

Case No. 84739

IN THE SUPREME COURT OF THE STATE OF NEVADA

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ADAM SULLIVAN, P.E., NEVADA  
STATE ENGINEER, et al.

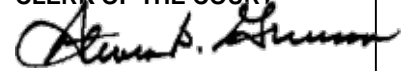
Appellants,

vs.

LINCOLN COUNTY WATER  
DISTRICT, et al.

**JOINT APPENDIX**

**VOLUME 49 OF 49**



**PRB**

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**DISTRICT COURT  
CLARK COUNTY, NEVADA**

10 LAS VEGAS VALLEY WATER  
11 DISTRICT, and SOUTHERN  
12 NEVADA WATER AUTHORITY,

13 Petitioners,

14 vs.

15 ADAM SULLIVAN, P.E., Nevada State  
16 Engineer, DIVISION OF WATER  
17 RESOURCES, DEPARTMENT OF  
18 CONSERVATION AND NATURAL  
19 RESOURCES,

Respondents.

Case No. A-20-816761-C  
Dept. No: 1

Consolidated with Cases:

A-20-817765-P, A-20-818015-P, A-20-  
817977-P, A-20-818069-P, A-20-817840-  
P, A-20-817876-P, A-21-833572-J

**REPLY BRIEF OF PETITIONERS  
LAS VEGAS VALLEY WATER  
DISTRICT AND SOUTHERN  
NEVADA WATER AUTHORITY**

20 Petitioners LAS VEGAS VALLEY WATER DISTRICT ("LVVWD") and  
21 SOUTHERN NEVADA WATER AUTHORITY ("SNWA") by and through their  
22 counsel of record, file their Reply Brief pursuant to EDCR 2.15.

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1 also easily reject arguments that the State Engineer changed priorities of water rights in  
2 Order 1309, since he clearly did not.<sup>4</sup>

3 As to challenges to scientific determinations about which areas should be in the  
4 LWRFS, those challenges involve findings of fact on highly scientific and technical  
5 issues. Courts properly defer to the State Engineer, as to any administrative agency,  
6 when such factual findings rely on the administrator's expertise. Many parties, including  
7 the State Engineer, provide a sufficiently detailed explanation of the technical basis for  
8 including basins in the LWRFS.<sup>5</sup> All this Court needs to review is whether, given the  
9 extensive technical evidence the State Engineer relied on, his decision was reasonable.  
10 The Court need not, nor should it, reweigh the evidence. Since mountains of water level,  
11 drawdown, climatic and biologic data support the State Engineer's composition of the  
12 LWRFS, this Court can easily conclude the State Engineer's decisions were reasonable,  
13 and therefore supported by substantial evidence.

14 Most of the due process challenges to the creation of the LWRFS can also be  
15 easily resolved because *the first* factual issue State Engineer asked stakeholders to  
16 provide evidence on was "the geographic boundary of the hydrologically connected  
17 groundwater and surface water systems."<sup>6</sup> Since the standard for due process in water  
18 cases is whether a party had a "full opportunity to be heard," all parties clearly had that  
19 opportunity regarding the boundaries of the LWRFS.<sup>7</sup> The remaining due process  
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21 <sup>4</sup> NV Energy Answering Brief at 9-10; SNWA and LVVWD Answering Brief at 20-24.

22 <sup>5</sup> State Engineer Answering Brief at 19-23; CBD Answering Brief at 15-20; MVWD  
23 Answering Brief at 10, 13; SNWA and LVVWD Answering Brief at 30-43; MVIC  
24 Answering Brief at 13-14, 18; NV Energy Answering Brief at 10-17.

<sup>6</sup> ROA 82-83.

<sup>7</sup> *Revert v. Ray*, 95 Nev. 782, 786-7, 603 P.2d 262, 264-5 (1979).

1 challenges fail because the State Engineer certainly has the authority to bifurcate the  
2 LWRFS proceedings between fact-finding (Phase I resulting in Order 1309) and  
3 management (Phase 2).

4 **Category II: The 8,000 afa Cap On Groundwater Development**

5 The State Engineer’s determination that 8,000 afa, *or less*, of groundwater  
6 development is the sustainable yield in the LWRFS is a scientific and technical factual  
7 finding that should be upheld because it was reasonable in light of the hydrologic and  
8 biologic evidence the State Engineer relied on.<sup>8</sup> The key to understanding this finding  
9 is that the State Engineer considered the LWRFS to be approaching a new equilibrium  
10 (i.e. steady state) with existing pumping. This means that existing pumping may not  
11 cause water levels and flow rates to decline *more*, but additional pumping will cause  
12 flow at critical springs to decline at unacceptable rates. The Court should uphold the  
13 8,000 afa cap because the hydrologic and biologic basis for the 8,000 afa cap is  
14 reasonable, and because the State Engineer agreed to reduce the cap further if flow rates  
15 continue to decline to avoid *further harm* to senior water rights and the Moapa dace.

16 Legal challenges allege the State Engineer cannot consider impacts to the Moapa  
17 dace. These are legal questions that are considered *de novo* and can be easily rejected.  
18 Nevada water law requires the State Engineer to consider the environment as part of his  
19

20 \_\_\_\_\_  
21 <sup>8</sup> Throughout the State Engineer’s Answering Brief, he incorrectly asserts that SNWA  
22 and LVVWD do not contest this determination. In fact, SNWA, LVVWD, and most  
23 experts in the Order 1303 Hearing, concluded the LWRFS is not reaching a new  
24 equilibrium, and the sustainable yield is substantially less than 8,000 afa. Rather than  
dispute this now, SNWA and LVVWD take the State Engineer at his word that the 8,000  
afa cap may be reduced in the future if flow data shows continued declines.

1 duties,<sup>9</sup> and prohibits the State Engineer from sticking his head in the sand if the  
2 groundwater permits he issues allow the take of an endangered species.

3 **Category III: State Engineer's Legal Conclusion**  
4 **That Current Capture Of Muddy River Water Does Not Conflict**  
5 **With Water Rights In Muddy River Decree**

6 This last category of challenges to Order 1309 is where SNWA and LVVWD part  
7 ways with the State Engineer. The State Engineer gave specific direction on numerous  
8 occasions to all stakeholders that he would not make legal conclusions about *conflicts* in  
9 the fact-finding phase. Evidence was requested and provided to demonstrate the level  
10 of *impacts* that existing LWRFS pumping has on the Muddy River, but the factual  
11 question of impacts is very different than the legal question of whether that *impact*  
12 constitutes a *conflict* with decreed water rights in the Muddy River. The State Engineer  
13 clearly stated that *conflict resolution* was left to Phase 2 of the LWRFS proceedings.  
14 Understandably, SNWA and LVVWD were shocked to see a conflicts determination in  
15 Order 1309 because the State Engineer consistently rebuked SNWA and LVVWD's  
16 efforts to have that legal question resolved.<sup>10</sup>

17 SNWA and LVVWD challenge the conflict determination on various grounds,  
18 and this reply brief focuses on those challenges.<sup>11</sup> First, the conflict finding is  
19 fundamentally unfair given the State Engineer's direction that he would only make  
20 factual findings in Order 1309, and because he relied on brand new analysis about which

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21 <sup>9</sup> CBD Answering Brief at 4-10.

22 <sup>10</sup> For instance, SNWA and LVVWD filed a Notice of Alleged Violation with the State  
23 Engineer that the State Engineer refused to process, presumably until Phase 2 of the  
24 LWRFS proceedings. ROA 48131-32.

<sup>11</sup> To the extent that is necessary, SNWA and LVVWD join in the arguments of other  
parties described above so that those arguments do not need to be repeated in this Reply  
Brief.



1 he gave SNWA and LVVWD no opportunity to be heard. Second, the conflicts  
2 determination is unlawful because it alters the Muddy River Decree and is contrary to  
3 Nevada law. And third, the conflicts determination is factually incorrect.

4 This Court should require the State Engineer to vacate the portion to Order 1309  
5 that makes the impermissible conflicts determination. Even the State Engineer concedes  
6 that this finding is incidental to Order 1309's main factual determinations.<sup>12</sup> In fact, the  
7 State Engineer suggests that his incidental finding be stricken if the Court agrees that the  
8 conflicts finding was premature.<sup>13</sup> Since the Court can find that SNWA and LVVWD  
9 did not have a full and fair opportunity to be heard regarding the State Engineer's conflict  
10 analysis – as it was first seen in Order 1309 – the Court can remand that portion of Order  
11 1309 only, with instructions to vacate the conflicts analysis.<sup>14</sup>

### 12 ARGUMENT

13 The Muddy River is an important resource SNWA relies upon to provide a secure  
14 and sustainable water supply for the Las Vegas Valley community. SNWA acquired  
15 water rights in the Muddy River and utilizes them through the U.S. Bureau of  
16 Reclamation's ("BOR") Intentionally Created Surplus ("ICS") program. Every year,  
17 SNWA coordinates the conveyance of Muddy River water to Lake Mead where it can  
18 be stored and diverted for municipal use. For every year since 2008, SNWA's creation  
19  
20  
21

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22 <sup>12</sup> State Engineer Answering Brief at 37.

23 <sup>13</sup> *Id.* at 37.

24 <sup>14</sup> *See e.g., Waters of Horse Springs v. State Eng'r*, 99 Nev. 776, 671 P.2d 1131 (1983) (a decision by the State Engineer may be affirmed in part, while also being reversed and remanded in part).

1 of ICS has been certified by the State Engineer and BOR. ICS is a critical element to  
2 SNWA’s water resource portfolio, particularly during drought.<sup>15</sup>

3 ICS is created, in part, from water rights SNWA acquired as a shareholder in the  
4 Muddy Valley Irrigation District (“MVIC”). Those water rights are represented by  
5 shares in MVIC. When SNWA acquired those shares, it properly relied on the Muddy  
6 River Decree and the provision in that decree that awarded all water below the Upper  
7 Muddy River to MVIC for distribution to its shareholders. Nearly every expert at the  
8 hearing below, and the State Engineer, agreed that groundwater pumping in the LWRFS  
9 has a direct impact on the flow of the Muddy River. In other words, current pumping  
10 captures Muddy River flow on an almost one-to-one basis. Each year, groundwater  
11 pumping in the LWRFS continues to capture Muddy River water, MVIC receives less  
12 water, and SNWA receives less ICS.

13 SNWA prepared an expert report that analyzed how much ICS it would have  
14 received if Muddy River flows were not captured by LWRFS groundwater pumping.<sup>16</sup>  
15 That depletion analysis was offered to quantify the impact of groundwater pumping on  
16 the Muddy River. SNWA was instructed by the State Engineer that the depletion  
17 analysis could not be used to seek redress for alleged conflicts because that question  
18 would be addressed in Phase 2 of the LWRFS proceedings.

19 In Order 1309, the State Engineer found that existing pumping captures Muddy  
20 River water, but the system is approaching a new equilibrium and existing pumping *will*  
21 *not decrease* Muddy River flows any more than *it already has*.<sup>17</sup> This does not mean,  
22

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23 <sup>15</sup> SE ROA 43840-44065.

24 <sup>16</sup> SE ROA 42005-10.

<sup>17</sup> SE ROA 64.

1 as the State Engineer implies in his answering brief, that existing pumping did not lower  
2 Muddy River flows. Muddy River flows are permanently reduced based on the historic  
3 and continuing LWRFS pumping that the State Engineer permitted. SNWA and  
4 LVVWD quantified that reduction in acre-feet and ICS Credits, and clearly requested  
5 that mitigation for those impacts be established in Phase 2 of the LWRFS proceedings.

6 Rather than wait until Phase 2 to address the mitigation question, the State  
7 Engineer concluded neither SNWA nor MVIC are legally harmed by the permanent  
8 reduction in Muddy River flow. This decision results in SNWA losing, on average,  
9 1,200 acre-feet of water every year, in perpetuity.<sup>18</sup> For the following reasons, that  
10 analysis cannot stand.

11 **I. The State Engineer’s No Conflict Conclusion Should Be Reversed.**

12 **A. The State Engineer’s no conflict conclusion is fundamentally unfair.**

13 The State Engineer exceeded the scope he defined for Phase 1 of the LWRFS  
14 proceedings by including a surprise and faulty conflicts analysis in Order 1309. Only  
15 foundational factual questions of geographic extent and availability of supply were to be  
16 considered in Phase 1.<sup>19</sup> At the prehearing conference, the State Engineer’s office said  
17 the initial hearing was part of a “multi-tiered process in terms of determining the  
18 appropriate management strategy”<sup>20</sup> for the LWRFS. Parties were told that the issue of  
19 conflicts would be addressed in the later phase of the State Engineer’s LWRFS  
20 proceedings.<sup>21</sup> The State Engineer’s office clarified that legal conflicts are part of “larger  
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22 <sup>18</sup> SE ROA 42009.

23 <sup>19</sup> SE ROA 82-83.

24 <sup>20</sup> SE ROA 522 at 10: 8-10 (Fairbank).

<sup>21</sup> SE ROA 522 at 12:6-15 (Fairbank).

1 substantive policy determinations [that are] not part of [the Order 1303 Hearing]”<sup>22</sup> and  
2 “the purpose of the [Order 1303] hearing *is not to resolve or address allegations of*  
3 *conflict between groundwater pumping within the LWRFS and Muddy River decreed*  
4 *rights.*”<sup>23</sup> The State Engineer even doubled-down, stating emphatically, “[t]hat is not  
5 the purpose of this hearing and *that’s not what we are going to be deciding at this point*  
6 *in time.*”<sup>24</sup> In his answering brief, the State Engineer admits the same, stating “the  
7 hearing was not intended to resolve the potential allegations of conflicts.”<sup>25</sup>

8 Coyote Springs Investments (“CSI”) agrees that the State Engineer “improperly  
9 used the evidence presented at the 1303 Hearing to conduct a conflict analysis when the  
10 [State Engineer] told the Petitioners that conflict issues would not be addressed at the  
11 1303 Hearing.”<sup>26</sup> Lincoln County Water District and Vidler Water Company (“LCWD  
12 and Vidler”) also concede that the State Engineer told the parties that conflicts were  
13 outside the scope of the Order 1303 Hearing.<sup>27</sup>

14 But LCWD and Vidler allege SNWA was not prejudiced by the State Engineer’s  
15 surprise finding because SNWA had submitted its ICS depletion analysis.<sup>28</sup> This  
16 argument is without merit. The ICS depletion analysis was not a legal-based conflicts  
17 analysis. The ICS depletion analysis was a fact-based quantification of *impacts*, in terms  
18 of ICS Credits, not the legal proof that would be submitted on the question of conflicts.<sup>29</sup>

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19 <sup>22</sup> SE ROA 522 at 10:18-22 (Fairbank).

20 <sup>23</sup> SE ROA 522 at 12:6-15 (Fairbank) (emphasis added).

21 <sup>24</sup> *Id.* (Emphasis added).

22 <sup>25</sup> State Engineer Answering Brief at 11.

23 <sup>26</sup> CSI Answering Brief at 22.

24 <sup>27</sup> LCWD and Vidler Answering Brief to LVVWD, SNWA and MVIC at 29.

<sup>28</sup> SE ROA 53400 (ICS depletion analysis was submitted before State Engineer explicitly ruled conflicts would not be considered).

<sup>29</sup> SE ROA 53400 (ICS depletion analysis was relevant to capture of river flows).

1 The legal conflicts allegation was included in SNWA’s Notice of Alleged Violation that  
2 the State Engineer repeatedly precluded SNWA from putting on until, presumably,  
3 Phase 2 of the LWRFS proceedings.<sup>30</sup>

4 Now LCWD and Vilder jump at the chance to self-servingly defend the State  
5 Engineer’s *no conflict* conclusion. But their 32 pages of detailed critiques are just the  
6 kind of arguments that would have been debated below, if the conflicts issue was actually  
7 in play below. The Court need not entertain them now. Certainly, if the State Engineer  
8 had surprised the parties by ruling that all LWRFS pumping *actually conflicts* with  
9 Muddy River water rights, LCWD and Vidler would be making the argument SNWA  
10 and LVVWD is making here - they never had the opportunity to raise their 32 pages of  
11 arguments.

12 The State Engineer cherry-picks from the transcripts a solitary mention of  
13 conflicts during pre-hearing discussions.<sup>31</sup> But that one reference, taken out of context,  
14 cannot overshadow the drumbeat of limitations the State Engineer’s office placed on  
15 Phase 1 of the LWRFS proceedings. Nor can it explain why the State Engineer never  
16 considered the Notice of Alleged Violation that clearly claimed conflicts are occurring  
17 on the Muddy River. The fact is that no party interpreted the State Engineer’s statements  
18 to mean that conflicts would be considered as part of the Order 1303 Hearing. And he  
19 admits that to enter Order 1309, “he did not need to know whether any particular user’s  
20 pumping conflicted with any other particular user’s rights. Allegations of conflict are  
21 usually adjudicated on a case-by-case basis based on the specific rights at issue.”<sup>32</sup>

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22  
23 <sup>30</sup> SE ROA 48131-32.

24 <sup>31</sup> State Engineer Answering Brief at 41.

<sup>32</sup> State Engineer Answering Brief at 41.

1 Fundamental unfairness is also evidenced by the State Engineer’s need to rely on  
2 extra-record evidence in his *no conflict* conclusion. Since the conflict question was  
3 intended to be addressed in Phase 2 of the LWRFS proceedings, no party testified or put  
4 on conflict evidence. The State Engineer had to rely on extra-record evidence in the  
5 “miscellaneous relevant findings”<sup>33</sup> section of Order 1309. Allowing the State Engineer  
6 to add evidence that was not admitted or discussed at the administrative hearing is  
7 fundamentally unfair because after he said would not address the question at all, then he  
8 proceeded to dig through a bunch of his dusty files to violate that promise.

9 The State Engineer tries to obscure his mistake behind claims that SNWA and  
10 LVVWD are not entitled be treated fairly by the State Engineer because they are  
11 governmental entities. That claim is preposterous. Due process must be given to any  
12 *person*,<sup>34</sup> and applicable water law statutes<sup>34</sup> specifically provide that governmental  
13 agencies are *persons*.<sup>35</sup> In proceedings before the State Engineer, all parties are entitled  
14 to fundamental fairness and due process. The Nevada Supreme Court recently affirmed  
15 this, stating that “[p]rocedural due process requires that *parties* receive notice and an  
16 opportunity to be heard.”<sup>36</sup> The Court has also explained that “a hearing is not  
17 meaningful without awareness of the matters to be considered.”<sup>37</sup> Because the State

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18 <sup>33</sup> Summary of Record on Appeal, Index to Administrative Record re: Order 1309 at 75,  
19 item 1014 (included as a non-exhibit that was support for “miscellaneous relevant  
20 findings”).

20 <sup>34</sup> Nev. Const., art. 1, § 8(2) (“No person shall be deprived of life, liberty, or property,  
21 without due process of law”).

21 <sup>35</sup> NRS 534.014 defines “person” to include any municipal corporation, power district,  
22 political subdivision of this or any state, or an agency of the United States Government.

22 <sup>36</sup> *Eureka Cnty. v. Seventh Judicial Dist. Ct.*, 134 Nev. 275, 279, 417 P.3d. 1121, 1124  
23 (2018) (internal quotations omitted) (emphasis added).

23 <sup>37</sup> *Nevada Power Co. v. Public Service Commission*, 91 Nev. 816, 824, 544 P.2d 428, 434  
24 (1975).

1 Engineer told SNWA and LVVWD on the record that he would not consider conflicts  
2 until a later proceeding, but then relied upon extra-record documents and an untested  
3 methodology<sup>38</sup> to make a conflicts determination, the procedural protections the  
4 Supreme Court requires of the State Engineer were denied to SNWA and LVVWD.<sup>39</sup>

5 **B. The State Engineer’s *no conflict* conclusion is contrary to law.**

6 The State Engineer violated at least three legal standards when he determined that  
7 senior Muddy River water rights are not legally injured by a permanent depletion of their  
8 supply. First, the State Engineer is precluded from impairing pre-statutory water rights,  
9 yet he did just that.<sup>40</sup> Second, the State Engineer is prohibited from altering a court  
10 decree, yet he reduced the quantity of water rights that were awarded in the Muddy River  
11 decree.<sup>41</sup> Third, Nevada statutes expressly bar the State Engineer from applying  
12 consumptive use limitations to the Muddy River, yet he used consumptive use to re-

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14 <sup>38</sup> SNWA and LVVWD Opening Brief at 37 (“the NIWR method and data used by the  
15 State Engineer to make this finding were not part of the record or presented at the hearing.  
16 Indeed, no party had the opportunity to present evidence rebutting the State Engineer’s  
17 use the NIWR of alfalfa to calculate the water requirement of decreed Muddy River water  
18 rights.”).

19 <sup>39</sup> *City of Boulder* is distinguishable. *City of Boulder City v. State*, 106 Nev. 390, 392,  
20 793 P.2d 845, 846 (1990) (emphasis added). That case involved tax revenues, not real  
21 property in the form of water rights. Vested property rights in Muddy River water rights  
22 are at issue, not disagreements over how taxes are distributed.

23 <sup>40</sup> NRS 533.085(1) (“[n]othing contained in this chapter shall impair the vested right of  
24 any person to the use of water, nor shall the right of any person to take and use water be  
25 impaired or affected by any of the provisions of this chapter where appropriations have  
26 been initiated in accordance with law prior to March 22, 1913.”).

27 <sup>41</sup> NRS 533.0245. (“[t]he State Engineer shall not carry out his or her duties pursuant to  
28 this chapter in a manner that conflicts with any applicable provision of a decree or order  
29 issued by a state or federal court, an interstate compact or an agreement to which this  
30 State is a party for the interstate allocation of water pursuant to an act of Congress.”). *See*  
31 *also* NRS 533.210(1) (a decree entered by a court is final and conclusive); NRS 533.220.

1 quantify the water rights in the Muddy River decree.<sup>42</sup> These mistakes are legal in nature  
2 and the Court reviews the State Engineer's error *de novo*. The State Engineer provides  
3 no justification for ignoring these manifestly applicable and controlling statutes.

4 **C. The State Engineer's *no conflict* conclusion is factually incorrect.**

5 Given that MVIC is entitled by a court decree to all the water in the Lower Muddy  
6 River, and that LWRFS groundwater pumping is indisputably capturing Muddy River  
7 water before it gets to MVIC, any reasonable person would conclude MVIC's water  
8 rights are legally injured.<sup>43</sup> Hence, the State Engineer's *no conflict* finding simply  
9 cannot meet the substantial evidence standard, particularly since the only "evidence" that  
10 supports the State Engineer are documents developed outside the hearing.

11 Contrary to the State Engineer's claims, SNWA and LVVWD *disagree* that the  
12 8,000 afa pumping limit does not diminish Muddy River flows.<sup>44</sup> SNWA and LVVWD  
13 only agree that 8,000 afa is a proper pumping limit to maintain the status quo based on  
14 the finding that the system may be reaching steady state. A finding of stabilization is  
15 entirely separate and independent from a conflict analysis. The State Engineer did not  
16 find that pumping at 8,000 afa would restore the base flow of the Muddy River, because  
17 it will not. Approaching steady state does not mean water levels and depleted flows are  
18 restored. Limiting LWRFS pumping to 8,000 afa may stop additional declines, but it  
19 will permanently remove flow from the Muddy River. The 8,000 afa cap strikes a  
20

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21 <sup>42</sup> NRS 533.3703. The State Engineer argues that this statute only applies to change  
22 applications. State Engineer Answer at 41 n.10. However, NRS 533.3703 is the only  
23 authority that allows the State Engineer to conduct a consumptive use analysis.

24 <sup>43</sup> Interestingly, in Order 1329 on the Humboldt River, the State Engineer agreed with  
this logical conclusion without reducing senior water rights based on consumptive use.

<sup>44</sup> State Engineer Answering Brief at 28, 36.



1 balance to maintain existing uses while other management issues, such as how to  
2 quantify and address existing conflicts, are adjudicated in subsequent proceedings.  
3 SNWA and LVVWD are hopeful that the existing conflicts can be mitigated and were  
4 assured that such conflict and mitigation topics would be addressed in Phase 2 of the  
5 LWRFS proceedings.<sup>45</sup>

6 As stated in the LVVWD and SNWA Opening Brief, had parties been aware that  
7 the State Engineer intended to address conflicts by recalculating and possibly even  
8 reallocating water rights under the Muddy River decree, parties would have presented  
9 evidence concerning: (1) the proper method of calculating rights under the Muddy River  
10 decree, (2) how groundwater pumping in the LWRFS has conflicted with senior decreed  
11 rights, and (3) which rights are causing conflicts, and which are not.<sup>46</sup> While CSI and  
12 LCWD and Vidler are attempting to make those arguments now, this proceeding is not  
13 the proper forum to develop a record for adjudicating the conflicts question. If this Court  
14 elects to entertain a substantive review of the State Engineer's *no conflict* determination,  
15 SNWA and LVVWD explained in their opening brief the flaws in his findings, and, as  
16 noted below, no meaningful response was made to those arguments.

17 **1. The State Engineer's *no conflict* findings cannot be verified.**

18 Only LCWD and Vidler support the State Engineer's finding of no conflict;  
19 however, in attempting to find evidence to support the State Engineer's calculations,

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21 <sup>45</sup> LCWD and Vidler recklessly claim SNWA and LVVWD agreed that 4,000 to 6,000  
22 afa can be pumped without conflicts. LCWD and Vidler Answering Brief to LVVWD,  
23 SNWA and MVIC at 7. SNWA and LVVWD have steadfastly held the opposition  
24 position. SE ROA 41941 ("If the conflicts with senior water-right holders *are adequately*  
*addressed*, the annual groundwater production [. . .] should be managed between 4,000-  
6,000 afy.") (emphasis added).

<sup>46</sup> SNWA and LVVWD Opening Brief at 36.

1 even they were forced to rely on, and cite to, extra-record evidence.<sup>47</sup> LCWD and  
2 Vidler's extra-record evidence is hard to follow because it does not say what they  
3 claim.<sup>48</sup> LCWD and Vidler criticize LVVWD and SNWA for their attempt to  
4 reconstruct the State Engineer's calculations for relying on the only certificate issued in  
5 relation to Permit 1611 that lists irrigated acres.<sup>49</sup> However, all this information is extra-  
6 record, cannot be used to support the State Engineer's findings, and should only be  
7 considered when a proper record is developed.

8 Also, LCWD and Vidler included a calculated acreage for irrigation from Baldwin  
9 Spring.<sup>50</sup> In support of their calculation that the irrigated area is 58.09 acres, LCWD and  
10 Vidler cite to SE ROA 33789.<sup>51</sup> But SE ROA 33789 does not state that the Baldwin  
11 claim to Baldwin Spring is 58.09 acres, only that the acreage is as claimed in the  
12 Baldwin's answer.<sup>52</sup> To determine the claimed acreage, a review of the decree maps or  
13 the Baldwin's answer is necessary, but these documents are not in the record. Thus,  
14 there remains insufficient evidence to support the State Engineer's contention that the  
15 total acreage under the decree is 5,614 acres.

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17 <sup>47</sup> LCWD and Vidler Answering Brief to LVVWD, SNWA and MVIC at 13 n.7.

18 <sup>48</sup> See Permit 1611, Certificate 1199, available at [http://images.water.nv.gov/images/Book\\_Records/01000/1611.pdf](http://images.water.nv.gov/images/Book_Records/01000/1611.pdf) (last visited January 10, 2022).

19 <sup>49</sup> See Permit 21873, Certificate 8325 available at <http://images.water.nv.gov/images/certificates/8000/8325c.pdf> (last visited December 30, 2021). LCWD and Vidler are  
20 correct in part, a change application cannot increase the amount of water appropriated  
21 under the base right. LCWD and Vidler Answering Brief to LVVWD, SNWA and MVIC  
22 at 17. However, a change application can, in fact, change the manner of use and place of  
use, which includes the ability to change the irrigated area under a base right. NRS  
533.345.

23 <sup>50</sup> LCWD and Vidler Answering Brief to LVVWD, SNWA and MVIC at 17.

24 <sup>51</sup> *Id.* at 13.

<sup>52</sup> *Id.* at 13.

1 Notably, in attempting to support the State Engineer’s conflict findings, LCWD  
2 and Vidler were forced to concede that the State Engineer’s calculations in Order 1309  
3 *remained clearly erroneous*,<sup>53</sup> and were left with only post hoc rationalizations to  
4 support the State Engineer’s conclusions.<sup>54</sup> The fact that LCWD and Vidler had to spend  
5 10 pages in their brief to speculate about how the State Engineer reached his conflict  
6 conclusion demonstrates how fundamentally unfair the State Engineer was by making  
7 that conclusion without input from the parties.

8 CSI is similarly perplexed by the State Engineer’s conflicts analysis. CSI agrees  
9 that an accurate estimate of a minimum volume required to meet decreed water rights is  
10 complex and “very difficult.”<sup>55</sup> CSI agrees the State Engineer’s calculations are  
11 erroneous and “must be vacated.”<sup>56</sup> CSI’s argument demonstrates why a substantially  
12 more detailed analysis is required before a proper conflict conclusion can be made, and  
13 why the State Engineer’s use of consumptive use to quantify Muddy River rights was  
14 improper. That analysis is incorrect, cannot be verified, and cannot stand.

15 **2. The Muddy River is fully appropriated, and any capture is a**  
16 **conflict with senior decreed rights.**

17 For over one hundred years, the Muddy River has been decreed as fully  
18 appropriated and consumed by vested rights.<sup>57</sup> The State Engineer cannot disobey this  
19 decree, and has, until now, protected the Muddy River as a fully appropriated water

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21 <sup>53</sup> LCWD and Vidler Answering Brief to LVVWD, SNWA and MVIC at 14.

22 <sup>54</sup> *Id.* at 14-19.

23 <sup>55</sup> CSI Answering Brief at 13.

24 <sup>56</sup> *Id.* at 21.

<sup>57</sup> Specifically, Muddy River Decree adjudicates “the total available flow of the said Muddy River and consumes and exhausts all of the available flow of the said Muddy River, its headwaters, sources of supply and tributaries.” SE ROA 33792-33793.

1 source that is fully consumed by existing rights.<sup>58</sup> LWRFS groundwater pumping takes  
2 water from the river, and less water is available for these water rights. The only way the  
3 State Engineer could justify a *no conflict* conclusion was to whittle away the vested  
4 rights he is prohibited from impairing with a faulty consumptive use analysis.

5 CSI, LCWD and Vidler argue that a consumptive use analysis is proper because  
6 the upstream users of the Muddy River must allow water to return to the Muddy River  
7 to satisfy downstream users.<sup>59</sup> What these parties ignore is that the Muddy River Decree  
8 fully appropriated the *consumption and exhaustion* of all waters of the river.<sup>60</sup> Nevada  
9 law often recognizes, as it does here, that the most downstream user on a water system  
10 has the right to fully consume its water right when no one relies on its return flows,<sup>61</sup>  
11 and that fully consuming Muddy River water for ICS Credits is a beneficial use.<sup>62</sup>  
12 Specific laws apply to the Muddy River, namely that consumptive use concepts “[d]o  
13 not apply to any decreed, certified or permitted right to appropriate water which  
14 originates in the Virgin River or the Muddy River.”<sup>63</sup> Additionally, SNWA is the most  
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16 <sup>58</sup> SE ROA 662 n. 12 (Order 1169 recognized the Muddy River and its headwaters as  
17 fully appropriated); SE ROA 751 (in Ruling 6254 “the State Engineer [found] the Muddy  
18 River and the Muddy River springs, the discharge location of the bulk of the region's  
19 water, is fully appropriated.”); SE ROA 44109 (in Order 1194 of the State Engineer found  
that “The Muddy River Decree adjudicated the entire now of the Muddy River and its  
tributaries”).

20 <sup>59</sup> CSI Answering Brief at 10-19.

21 <sup>60</sup> SE ROA 33792-93 (decreed rights “consume and exhaust *all of the available flow* of  
22 the said Muddy River) (emphasis added).

23 <sup>61</sup> NRS 533.3703(2)(b); *See* State Engineer Ruling 4116 at 19-20, State Engineer Ruling  
6102 at 9 (granting change applications at full duty because no party relied on return  
flows). Available at <http://www.water.nv.gov/hearings.aspx?mode=Rulings> (last visited  
January 10, 2022).

24 <sup>62</sup> NRS 533.030(2)(b).

<sup>63</sup> NRS 533.3703.

1 downstream user of all water right holders on the Muddy River. So even if CSI is correct,  
2 as the most downstream user, SNWA is the benefactor of the return flows of the  
3 upstream users – and its rights cannot be impaired.

4 **3. ICS certification demonstrates error in State Engineer’s no**  
5 **conflict finding.**

6 The State Engineer’s use of consumptive use to limit the duty of decreed Muddy  
7 River water rights is inconsistent with his approval of SNWA’s ICS Certification  
8 Report.<sup>64</sup> The novel consumptive use approach is also inconsistent with the BOR’s  
9 approval of the ICS Certification Report.<sup>65</sup> Every year, SNWA submits a report to the  
10 State Engineer using the full duty of its Muddy River water rights to create ICS Credits.<sup>66</sup>  
11 In approving the ICS Certification Report, the State Engineer has found that the report  
12 “demonstrates that the amount of Tributary Conservation ICS created by the Authority  
13 and conveyed to Lake Mead are consistent with Nevada Water Law.”<sup>67</sup> This certification  
14 recognizes the full duty of the water rights. The State Engineer provides no explanation  
15 for his arbitrary divergence in Order 1309 from his recognition in approving the ICS  
16 Certification Report that consumptive use does not limit Muddy River water rights under  
17 Nevada law.

18 **4. SNWA and LVVWD’s ICS depletion analysis proves LWRFS**  
19 **groundwater pumping conflicts with Muddy River water rights.**

20 SNWA and LVVWD submitted in an expert report an analysis to quantify how  
21 LWRFS groundwater pumping *captures* flows in the Muddy River and depletes ICS

22 <sup>64</sup> SE ROA 44046-44071, 44107-44110.

23 <sup>65</sup> SE ROA 44046-44074.

24 <sup>66</sup> *See e.g.*, SE ROA 8928-9198.

<sup>67</sup> SE ROA 46111.

1 Credits that SNWA would otherwise receive.<sup>68</sup> LCWD and Vidler did not rebut this  
2 depletion analysis during the Order 1303 Hearing. Now, however, LCWD and Vidler  
3 attack the ICS depletion analysis in their answering brief. These attacks are best  
4 addressed in an evidentiary hearing where a proper record could be developed.  
5 Nevertheless, LCWD and Vidler’s arguments are both factually and legally deficient.

6 SNWA and LVVWD presented strong evidence that groundwater pumping in the  
7 LWRFS has reduced the amount of ICS Credits that SNWA would have created if the  
8 river was flowing at its pre-development rate.<sup>69</sup> In their expert report submitted at the  
9 Order 1303 Hearing, SNWA and LVVWD established the pre-development flow of the  
10 Muddy River using all available data in order to show the impact of increased  
11 groundwater pumping on the flow of the river.<sup>70</sup> The pre-development flow was derived  
12 from data from a period of below-normal precipitation so using it as a reference point  
13 likely underestimated streamflow depletion caused by groundwater pumping.<sup>71</sup>

14 SNWA and LVVWD compared the pre-development flow of the Muddy River  
15 with the current flow<sup>72</sup> measured at the Moapa gage to determine how much water  
16 groundwater pumping captures from the river.<sup>73</sup> Then, using the current flow as a  
17 percentage of baseline flow, SNWA and LVVWD were able to determine how many  
18 ICS Credits would have been created, using their MVIC shares, if the river was flowing  
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21 <sup>68</sup> SE ROA 53400 at 1049:12-14.

22 <sup>69</sup> SE ROA 42005-10.

23 <sup>70</sup> SE ROA 41962.

24 <sup>71</sup> SE ROA 42008.

<sup>72</sup> The natural-flow record was created by adding annual surface water diversions to the flood-adjusted flow record of the Moapa gage.

<sup>73</sup> SE ROA 42009.

1 at the pre-development level.<sup>74</sup> For the 10-year period of record, an average of 1,200  
2 afa of ICS Credits were not created due to impacts from LWRFS groundwater  
3 pumping.<sup>75</sup>

4 The fact that Muddy River base flows have been depleted by pumping is well  
5 established.<sup>76</sup> Estimates of average pre-development flow of the Muddy River range  
6 from 33,600 afa to 37,000 afa.<sup>77</sup> In 2003, the Muddy River only flowed 22,000 afa.  
7 Since 2003, the flow has recovered to about 30,800 afa.<sup>78</sup> Most parties agree that  
8 groundwater levels rose as pumping decreased, but flows have not fully recovered.<sup>79</sup>

9 Even LCWD and Vidler agreed at the Order 1303 Hearing that the Muddy River  
10 pre-development flow has been depleted, but they tried to blame the harm on other  
11 parties, faulty gages or climate.<sup>80</sup> Now LCWD and Vidler make arguments against  
12 SNWA and LVVWD's ICS depletion analysis based on a misunderstanding of the  
13 methodology for that analysis and how ICS Credits are calculated.

14 **a. Estimate of Muddy River pre-development flows**

15 LCWD and Vidler argue that SNWA's estimate of pre-development flow in its  
16 depletion analysis is flawed because there is not enough data to support SNWA's

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18 <sup>74</sup> SE ROA 42009.

19 <sup>75</sup> SE ROA 42009.

20 <sup>76</sup> SE ROA 7-9, 56-58; SE ROA 740-43.

21 <sup>77</sup> SE ROA 662 (36,000 afa); SE ROA 736 (37,000 afa); SE ROA 41962.

22 <sup>78</sup> SE ROA 41962.

23 <sup>79</sup> SE ROA 13, 14, 16, 21, 23, 25-26, 27, 29-30, 32, 34, 37. Note, while many parties  
24 argue whether the recovery is influenced by climate or pumping, all agree recovery is not  
yet complete.

<sup>80</sup> SE ROA 36353 ("Lincoln/Vidler agrees that this statement sums up the effects to the  
Muddy River Springs Area (MRSA): '*...the difference between the pre-development  
baseflow and the natural flow record must be mostly associated with groundwater  
production within the MRSA.*'").

1 estimate.<sup>81</sup> This argument is false. SNWA used all available data to come up with a  
2 reasonable figure for pre-development flow. This included the average flow of the  
3 Muddy River between 1913 and 1918, the mean annual flow of 1946, and the 25-year  
4 average flood-adjusted mean annual flow using measurements between 1914 and 1965.<sup>82</sup>  
5 Even though some of this data is intermittent, all the data comes from a period that  
6 predates significant groundwater development in the LWRFS.<sup>83</sup>

7 LCWD and Vidler cynically question SNWA’s data without providing any  
8 feasible alternative for how pre-development flows should be estimated. SNWA used  
9 the best data available to determine pre-development flow and the impact of increased  
10 groundwater pumping on SNWA’s ICS Credits. In fact, the pre-development flow  
11 estimate used by SNWA is less than some other calculations of pre-development flow.<sup>84</sup>

12 **b. Calculation of ICS credits and depletions**

13 LCWD and Vidler further argue that SNWA’s “impairment” calculation assumes  
14 it will receive full flow of the Muddy River each year.<sup>85</sup> LCWD and Vidler base this  
15 argument on their claim that SNWA assumed the flow of the river will be the same every  
16 year.<sup>86</sup> This is false. SNWA’s calculations of the impact of streamflow depletions on  
17 its ICS Credits were based on the annual flow of the Muddy River.<sup>87</sup> This was not a  
18 hypothetical number, as LCWD and Vidler suggest, but was derived from the annual  
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21 <sup>81</sup> LCWD and Vidler Answering Brief to LVVWD, SNWA and MVIC at 21.  
22 <sup>82</sup> SE ROA 41962.  
23 <sup>83</sup> SE ROA 41962.  
24 <sup>84</sup> SE ROA 662 (36,000 afa); SE ROA 736 (37,000 afa); SE ROA 41962.  
<sup>85</sup> LCWD and Vidler Answering Brief to LVVWD, SNWA and MVIC at 25.  
<sup>86</sup> *Id.* at 26.  
<sup>87</sup> SE ROA 42009.



1 flood-adjusted flow records at the Moapa gage.<sup>88</sup> Therefore, SNWA made no  
2 assumption that the flow of the Muddy River would be the same every year when  
3 calculating the impact of groundwater pumping on its ICS Credits.

4 LCWD and Vidler also argue that SNWA inflates the depletion of its ICS Credits  
5 because it takes the full volume of all its Upper Muddy River water as ICS Credits.<sup>89</sup>  
6 This argument shows a basic misunderstanding of the depletion analysis. The Upper  
7 Muddy River water rights did not impact the depletion analysis, as the depletion analysis  
8 relied instead on harm to MVIC shares based on depletion of river flows from the  
9 baseline.

10 Furthermore, as LCWD and Vidler recognize, SNWA would be entitled to more  
11 water as an MVIC shareholder that it is receiving because MVIC shareholders are not  
12 receiving the full volume of pre-development flows distributed among its shareholders.<sup>90</sup>  
13 Shareholders receive a volume of water based on actual flows. This means the amount  
14 of water per share goes up and down dependent on how much water is in the River in a  
15 given year. And every year the amount of water per share has been less that what it  
16 should have been due to groundwater pumping in the LWRFS.

17 c. **SNWA shares in losses of Muddy River flow.**

18 LCWD and Vidler also argue that SNWA does not share in Muddy River losses  
19 because they receive the same volume of water each year for the purposes of creating its  
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21 <sup>88</sup> SE ROA 42008.

22 <sup>89</sup> LCWD and Vidler Answering Brief to LVVWD, SNWA and MVIC at 26.

23 <sup>90</sup> *Id.* at 27 (LCWD and Vidler admit “MVIC shareholders do not receive the full volume  
24 of pre-development flows (33,900 afa) for purposes of determining their annual water  
right per share; their yearly calculation is based upon actual flows to determine their water  
use per share.”).

1 ICS Credits. This is false as well. As a MVIC shareholder, SNWA shares in annual  
2 river depletions the same as other MVIC shareholders. For example, in 2016 SNWA  
3 was able to create 8,263 afa of ICS Credits based on its MVIC shares but in 2017 it was  
4 only able to create 7,660 afa of ICS Credits based on its MVIC shares.<sup>91</sup> Therefore, any  
5 reduction of flow in the Muddy River causes SNWA to suffer because it receives less  
6 water for each of its MVIC shares, thus reducing its ability to create ICS Credits.

7 Furthermore, SNWA must annually verify that the Muddy River water rights it  
8 controls actually reach Lake Mead. SNWA receives ICS Credits based on the full  
9 volume of water rights it owns or controls, and that actually reach Lake Mead.

10 **d. Moapa is the proper river gage for depletion analysis.**

11 LCWD and Vidler argue that SNWA and LVVWD created fictitious harm by  
12 using the Moapa gage to calculate the impact of Muddy River flow reduction on  
13 SNWA's ICS Credits.<sup>92</sup> This, too, is false. SNWA used the Moapa gage because the  
14 Moapa gage is the same gage used to calculate the baseline flow of the Muddy River,  
15 and thus properly shows the impacts from pumping to that baseflow.<sup>93</sup> It would be  
16 illogical and misleading to compare the pre-development flow, which was measured at  
17 the Moapa gage, to the modern flow of the river measured at a different gage.  
18 Consistency required that the same gage that measured pre-development flow be used to  
19 measure modern river flow in the depletion analysis. Additionally, Moapa gage  
20 evidence is more compelling because the gage has a longer historical record of flow.  
21 While SNWA does use the Glendale gage for its ICS Credit calculation, it would be  
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23 <sup>91</sup> SE ROA 8939; SE ROA 8685.

24 <sup>92</sup> LCWD and Vidler Answering Brief to LVVWD, SNWA and MVIC at 27-28.

<sup>93</sup> SE ROA 41962.

1 illogical to use that gage – with less historical data – to determine the pre-development  
2 flow of the Muddy River.

3 LCWD and Vidler point to no evidence that use of the Glendale gage would have  
4 showed less harm. In fact, the flows at Glendale are generally recorded as lower than  
5 the flows at the Moapa gage.<sup>94</sup> Had SNWA used the Glendale gage instead of the Moapa  
6 gage, depletions would have increased, not decreased. LCWD and Vidler’s argument is  
7 an attempt to distract the Court from the significant impact of groundwater pumping on  
8 SNWA’s ICS Credits and should be disregarded.

9 e. **Climate conditions are not the cause of Muddy River**  
**depletions.**

10 LCWD and Vidler also argue that the reduction of Muddy River flows is based on  
11 climate and other river conditions.<sup>95</sup> SNWA’s experts investigated the possibility that  
12 climate variability was impacting streamflow but found little evidence to support LCWD  
13 and Vidler’s position. SNWA’s expert analyzed annual precipitation from 1895 to 2019  
14 and found that annual winter season precipitation was 4.17 inches per year (“in/yr”)  
15 before 1965 (the year significant groundwater production began in the Muddy River  
16 Springs Area) and 4.50 in/yr since 1965.<sup>96</sup> Based on the fact that the post-1965 average  
17 precipitation is slightly *higher*, SNWA’s experts concluded that climatic conditions  
18 could not be a primary factor in reducing Muddy River streamflow.<sup>97</sup>

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21 <sup>94</sup> For example, in 2017, the Moapa gage was used to calculate a flow of 30,331 afa. For  
22 the same year the Glendale gage reported 30,200 afa. Using the Glendale gage for 2017  
would have artificially increases the depletion analysis by 100 afa.

23 <sup>95</sup> LCWD and Vidler Answering Brief to LVVWD, SNWA and MVIC at 21.

24 <sup>96</sup> SE ROA 41976.

<sup>97</sup> SE ROA 41976.

1 LCWD and Vidler also fail to present any compelling evidence to support their  
2 claim that climate conditions have reduced Muddy River flows. LCWD and Vidler  
3 ignore long-term precipitation trends and rely on short-term impacts of precipitation on  
4 groundwater levels.<sup>98</sup> This short-term evidence is unconvincing. Therefore, the State  
5 Engineer properly found that long-term climate trends are not the cause of Muddy River  
6 flow declines.

7 **f. A reduction in MVIC shares would not alter SNWA and**  
8 **LVVWD's depletion analysis.**

9 LCWD and Vidler make the confusing argument that the volume of water MVIC  
10 receives is artificially low because SNWA controls water in the Upper Muddy River that  
11 was previously used in the Lower Muddy River.<sup>99</sup> LCWD and Vidler appear to be  
12 referring to 3,000 afa of water that was first moved from the Lower Muddy River to the  
13 Upper Muddy River based on a lease agreement between NV Energy and MVIC in  
14 1967.<sup>100</sup> The time to challenge the approval of the change application, and any impact  
15 to shareholders, sunset over fifty years ago. The 3,000 afa is currently approved for full  
16 diversion use in the Upper Muddy River and is correctly accounted for in the ICS  
17 Certification Report. This water is also not a part of the depletion analysis.

18 Since 2009, SNWA has leased this 3,000 afa from MVIC and subleased a portion  
19 of the rights to NV Energy.<sup>101</sup> LCWD and Vidler argue that the total number of MVIC  
20 shares should have been reduced when this water was moved for use in the Upper Muddy  
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22 <sup>98</sup> LCWD and Vidler Answering Brief to LVVWD, SNWA and MVIC at 22-23.

23 <sup>99</sup> *Id.* at 24.

24 <sup>100</sup> SE ROA 8962.

<sup>101</sup> SE ROA 8962.

1 River in 1967.<sup>102</sup> There is no evidence in the record, or now cited to by LCWD and  
2 Vidler, to support their contention that the MVIC shares do not already account for this  
3 water rights transfer in 1967. Nor do LCWD or Vidler provide any support for how the  
4 depletion calculation would vary if the MVIC share calculation was altered. The fact of  
5 the matter is that the baseflow, which is fully appropriated, is depleted. As a result, all  
6 MVIC shareholders, including SNWA, share in the impacts from LWRFS groundwater  
7 pumping that violates their vested, decreed senior water rights.

8 **II. The State Engineer’s Consideration Of Moapa Dace And The Endangered**  
9 **Species Act Was Sound.**

10 Many parties, primarily CSI, Georgia-Pacific, and LCWD and Vidler, challenge  
11 the propriety of the State Engineer’s consideration of the impacts of groundwater  
12 pumping on Moapa dace habitat and potential liability under the Endangered Species  
13 Act (“ESA”). These claims are meritless.<sup>103</sup> The State Engineer relied on evidence from  
14 the United States Fish and Wildlife Service’s (“USFWS”) extensive analysis and  
15 decisions about the Moapa dace (expressed in terms of habitat loss from spring flow  
16 reductions as measured at Warm Springs West gage). He considered that analysis in  
17 conjunction with updated hydrologic information from the Order 1169 Aquifer Test  
18 (“Aquifer Test”).

19 CSI’s claim that all parties to the MOA, including itself, have *carte blanche* to  
20 harm the Moapa dace is equally erroneous. The MOA occurred before the Aquifer Test  
21 and did not authorize take. Then the Aquifer Test, and data since, revealed greater risk

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23 <sup>102</sup> LCWD and Vidler Answering Brief to LVVWD, SNWA and MVIC at 24.  
24 <sup>103</sup> SNWA and LVVWD join in the arguments of the State Engineer and CBD on these  
points.

1 to the Moapa dace. Neither the State Engineer, nor any party with potential ESA  
2 liability, can ignore that. CSI is also wrong when it argues that actual evidence did not  
3 exist that harm to the Moapa dace would result from state action.<sup>104</sup> Testimony from  
4 experts indicated that the flow rates in springs that are critical for the Moapa dace have  
5 declined and are at risk of declining more. CSI argues the State Engineer failed to  
6 adequately consider climate effects on the Moapa dace habitat,<sup>105</sup> but the State Engineer  
7 did consider climate data and disagreed with CSI's interpretation of that data. Even  
8 though "spring discharge is affected by both pumping and climate,"<sup>106</sup> the State Engineer  
9 found pumping, not climate, is the most predominant cause of spring flow decline.

10 Georgia Pacific and Apex are wrong that the USFWS "expressly declined to  
11 endorse" the State Engineer's position regarding take and ESA liability. Those  
12 witnesses confirmed they were not experts in ESA compliance, they did not discuss the  
13 agency's existing analyses and conclusions concerning take of the species, and they did  
14 not broach the subject of liability. Their expertise and testimony related to the biologic  
15 requirements of the Moapa dace.

16 LCWD and Vidler also make the flawed argument that the State Engineer is  
17 powerless to regulate water rights after he issues a permit. This argument fails for two  
18 reasons. First, the State Engineer can limit groundwater permits based on his  
19 enforcement of permit terms. Second, the public interest is a factor the State Engineer  
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23 <sup>104</sup> CSI Answering Brief at 7.

24 <sup>105</sup> CSI Answering Brief at 9.

<sup>106</sup> SE ROA 57.

1 must consider before he issues a water right permit, *and after*.<sup>107</sup> The State Engineer  
2 must “regulate groundwater *in the interest of public welfare*, which includes curtailing  
3 groundwater rights during water supply shortages,” and he has “an *affirmative duty*” to  
4 “maintain public trust resources.”<sup>108</sup> Therefore, LCWD and Vidler’s claims that the  
5 State Engineer is powerless to protect an endangered species are incorrect.

6 **CONCLUSION**

7 For the reasons stated herein, SNWA and LVVWD respectfully request that Order  
8 1309 be affirmed in part and reversed and remanded in part, solely for the purpose of  
9 vacating the State Engineer’s *no conflict* conclusion.

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22 <sup>107</sup> See NRS 534.120 (State Engineer can make orders *deemed essential for the welfare*  
23 *of the area*); NRS 533.367 (permittees must “ensure that wildlife which customarily uses  
the water will have access to it”).

24 <sup>108</sup> *Mineral County v. Lyon County*, 136 Nev. 503, 515, 473 P.3d 418, 427 (2020).







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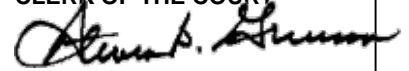
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7 DATED this 11th day of January 2022.

8 */s/ Thomas Duensing*  
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**DISTRICT COURT**  
**CLARK COUNTY, NEVADA**

12 **LAS VEGAS VALLEY WATER**  
13 **DISTRICT, and SOUTHERN NEVADA**  
14 **WATER AUTHORITY**

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Petitioners,

vs.

ADAM SULLIVAN, P.E., Nevada State  
Engineer, DIVISION OF WATER  
RESOURCES, DEPARTMENT OF  
CONSERVATION AND NATURAL  
RESOURCES,

Respondents.

Case No. A-20-816761-C

Dept. No. 1

Consolidated with Cases:

A-20-817765-P, A-20-818015-P, A-20-  
817977-P, A-20-818069-P, A-20-  
817840-P, A-20-817876-P, A-21-  
833572-J

**APPENDIX TO REPLY BRIEF (1  
OF 3)**

As requested by Judge Yeager this appendix contains excerpts from the record on  
appeal that were cited to in the Las Vegas Valley Water District and Southern Nevada

1 Water Authority's answering brief in the consolidated petitions for judicial review of  
2 Order 1309. Excerpts from the record on appeal are attached as Exhibit 1.

3  
4 **AFFIRMATION:** The undersigned does hereby affirm that the preceding  
5 document and/or attachments do not contain the social security number of any person.  
6 Dated this 11th day of January 2022.

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<b>Exhibit No.</b>	<b>Exhibit Title</b>
1	Excerpts from Record on Appeal



## CERTIFICATE OF SERVICE

I certify that I am an employee of Taggart & Taggart, LTD, and that on this 11th day of January 2022, I served a true and correct copy of the foregoing document by electronic service to the participants in this case who are registered with the Eighth Judicial District Court's Odyssey eFile NV File & Serve system to this matter:

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TABLE OF JA LOCATION TO AVOID DUPLICATES

Document Description	SE ROA Bates #		JA VOLUME	JA BATES	
Order 1309	2	69	2	JA_326	JA_393
Interim Order 1303	70	88	2	JA_394	JA_412
Amended Notice of Hearing	284	301	2	JA_486	JA_503
Motion to Associate Counsel (Moapa Band of Paiutes)	445	483	2	JA_639	JA_677
Notice of Pre-Hearing Conference	513	518	2	JA_697	JA_702
Transcript of Proceedings - Pre Hearing Conference	519	552	2	JA_703	JA_736
NSE Ex 2 – Order 1169A	654	658	3	JA_819	JA_823
NSE Ex 3 - Order 1169	659	669	3	JA_824	JA_834
NSE Ex 14 - Ruling 6254	726	754	3	JA_891	JA_919
NSE Ex 15 – Ruling 6255	755	785	3	JA_920	JA_950
NSE Ex 16 – Ruling 6256	786	815	3	JA_951	JA_980
NSE Ex 17 – Ruling 6257	816	847	3	JA_981	JA_1012
NSE Ex 18 – Ruling 6258	848	884	3	JA_1013	JA_1049
NSE Ex 19 – Ruling 6259	885	905	3	JA_1050	JA_1070
NSE Ex 20 – Ruling 6260	906	928	3	JA_1071	JA_1093
NSE Ex 21 – Ruling 6261	929	948	3	JA_1094	JA_1113
NSE Ex 23 – Hydrographic Abstracts Kane Springs Valley (Basin 206)	992	994	3	JA_1157	JA_1159
NSE Ex 229 – 2016 Southern Nevada Water Authority Muddy River Intentionally Created Surplus Certification Report	8674	8927	4	JA_1681	JA_1934
NSE Ex 230 – 2017 Southern Nevada Water Authority Muddy River Intentionally Created Surplus Certification Report	8928	9198	4	JA_1935	JA_2205
NSE Ex 232 – State of Nevada, Department of Conservation and Natural Resources, GroundWater Resources – Reconnaissance Series Report 25: Ground-Water Appraisal of Coyote Spring and Kane Spring Valleys and Muddy River Springs Area, Lincoln and Clark Counties, Nevada, by Thomas E. Eakin February 1964	9296	9347	5	JA_2303	JA_2354
NSE Ex 256 – Federal Bureaus Order 1169 Report	10883	10974	8	JA_3645	JA_3736
NSE Ex 333 - Muddy River Decree	33770	33816	13	JA_6634	JA_6680
NSE Ex 336 – LWRFS Sign-in sheet	33863	33868	13	JA_6687	JA_6692
NSE Ex 337 – LWRFS Sign-in sheet	33869	33874	13	JA_6693	JA_6698
NSE Ex 338 – LWRFS Sign-in sheet	33875	33880	13	JA_6699	JA_6704

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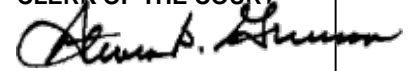
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NSE Ex 340 – LWFRS Sign-in sheet	33887	33892	13	JA_6711	JA_6716
NSE Ex 341 – LWFRS Sign-in sheet	33893	33898	13	JA_6717	JA_6722
NSE Ex 342 – LWFRS Sign-in sheet	33899	33904	13	JA_6723	JA_6728
NSE Ex 343 – LWFSR Sign-in sheet	33905	33910	13	JA_6729	JA_6734
NSE Ex 344 – LWFRS Sign-in sheet	33911	33916	13	JA_6735	JA_6740
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BEDROC Ex 5 – NDWR Permit 83044	33952	33956	13	JA_6764	JA_6769
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NCA Ex 15 – Assessment of Lower White River Flow System Water Resource Conditions and Aquifer Response	40592	40734	<b>attached</b>		
SNWA Ex 24 – Muddy River Tributary Conservation Intentionally Created Surplus Certification Report Calendar Year 2008	43840	44065	26	JA_11561	JA_11562
NCA Ex 47 – Water Permit	41851	41870	27	JA_11762	JA_11781
NVE Ex 1 – NV Energy Rebuttal Report	41875	41886	27	JA_11786	JA_11797
SNWA Ex 7 – Assessment of LWRFS Water Resource Conditions and Aquifer Response	41930	42072	27	JA_11813	JA_11955
SNWA Ex 8 – Assessment of Moapa Dace and Other Groundwater-Dependent Special Status Species in the LWRFS	42073	42164	28	JA_11956	JA_12047
SNWA Ex 9 – Response to Stakeholder Reports Submitted to the Nevada State Engineer	42165	42214	28	JA_12048	JA_12097
SNWA Ex 24-A – SNWA Virgin and Muddy Rivers Tributary Conservation, Intentionally Created Surplus (ISC) Project	44066	44071	30	JA_13795	JA_13800
SNWA Ex 24-B-1 – Approval Letter from USBR on ICS plan	44072	44074	30	JA_13801	JA_13803
SNWA Ex 24-B-4 – Order 1194	44107	44110	30	JA_13804	JA_13807
SNWA Ex 30 – Muddy River Tributary Conservation Intentionally Created Surplus Certification Report Calendar Year 2014	46107	46190	31	JA_13808	JA_13891

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SNWA Ex 31 – Muddy River Tributary Conservation Intentionally Created Surplus Certification Report Calendar Year 2015	46345	46430	31	JA_13892	JA_13977
SNWA Ex 31-C – Order 1194	46469	46472	30	JA_13804	JA_13807
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Hearing Transcript Vol. III(b)	53212	53251	44	JA_17609	JA_17648
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Hearing Transcript Vol. X	53709	53758	44	JA_18106	JA_18155
Kane Springs Valley Well Construction and Testing	54234	54247	46	JA_18372	JA_18385



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11 **CLARK COUNTY, NEVADA**

12 LAS VEGAS VALLEY WATER DISTRICT,  
and SOUTHERN NEVADA WATER  
13 AUTHORITY,

14 Petitioners,

15 vs.

16 ADAM SULLIVAN, P.E., Nevada  
State Engineer, DIVISION OF  
17 WATER RESOURCES, DEPARTMENT OF  
CONSERVATION AND NATURAL  
18 RESOURCES,

19 Respondent.

20 And All Consolidated Cases.

Case No. A-20-816761-C  
Dept. No. I

Consolidated with:

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A-20-817840-P  
A-20-817876-P  
A-21-833572-J

22 **RESPONDENT'S AMENDED EXCERPTS OF RECORD**

23 Respondent Adam Sullivan, P.E., in his capacity as the Nevada State Engineer,  
24 Department of Conservation and Natural Resources, Division of Water Resources  
25 (hereafter "State Engineer"), by and through counsel, files this amended excerpts of record.  
26 On January 7, 2022 the State Engineer filed an amended record on appeal. This amended  
27 excerpts of record reflects the amended record on appeal. Only the documents bolded in  
28 the index below have been replaced.

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DATED this 19th day of January, 2022.

AARON D. FORD  
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IN THE OFFICE OF THE STATE ENGINEER  
OF THE STATE OF NEVADA

#1309

ORDER

**DELINEATING THE LOWER WHITE RIVER FLOW SYSTEM HYDROGRAPHIC  
BASIN WITH THE KANE SPRINGS VALLEY BASIN (206), COYOTE SPRING  
VALLEY BASIN (210), A PORTION OF BLACK MOUNTAINS AREA BASIN (215),  
GARNET VALLEY BASIN (216), HIDDEN VALLEY BASIN (217), CALIFORNIA  
WASH BASIN (218), AND MUDDY RIVER SPRINGS AREA (AKA UPPER MOAPA  
VALLEY) BASIN (219) ESTABLISHED AS SUB-BASINS, ESTABLISHING A  
MAXIMUM ALLOWABLE PUMPING IN THE LOWER WHITE RIVER FLOW  
SYSTEM WITHIN CLARK AND LINCOLN COUNTIES, NEVADA,  
AND RESCINDING INTERIM ORDER 1303**

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**I. BACKGROUND OF THE ADMINISTRATION OF THE LOWER WHITE  
RIVER FLOW SYSTEM BASINS**

WHEREAS, the State Engineer has actively managed and regulated the Coyote Spring Valley Hydrographic Basin (Coyote Spring Valley), Basin 210, since August 21, 1985; the Black Mountains Area Hydrographic Basin (Black Mountains Area), Basin 215, since November 22, 1989; the Garnet Valley Hydrographic Basin (Garnet Valley), Basin 216, since April 24, 1990; the Hidden Valley Hydrographic Basin (Hidden Valley), Basin 217, since April 24, 1990; the California Wash Hydrographic Basin (California Wash), Basin 218, since April 24, 1990; and the

Muddy River Springs Area Hydrographic Basin (Muddy River Springs Area), Basin 219, since July 14, 1971.<sup>1</sup>

WHEREAS, in 1984, the United States Department of Interior, Geological Survey (USGS), Water Services Division, proposed a ten-year investigation into carbonate-rock aquifers that underlay approximately 50,000 square miles of eastern and southern Nevada.<sup>2</sup> In 1985, a program for the study and testing of the carbonate-rock aquifer system of eastern and southern Nevada was authorized by the Nevada Legislature. In 1989, a report was published by the USGS summarizing the first phase of the study.<sup>3</sup> Included in the summary was a determination that:

Large-scale development (sustained withdrawals) of water from the carbonate-rock aquifers would result in water-level declines and cause the depletion of large quantities of stored water. Ultimately, these declines would cause reductions in the flow of warm-water springs that discharge from the regional aquifers. Storage in other nearby aquifers also might be depleted, and water levels in those other aquifers could decline. In contrast, isolated smaller ground-water developments, or developments that withdraw ground water for only a short time, may result in water-level declines and springflow reductions of manageable or acceptable magnitude.

Confidence in predictions of the effects of development, however, is low; and it will remain low until observations of the initial hydrologic results of development are analyzed. A strategy of staging developments gradually and adequately monitoring the resulting hydrologic conditions would provide information that eventually could be used to improve confidence in the predictions.<sup>4</sup>

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<sup>1</sup> See NSE Ex. 9, *Order 905*, Hearing on Interim Order 1303, official records of the Division of Water Resources. See NSE Ex. 8, *Order 1018*, Hearing on Interim Order 1303, official records of the Division of Water Resources. See NSE Ex. 5, *Order 1025*, Hearing on Interim Order 1303, official records of the Division of Water Resources. See NSE Ex. 6, *Order 1024*, Hearing on Interim Order 1303, official records of the Division of Water Resources. See NSE Ex. 4, *Order 1026*, Hearing on Interim Order 1303, official records of the Division of Water Resources. See NSE Ex. 7, *Order 1023*, Hearing on Interim Order 1303, official records of the Division of Water Resources; NSE Ex. 11, *Order 392*, Hearing on Interim Order 1303, official records of the Division of Water Resources.

<sup>2</sup> Memorandum dated August 3, 1984, from Terry Katzer, Nevada Office Chief, Water Resources Division, United States Department of Interior Geological Survey, Carson City, Nevada to Members of the Carbonate Terrane Study.

<sup>3</sup> Michael D. Dettinger, *Distribution of Carbonate-Rock Aquifers in Southern Nevada and the Potential for their Development, Summary of Findings, 1985-1988*, Summary Report No. 1, U.S. Geological Survey, Department of Interior and Desert Research Institute, University of Nevada System, 1989, p. Forward. See also NSE Ex. 3, *Order 1169*, Hearing on Interim Order 1303, official records of the Division of Water Resources.

<sup>4</sup> *Id.*, p. 2.

**WHEREAS**, beginning in 1989 and through the early 2000s, numerous groundwater applications were filed in Coyote Spring Valley, Black Mountains Area, Garnet Valley, Hidden Valley, California Wash, and Muddy River Springs Area Hydrographic Basins seeking to appropriate more than 300,000 acre-feet annually (afa) of groundwater from the carbonate-rock aquifer underlying these basins.<sup>5</sup> The State Engineer held a hearing on July 12-20, 23-24, and August 31, 2001, for pending Applications 54055–54059, filed by Las Vegas Valley Water District (LVVWD) to appropriate 27,510 afa of water in Coyote Spring Valley.<sup>6</sup> The State Engineer conducted a hearing on Coyote Springs Investments LLC (CSI) Applications 63272–63276 on August 20-24, 27-28, 2001.<sup>7</sup>

**WHEREAS**, following the conclusions of these hearings, the State Engineer issued Order 1169 on March 8, 2002, requiring all pending applications in Coyote Spring Valley, Black Mountains Area, Garnet Valley, Hidden Valley, Muddy River Springs Area, and Lower Moapa Valley Hydrographic Basin (Basin 220), be held in abeyance pending an aquifer test of the carbonate-rock aquifer system to better determine whether the pending applications and future appropriations could be developed from the carbonate-rock aquifer.<sup>8</sup>

**WHEREAS**, in Order 1169, the State Engineer found that he did not believe that it was prudent to issue additional water rights to be pumped from the carbonate-rock aquifer until a significant portion of the then existing water rights were pumped for a substantial period of time to determine whether the pumping of those water rights would have a detrimental impact on existing water rights or the environment.<sup>9</sup>

**WHEREAS**, Order 1169 required that at least 50%, or 8,050 afa, of the water rights then currently permitted in Coyote Spring Valley be pumped for at least two consecutive years.<sup>10</sup> On April 18, 2002, the State Engineer added the California Wash to the Order 1169 aquifer test basins.<sup>11</sup>

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<sup>5</sup> See NSE Exs. 14–20, *Ruling 6254–Ruling 6260*, Hearing on Interim Order 1303, official records of the Division of Water Resources.

<sup>6</sup> See NSE Ex. 14.

<sup>7</sup> *Id.*

<sup>8</sup> See NSE Ex. 3.

<sup>9</sup> *Id.*

<sup>10</sup> *Id.*

<sup>11</sup> See State Engineer's Ruling 5115, dated April 18, 2002, official records of the Division of Water Resources.

**WHEREAS**, subsequent to the issuance of Order 1169, the United States Fish and Wildlife Service (USFWS) expressed concern that current groundwater pumping coupled with additional groundwater withdrawals in Coyote Spring Valley and California Wash may cause reduction of spring flow to the Warm Springs area, tributary thermal springs in the upper Muddy River, which serves as critical habitat to the Moapa dace (*Moapa corciacea*), an endemic fish species federally listed as endangered in 1967.<sup>12</sup> Due to these concerns, on April 20, 2006, the Southern Nevada Water Authority (SNWA), USFWS, CSI, the Moapa Band of Paiute Indians (MBOP) and the Moapa Valley Water District (MVWD) entered into a Memorandum of Agreement (MOA).<sup>13</sup>

**WHEREAS**, the MOA stated that all the parties shared “a common interest in the conservation and recovery of the Moapa dace and its habitat.” The MOA established certain protections to the Moapa dace, including protocols relating to pumping from the regional carbonate-rock aquifer that may adversely impact spring flow to the dace habitat in the Warm Springs area. Specifically, the MOA identified conservation measures, which included protections for minimum instream flows in the Warm Springs area with trigger levels set at 3.2 cubic feet per second (cfs) at the Warm Springs West gage requiring initial action by the MOA parties, and the most stringent action required at a flow rate of 2.7 cfs.<sup>14</sup>

**WHEREAS**, the MBOP raised concerns that pumping 8,050 afa from the Coyote Spring Valley as part of the aquifer test would adversely impact the water resources at the Warm Springs area, and consequently the Moapa dace, and that the impacts would persist such that protective measures established in the MOA would be inadequate to protect the dace.<sup>15</sup> As a result, the Order 1169 study participants, which included the LVVWD, SNWA, CSI, Nevada Power Company,<sup>16</sup> MVWD, Dry Lake Water Company, LLC, Republic Environmental Technologies, Inc. (Republic),

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<sup>12</sup> USFWS, *Fish and Aquatic Conservation - Moapa dace*, <https://bit.ly/moapadace> (last accessed June 3, 2020). See also SNWA Ex. 8, p. 1-1.

<sup>13</sup> See NSE Ex. 236, *2006 Memorandum of Agreement between the Southern Nevada Water Authority, United States Fish and Wildlife Service, Coyote Springs Investment LLC, Moapa Band of Paiute Indians and Moapa Valley Water District*, Hearing on Interim Order 1303, official records of the Division of Water Resources.

<sup>14</sup> *Id.*

<sup>15</sup> See May 26, 2010, letter from Darren Daboda, Chairperson, Moapa Band of Paiutes, to Jason King, Nevada State Engineer, official records of the Division of Water Resources.

<sup>16</sup> Nevada Power Company, following the merger with Sierra Pacific Power Company and Sierra Pacific Resources subsequently began doing business as NV Energy. See, e.g., NV Energy, *Company History*, <https://bit.ly/NVEhistory> (last accessed April 20, 2020).

Chemical Lime Company, Nevada Cogeneration Associates, and the MBOP, or their successors, agreed that even if the minimum 8,050 afa was not pumped, sufficient information would be obtained to inform future decisions relating to the study basins.<sup>17</sup>

**WHEREAS**, on November 15, 2010, the Order 1169 aquifer test began, whereby the study participants began reporting to the Nevada Division of Water Resources (Division) on a quarterly basis the amounts of water pumped from wells in the carbonate-rock and alluvial aquifers during the pendency of the aquifer test.

**WHEREAS**, on December 21, 2012, the State Engineer issued Order 1169A declaring the completion of the Order 1169 aquifer test to be December 31, 2012, after a period of 25½ months. The State Engineer provided the study participants the opportunity to file reports with the Division until June 28, 2013, to present information gained from the aquifer test in order to estimate water to support applications in the Order 1169 study basins.<sup>18</sup>

**WHEREAS**, during the Order 1169 aquifer test, an average of 5,290 acre-feet per year (afy) was pumped from carbonate-rock aquifer wells in Coyote Spring Valley, and a cumulative reported total of 14,535 afy of water was pumped throughout the Order 1169 study basins. Of this total, approximately 3,840 afy was pumped from the Muddy River Springs Area alluvial aquifer with the balance pumped from the carbonate-rock aquifer.<sup>19</sup>

**WHEREAS**, during the aquifer test, pumpage was measured and reported from 30 other wells in the Coyote Spring Valley, Muddy River Springs Area, Garnet Valley, California Wash, Black Mountains Area, and Lower Meadow Valley Wash Hydrographic Basin (Lower Meadow Valley Wash). Stream diversions from the Muddy River were reported, and measurements of the natural discharge of the Muddy River and from the Warm Springs area springs were collected daily. Water-level data were collected from a total of 79 monitoring and pumping wells within the Order 1169 study basins. All of the data collected during the aquifer test were made available to each of the study participants and the public.<sup>20</sup>

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<sup>17</sup> See July 1, 2010, letter from Jason King, Nevada State Engineer, to Order 1169 Study Participants, official records of the Division of Water Resources.

<sup>18</sup> See NSE Ex. 2, *Order 1169A*, Hearing on Interim Order 1303, official records of the Division of Water Resources.

<sup>19</sup> See, e.g., NSE Ex. 1, Appendix B.

<sup>20</sup> See Division, *Water Use and Availability – Order 1169*, <https://bit.ly/Order1169>

**WHEREAS**, during the Order 1169 aquifer test, the resulting water-level decline encompassed 1,100 square miles and extended from southern Kane Springs Valley, northern Coyote Spring Valley through the Muddy River Springs Area, Hidden Valley, Garnet Valley, California Wash, and the northwestern portion of the Black Mountains Area.<sup>21</sup> The water-level decline was estimated to be 1 to 1.6 feet throughout this area with minor drawdowns of 0.5 foot or less in the northern portion of Coyote Spring Valley north of the Kane Springs Wash fault zone.<sup>22</sup>

**WHEREAS**, results of the two-year aquifer test demonstrated that pumping 5,290 afa from the carbonate-rock aquifer in Coyote Spring Valley, in addition to the other carbonate-rock aquifer pumping in Garnet Valley, Muddy River Springs Area, California Wash and the northwest portion of the Black Mountains Area, caused sharp declines in groundwater levels and flows in the Pederson and Pederson East springs, two springs considered to be sentinel springs for the overall condition of the Muddy River due to being higher in altitude than other Muddy River source springs, and therefore are proportionally more affected by a decline in groundwater level in the carbonate-rock aquifer.<sup>23</sup> The Pederson spring flow decreased from 0.22 cfs to 0.08 cfs and the Pederson East spring flow decreased from 0.12 cfs to 0.08 cfs. Additional headwater springs at lower altitude, the Baldwin and Jones springs, declined approximately 4% in spring flow during the test.<sup>24</sup> All of the headwater springs contribute to the decreed and fully-appropriated Muddy River and are the predominant source of water that supplies the habitat of the endangered Moapa dace.

**WHEREAS**, Order 1169A provided the study participants an opportunity to submit reports addressing three specific questions presented by the State Engineer: (1) what information was obtained from the study/pumping test; (2) what were the impacts of pumping under the pumping test; and, (3) what is the availability of additional water resources to support the pending applications. SNWA, USFWS, National Park Service (NPS) and Bureau of Land Management

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<sup>21</sup> USFWS Ex. 5, *Report in Response to Order 1303*, Hearing on Interim Order 1303, official records of the Division of Water Resources, pp. 21, 67. *See, e.g.*, NSE Ex. 14. *See also* NSE Ex. 256, *Federal Bureaus Order 1169A Report*, Hearing on Interim Order 1303, official records of the Division of Water Resources. There was no groundwater pumping in Hidden Valley, but effects were still observed in the Hidden Valley monitor well.

<sup>22</sup> *See, e.g.*, NSE Ex. 14. *See also* NSE Ex. 256.

<sup>23</sup> *See* NSE Ex. No. 236.

<sup>24</sup> NSE Ex. 256, pp. 43–46, 50–51. *See also*, USGS, *Water Data for Nevada*, <https://bit.ly/nvwater>.



(BLM), MBOP, MVWD, CSI, Great Basin Water Network (GBWN) and Center for Biological Diversity (CBD) submitted either reports or letters.

**WHEREAS**, in its report, SNWA addressed water levels throughout the Order 1169 basins. SNWA acknowledged that hydrologic connectivity supported the potential need for redistribution of existing pumping, and indirectly acknowledged the limitation on availability of water to satisfy the pending applications.<sup>25</sup> SNWA further acknowledged declines to spring flow in the Pederson and Pederson East springs as a result of the aquifer test, but characterized the decline in spring flow at the Warm Springs West location as minimal. SNWA further correlated the declining trends as associated with climate but opined that Muddy River flow did not decline as a result of the aquifer test and carbonate-rock aquifer pumping; rather, impact to Muddy River flows were due to alluvial aquifer pumping.<sup>26</sup>

**WHEREAS**, CSI, through a letter, agreed with SNWA's report and asserted that additional water resources could be developed within the Coyote Spring Valley north of the Kane Springs Fault, which supported granting new appropriations of water.<sup>27</sup>

**WHEREAS**, the United States Department of Interior Bureaus (USFWS, NPS and BLM) concluded that the aquifer test provided sufficient data to determine the effects of the aquifer drawdown as well as identify drawdown throughout the region and was sufficient to project future pumping effects on spring flow. Based upon their analysis, the Department of Interior Bureaus concluded that water-level declines due to the aquifer test encompassed 1,100 square miles throughout the Order 1169 study basins. Additionally, the Department of Interior Bureaus' analysis found a direct correlation between the aquifer test pumping and flow declines at Pederson, Plummer and Apcar units and Baldwin Spring, all springs critical to the Moapa dace habitat, and asserted that pumping at the Order 1169 rate at well MX-5 in Coyote Spring Valley could result in both of the high-altitude Pederson and Pederson East springs going dry in 3 years or less.<sup>28</sup>

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<sup>25</sup> See NSE Ex. 245, *Southern Nevada Water Authority Order 1169 Report*, Hearing on Interim Order 1303, official records of the Division of Water Resources, pp. 23–25.

<sup>26</sup> *Id.*

<sup>27</sup> NSE Ex. 247, *Coyote Springs Investments, LLC Order 1169 Report*, Hearing on Interim Order 1303, official records of the Division of Water Resources.

<sup>28</sup> See, e.g., NSE Ex. 14, pp.15–18. See also NSE Ex. 256.

**WHEREAS**, the Department of Interior Bureaus further found that the groundwater withdrawals that occurred in Coyote Spring Valley during the Order 1169 aquifer test represented approximately one-third of the then existing water rights within Coyote Spring Valley, concluding that even one-third of the existing water rights could not be developed without adversely impacting spring flow to the headwaters of the Muddy River and habitat for the Moapa dace.<sup>29</sup> Ultimately, the Department of Interior Bureaus concluded that there was insufficient water available for the pending applications, and that the area that was subject to the Order 1169 aquifer test behaved as one connected aquifer and pumping in one basin would have similar effects on the whole aquifer.<sup>30</sup>

**WHEREAS**, MBOP's report disagreed with the magnitude of drawdown resulting from the Order 1169 aquifer test, but ultimately concluded carbonate-rock aquifer pumping in Coyote Spring Valley and the Muddy River Springs Area would have a one-to-one impact on Muddy River flows.<sup>31</sup> MBOP opined to the existence of a southern flow field, which included California Wash, Hidden Valley, Garnet Valley, and the northwest portion of the Black Mountains Area, that could be developed without depleting spring flows. MBOP also argued that changes in the groundwater levels were directly tied to water level declines in Lake Mead.<sup>32</sup>

**WHEREAS**, MVWD's report was limited to water levels and flows within the Muddy River Springs Area. In its report, MVWD acknowledged the groundwater level declines resulting from the aquifer test, including decreased spring flow at the Pederson springs, Warm Springs West gage and Baldwin Spring, but not at Jones Spring or Muddy Spring.<sup>33</sup> Ultimately, MVWD concluded that additional water was available in the Lower Moapa Valley, as that aquifer did not appear hydrologically connected to the regional carbonate-rock aquifer.

**WHEREAS**, GBWN presented a report that recognized the decline in the groundwater levels in Coyote Spring Valley and discharge to the Muddy River Springs Area resulting from the

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<sup>29</sup> *Id.*

<sup>30</sup> *Id.*

<sup>31</sup> See NSE Ex. 252, *Moapa Band of Paiute Indians Order 1169 Report*, Hearing on Interim Order 1303, official records of the Division of Water Resources, p. 25.

<sup>32</sup> *Id.*

<sup>33</sup> NSE Ex. 250, *Moapa Valley Water District Basin 220 Well Site Analysis*, Hearing on Interim Order 1303, official records of the Division of Water Resources; NSE Ex. 251, *Moapa Valley Water District Evaluation of MX-5 Pumping Test on Springs and Wells in the Muddy Springs Area*, dated June 24, 2013, Hearing on Interim Order 1303, official records of the Division of Water Resources.

aquifer test.<sup>34</sup> However, GBWN believed that the aquifer test failed to provide sufficient data to determine water availability throughout the other study basins. GBWN did assert that pumping of existing rights within all of the study basins would unacceptably decrease spring discharge.<sup>35</sup>

**WHEREAS**, CBD, relying on GBWN's technical report, opined that pumping existing water rights within the Order 1169 study basins would result in unacceptable decline in spring flow, ultimately threatening the Moapa dace and the habitat necessary for the species survival.<sup>36</sup>

**WHEREAS**, based upon the findings of the Order 1169 aquifer test, in denying the pending applications the State Engineer found: (1) that the information obtained from the Order 1169 aquifer test was sufficient to document the effects of pumping from the carbonate-rock aquifer on groundwater levels and spring flow and that the information could assist in forming opinions regarding future impacts of groundwater pumping and availability of groundwater in the study basins; (2) that the impacts of aquifer test pumping in Coyote Spring Valley was widespread throughout the Order 1169 aquifer test study basins and that the additional pumping in Coyote Spring Valley was a significant contributor to the decline in the springs that serve as the headwaters of the Muddy River and habitat for the Moapa dace; and, (3) that additional pumping from the then pending applications would result in significant regional water-level decline, and decreases in spring and Muddy River flows.<sup>37</sup>

**WHEREAS**, the basins that were included in the Order 1169 aquifer test were acknowledged to have a unique hydrologic connection and share the same supply of water.<sup>38</sup> The State Engineer further went on to find that the total annual supply to the basins could not be more than 50,000 acre-feet, that the perennial yield is much less than that because the Muddy River and the springs in the Warm Springs area utilize the same supply, and that the quantity and location of

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<sup>34</sup> NSE Ex. 246, *Great Basin Water Network Order 1169 Report*, Hearing on Interim Order 1303, official records of the Division of Water Resources.

<sup>35</sup> *Id.*

<sup>36</sup> NSE Ex. 248, *Center for Biological Diversity Order 1169 Report*, Hearing on Interim Order 1303, official records of the Division of Water Resources.

<sup>37</sup> NSE Exs. 14–21. The study basins include Coyote Spring Valley, Garnet Valley, Hidden Valley, Muddy River Springs Area, California Wash, and that portion of the Black Mountains Area lying within the LWRFS was defined as those portions of Sections 29, 30, 31, 32, and 33, T.18S., R.64E., M.D.B.&M.; Section 13 and those portions of Sections 1, 11, 12, and 14, T.19S., R.63E., M.D.B.&M.; Sections 5, 7, 8, 16, 17, and 18 and those portions of Sections 4, 6, 9, 10, and 15, T.19S., R.64E., M.D.B.&M.

<sup>38</sup> *See, e.g.*, NSE Ex. 14, p. 24.

any groundwater that could be developed without conflicting with senior rights on the Muddy River and the springs was uncertain.<sup>39</sup>

## II. INTERIM ORDER 1303

**WHEREAS**, on January 11, 2019, the State Engineer issued Interim Order 1303 designating the Lower White River Flow System (LWRFS), a multi-basin area known to share a close hydrologic connection, as a joint administrative unit for purposes of administration of water rights. The Interim Order defined the LWRFS to consist of the Coyote Spring Valley, Muddy River Springs Area, California Wash, Hidden Valley, Garnet Valley, and the portion of the Black Mountains Area Hydrographic Basins as described in the Interim Order.<sup>40</sup> Pursuant to Interim Order 1303, all water rights within the LWRFS were to be administered based upon their respective dates of priority in relation to other rights within the regional groundwater unit.

**WHEREAS** Interim Order 1303 recognized the need for further analysis of the LWRFS because the pre-development discharge of 34,000 acre-feet of the Muddy River system plus the more than 38,000 acre-feet of existing groundwater appropriations within the LWRFS greatly exceed the total water budget, which was determined to be less than 50,000 acre-feet.<sup>41</sup> Stakeholders with interests in water right development within the LWRFS were invited to file a report with the Office of the State Engineer addressing four specific matters, generally summarized as: 1) The geographic boundary of the LWRFS, 2) aquifer recovery subsequent to the Order 1169 aquifer test, 3) the long-term annual quantity and location of groundwater that may be pumped from the LWRFS, and 4) the effect of movement of water rights between alluvial and carbonate wells within the LWRFS. Stakeholders were also invited to address any other matter believed to be relevant to the State Engineer's analysis.

**WHEREAS**, on May 13, 2019, the State Engineer amended Interim Order 1303 modifying the deadlines for the submission of reports and rebuttal reports by interested stakeholders. Reports

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<sup>39</sup> *Id.*

<sup>40</sup> See NSE Ex. 1, *Order 1303 and Addendum to Interim Order 1303*, Hearing on Interim Order 1303, official records of the Division of Water Resources.

<sup>41</sup> *Id.*, p. 7.

submitted by interested stakeholders were intended to aid in the fact-finding goals of the Division.<sup>42</sup>

**WHEREAS**, a public hearing was held in Carson City, Nevada between, September 23, 2019, and October 4, 2019. The purposes of this hearing were to afford stakeholder participants who submitted reports pursuant to the solicitation in Interim Order 1303 an opportunity to provide testimony on the scientific data analysis regarding the five topics within the Interim Order and to test the conclusions offered by other stakeholder participants.

**WHEREAS**, during the Interim Order 1303 hearing, testimony was provided by expert witnesses for the participants CSI, USFWS, NPS, MBOP, SNWA and LVVWD<sup>43</sup>, MVWD, Lincoln County Water District and Vidler Water Company (LC-V), City of North Las Vegas (CNLV), CBD, Georgia Pacific Corporation (Georgia Pacific) and Republic, Nevada Cogeneration Associates Nos. 1 and 2 (collectively "NCA"), Muddy Valley Irrigation Company (MVIC), Western Elite Environmental, Inc. and Bedroc Limited, LLC (collectively "Bedroc"), and NV Energy.

**WHEREAS**, following the conclusion of the Interim Order 1303 hearing, stakeholder participants were permitted to submit written closing statements no later than December 3, 2019. The specific area evaluated, data analyzed, and methodology used varied by participant. Generally, participants relied on spring and streamflow discharge, groundwater level measurements, geologic and geophysical information, pumping data, climate data, and interpretations of aquifer hydraulics. Methodologies applied ranged from conceptual observations to statistical analysis to numerical and analytical models; the level of complexity and uncertainty differing for each.

**WHEREAS**, each of the participants' conclusions with respect to the topics set forth in Interim Order 1303 are summarized as follows:

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<sup>42</sup> *Id.*, pp. 16–17.

<sup>43</sup> SNWA is a regional water authority with seven water and wastewater agencies, one of which is LVVWD. References to SNWA include its member agency, LVVWD, which too retains water rights and interests within the LWRFS.

*Center for Biological Diversity*

The primary concern of the CBD was to ensure adequate habitat for the survival and recovery of the Moapa dace. CBD felt "that the Endangered Species Act is the primary limiting factor on the overall quantity of allowable pumping within the [LWRFS] and thus [...] geared [the] analysis toward that goal of protecting the dace." The Moapa dace primarily resides in the springs and pools of the Muddy River; protecting those areas of habitat are of the utmost importance to CBD's goal and have the collateral benefit of protecting the Muddy River decreed rights. Furthermore, CBD "believe[d] that withdrawals from the carbonate aquifer that cause a reduction in habitat quantity for the dace are a take under the Endangered Species Act and thus prohibited."<sup>44</sup>

CBD urges that Kane Springs Valley Hydrographic Basin (Kane Springs Valley) be included and managed as part of the LWRFS; otherwise CBD did not dispute the boundary as presented in Interim Order 1303. The inclusion of Kane Springs Valley was based on a shallow hydraulic gradient between Coyote Spring Valley and Kane Springs Valley; propagation of water level decline into Kane Springs Valley during the Order 1169 aquifer test; and a finding that the carbonate-rock aquifer extends into Kane Springs Valley. In CBD's opinion, adequate management of the LWRFS does not require that the administrative boundary include the White River Flow System north of Coyote Spring Valley.<sup>45</sup>

CBD identified a long-term, declining trend commencing in the 1990s in carbonate-rock aquifer water levels within the Muddy River Springs Area, which was accelerated by the Order 1169 aquifer test. Although CBD observed a partial, immediate recovery in the carbonate-rock aquifer water levels and spring flows, CBD finds that full recovery to pre-Order 1169 aquifer test conditions were never realized. Concurring with multiple other participants, CBD identified higher water levels in response to wet years despite the continued decline in the overall trend in the hydrographs. However, with regards to long-term drought, in their review of the Climate Division Data for southern Nevada, CBD saw no indication of a 20-year drought and disagreed with the conclusions and analysis presented by MBOP. Decreased spring flows in conjunction with

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<sup>44</sup> See CBD Ex. 3, *CBD Order 1303 Report by Dr. Tom Myers*; 27 pp., Hearing on Interim Order 1303, official records of the Division of Water Resources, p. 1; Transcript 1504–1505.

<sup>45</sup> See CBD Ex. 3, pp. 1, 2, 12, 17, 19; See CBD Ex. 4, *CBD Order 1303 Rebuttal in Response to Stakeholder Reports by Dr. Tom Myers*; 30 pp., Hearing on Interim Order 1303, official records of the Division of Water Resources, pp. 17–21; Tr. 1516; 1520–1521; 1526–1527; 1538–1539; CSI Ex. 2, p. 38; LC-V Ex. 2, pp. 11–14.

increased carbonate-rock aquifer pumping, led the CBD to infer the dependency of spring flows on carbonate-rock aquifer water supply.<sup>46</sup>

Again, with emphasis on protecting spring flows, and thus the Moapa dace habitat, CBD did not support any pumping of the carbonate-rock aquifer. CBD's desired outcome would be to avoid decreases in spring flow in the Warm Springs area attributed to continued carbonate-rock aquifer pumping. CBD postulated that surface water rights on the Muddy River will be protected by limiting carbonate-rock aquifer pumping.

Alternatively, CBD speculated that some alluvial aquifer pumping, within the Muddy River Springs Area and Coyote Spring Valley, could be sustained without significantly impacting the Warm Springs area. A preliminary estimate of 4,000 afa of sustainable alluvial aquifer pumping was proposed, based on the existing pumping within the Muddy River Springs Area and considering pumping in the 1990s near 5,000 afa when alluvial aquifer water levels were stable.<sup>47</sup>

*Church of Jesus Christ of Latter-day Saints*

The Church of Jesus Christ of Latter-day Saints (the Church) chose not to directly participate in the hearing but joined the evidentiary submissions of CNLV.<sup>48</sup> In response to the directives set forth in Interim Order 1303 and considering the testimony provided, the Church requests the continued administration and management of the LWRFS as identified in Interim Order 1303, and to allow for change applications throughout the LWRFS basins that move pumping of groundwater further away from the Muddy River Springs Area and from the alluvial aquifer to the carbonate-rock aquifer. The Church further requests that the testimony and recommendation of Dwight Smith, PE, PG on behalf of CNLV be considered and adopted.<sup>49</sup>

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<sup>46</sup> See CBD Ex. 3, pp. 1, 24; See CBD Ex. 4, p. 8–10, 21–25; Tr. 1508–1525; LC-V Ex. 2, p. 12, GP-REP Ex. 2, p. 3; CBD's expert suggest that the Palmer Drought Severity Index is more robust to evaluate for drought rather than using precipitation.

<sup>47</sup> See CBD Ex. 3, pp. 20–26; See CBD Ex. 4, p. 28–29; Tr. 1525-1528.

<sup>48</sup> See Letter from the Church, received August 15, 2019, Hearing on Interim Order 1303, official records of the Division of Water Resources.

<sup>49</sup> See *Closing Brief of the Church of Jesus Christ of Latter-Day Saints* (Church closing), Hearing on Interim Order 1303, official records of the Division of Water Resources.

*City of North Las Vegas*

In CNLV's report submissions and closing statement it addressed four questions set forth in Interim Order 1303.<sup>50</sup> CNLV generally urges for more analysis and study of the LWRFS before administrative decisions are made due to lack of agreement on fundamental interpretations of the water availability and basin connectivity. It was agreed to by CNLV that most of Garnet Valley and a small portion of the Black Mountains area were within the larger carbonate-rock aquifer underlying the LWRFS basins, but that there is uncertainty in the boundaries of Garnet Valley with California Wash and Las Vegas Valley Hydrographic Basin (Las Vegas Valley).<sup>51</sup> With respect to the recovery of the groundwater aquifer following the Order 1169 aquifer test, CNLV concluded that the record and evidence demonstrates a long-term declining trend in the groundwater level since the late 1990s and that pumping responses can propagate relatively quickly through the carbonate-rock aquifer and drawdown is directly related to the pumping.<sup>52</sup>

While CNLV did consider the long-term quantity of groundwater that may be developed without adversely impacting discharge to the Warm Springs area, its opinions were limited to the sustainability of pumping within Garnet Valley.<sup>53</sup> CNLV concluded that the safe yield concept should be applied to the management of pumping within the LWRFS and that pumping between 1,500 afa to 2,000 afa does not appear to be causing regional drawdown within the LWRFS carbonate-rock aquifer and that pumping this quantity of water may be sustainable within the APEX Industrial Park area of Garnet Valley.<sup>54</sup> Finally, CNLV asserted that movement of alluvial water rights from the Muddy River Springs Area along the Muddy River would reduce the capture

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<sup>50</sup> See CNLV Ex. 5, *City of North Las Vegas Utilities Department: Interim Order 1303 Report Submittal from the City of North Las Vegas – July 2, 2019*, Hearing on Interim Order 1303, official records of the Division of Water Resources. See CNLV Ex. 6, *Rebuttal Document submitted on behalf of the City of North Las Vegas, to Interim Order 1303 Report Submittals of July 3, 2019 – Prepared by Interflow Hydrology – August 2019*, Hearing on Interim Order 1303, official records of the Division of Water Resources. See Tr. 1416–66, and *City of North Las Vegas' Closing Statement (CNLV Closing)*, Hearing on Interim Order 1303, official records of the Division of Water Resources.

<sup>51</sup> See CNLV Ex. 5, pp. 2–3. See also CNLV Ex. 3, *Garnet Valley Groundwater Pumping Review for APEX Industrial Complex, City of North Las Vegas, Clark County, Nevada- Prepared by Interflow Hydrology, Inc.- July 2019*, pp. 7–8, 38.

<sup>52</sup> *Id.*, p. 3, Technical Memo, pp. 14–16.

<sup>53</sup> *Id.*, pp. 3–4.

<sup>54</sup> *Id.*, p. 4., Technical Memo, p. 45.



of Muddy River flow, move more senior water rights into Garnet Valley to support a secure water supply for the municipal uses within the APEX area, and would support overall objectives relating to the management of the LWRFS.<sup>55</sup> CNLV advocated that transferring water rights between alluvial aquifer and carbonate-rock aquifer should be considered on a case-by-case basis with consideration given as to location, duration, and magnitude of pumping.<sup>56</sup>

CNLV disagreed with certain conclusions of the NPS relating to the inclusion of the entirety of the Black Mountains Area within the LWRFS boundaries and had concerns relating to the reliability of the Tetra Tech model for future water resource management within the LWRFS.<sup>57</sup> CNLV further disagreed with stakeholder conclusions that movement of groundwater withdrawals from the alluvial aquifer along the Muddy River to the carbonate-rock aquifer in Garnet Valley will not alleviate the conflicts to Muddy River flow, rather concluding that there may be benefits for overall management of the LWRFS.<sup>58</sup> Further, CNLV disagreed with certain findings regarding water flow through the carbonate-rock aquifer, finding that it is likely that some groundwater can be pumped within Garnet Valley without capturing groundwater that would otherwise discharge to the Warm Springs area and the Muddy River.<sup>59</sup> Finally, in its rebuttal the CNLV joined other stakeholders in supporting the conclusion that there is a quantity of water that may be sustainably developed within the LWRFS and that use of carbonate-rock aquifer groundwater in Garnet Valley is critical to the short-term and long-term management and development of the APEX Industrial Complex.<sup>60</sup>

#### *Coyote Springs Investments*

In presenting its opinions and conclusions CSI's focus was primarily on climate as the foundation for groundwater elevation declines after the Order 1169 aquifer test, and additional geophysical research that provided evidence of a structural block isolating the west side of Coyote Spring Valley.

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<sup>55</sup> *Id.*, Technical Memo, p. 48–49.

<sup>56</sup> *Id.*

<sup>57</sup> *See* CNLV Ex. 6, pp. 1–2.

<sup>58</sup> *Id.*, p. 2.

<sup>59</sup> *Id.*, pp. 2–3.

<sup>60</sup> *Id.*, p. 3.

CSI did a statistical analysis of climate data, and determined from the results that 1998, 2004, 2005, and 2010 were wetter than normal, with a drying trend from 2006 to 2017.<sup>61</sup> The Order 1169 aquifer test took place toward the end of an extended dry period when all water resources throughout the LWRFS were negatively affected.<sup>62</sup> Additionally, annual cyclical patterns of groundwater pumping should not be confused with long-term climate variability.<sup>63</sup>

CSI challenged the basic assumption that the LWRFS, as proposed in Interim Order 1303, is a homogenous unit.<sup>64</sup> CSI could not duplicate the results of the SeriesSEE, and its own Theis solution modeling concluded that a greater impact occurred from pumping at a well closer in proximity to Pederson Spring than pumping from a well further away, or the combined effect of both wells.<sup>65</sup> CSI also acknowledged that due to the fragmented nature of the LWRFS, the Theis solution is of limited utility.<sup>66</sup>

CSI presented geologic and geophysical information in support of the idea that the LWRFS administrative unit is a geophysically and hydrogeologically heterogeneous area, characterized by multiple flow paths defined by faults and structural elements that control the occurrence and movement of regional and local groundwater along the western side of Coyote Spring Valley, the eastern side of Coyote Spring Valley, and from Lower Meadow Valley Wash into the LWRFS.<sup>67</sup> CSI stated that the LWRFS does not include Kane Springs Valley.<sup>68</sup>

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<sup>61</sup> CSI Ex. 1, *CSI July 3, 2019 Order 1303 Report*, Hearing on Interim Order 1303, official records of the Division of Water Resources, pp. 4–5; Tr. 53.

<sup>62</sup> CSI Ex. 1, p. 5.

<sup>63</sup> CSI Ex. 2, *CSI August 16, 2019 Rebuttal Report*, Hearing on Interim Order 1303, official records of the Division of Water Resources, pp. 2, 7.

<sup>64</sup> CSI Ex. 1, p. 7.

<sup>65</sup> CSI Ex. 1, p. 7; Tr. 131–132.

<sup>66</sup> Tr. 154.

<sup>67</sup> CSI Ex. 2, p. 2; *CSI Closing Statement (CSI Closing)*, Hearing on Interim Order 1303, official records of the Division of Water Resources; CSI recommended including Lower Meadow Valley Wash in its Rebuttal report. See CSI Ex. 2, p. 12; Mr. Herrema said Lower Moapa Valley, but the report said Lower Meadow Valley 10:10.

<sup>68</sup> CSI Ex. 1, p. 15; the outflow from Kane Springs Valley is included in the water budget, but due to isolating geologic features, groundwater elevations in Kane Springs Valley are not impacted by pumping in the LWRFS, Tr. 135:7–137:3, 160:2–12.

CSI engaged a geophysicist to conduct a CSAMT survey at multiple points in the valley.<sup>69</sup> CSI's CSAMT study showed evidence of a prominent carbonate block bounded on either side by normal faults.<sup>70</sup> CIS asserts that the carbonate block isolates recharge from the zone west of the block, such that it eliminates or limits contribution of local recharge to the Warm Springs area.<sup>71</sup> Faulting has created a preferred path for groundwater flow "from the east side Coyote Spring Valley to the Muddy River Springs Area".<sup>72</sup>

CSI relied on a water budget as the best method to determine available water in the LWRFS, accounting for recharge and subsurface flow as well as climatic variations.<sup>73</sup> Comparing several models of recharge, CSI estimated recharge at 5,280 afa from the Sheep Range to the western side of Coyote Spring Valley.<sup>74</sup> CSI stated that 30,630 afa can be pumped from the LWRFS, but there would be impacts from pumping the water, and that the Coyote Spring Valley can sustain 5,280 afa of pumping from the western side without impact to the Warm Springs area or the Muddy River.<sup>75</sup>

As asserted by CSI, groundwater pumping from the carbonate-rock aquifer in the Muddy River Springs Area affects flow in the carbonate-rock aquifer to the alluvial aquifer, which then affects flow from the alluvial aquifer to the Muddy River.<sup>76</sup> CSI argues that effects are dependent on well location, geologic formations, hydraulic gradients, and elevation.<sup>77</sup> Transfers between carbonate and alluvial pumping should be made on a case-by-case basis, analyzing place of use, points of diversion, and quantity of groundwater.<sup>78</sup> Movement of water rights between alluvial wells and carbonate-rock aquifer wells will only serve to shift the timing and location of impacts and not the amount of the impact.<sup>79</sup>

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<sup>69</sup> CSI Ex. 1, p. 25

<sup>70</sup> CSI Ex. 1, p. 25.

<sup>71</sup> CSI Ex. 1, p. 29; evidence of impermeability, Tr. 181.

<sup>72</sup> CSI Ex. 1, p. 29.

<sup>73</sup> CSI Closing.

<sup>74</sup> CSI Ex. 1, pp. 31-40.

<sup>75</sup> Tr. 221-223; CSI Closing, pp. 8-9.

<sup>76</sup> CSI Closing.

<sup>77</sup> CSI Closing, p. 19.

<sup>78</sup> CSI Closing.

<sup>79</sup> CSI Ex. 1, p. 58.

As a consequence of the heterogenous nature of the LWRFS, CSI recommended sustainable management of the LWRFS through the creation of "Management Areas" that recognize flow paths and their relative contributions to spring flow, surface flow, evapotranspiration, and sub-surface outflow.<sup>80</sup> For example, though pumping in the Muddy River Springs Area near the Warm Springs area would have a direct impact on available surface water resources, structural blocks and faults isolate the effect of groundwater pumping in other areas of the LWRFS.<sup>81</sup> Thus CSI does not recommend a blanket ban on carbonate-rock aquifer pumping, or a decrease in carbonate-rock aquifer pumping in exchange for alluvial aquifer pumping.

#### *Georgia Pacific and Republic*

Dry Lake Water, LLC, Georgia Pacific and Republic submitted initial and rebuttal responses to Interim Order 1303 and offered testimony during the hearing.<sup>82</sup> In their response, Georgia Pacific and Republic acknowledged impacts to groundwater elevations throughout the LWRFS, including wells in the Black Mountains Area and Garnet Valley, which does demonstrate a degree of hydraulic connectivity throughout the carbonate-rock aquifer. However, Georgia Pacific and Republic called for collection of more scientific evidence to further understand the LWRFS and its boundaries. Further, it was their opinion that climate, seasonal fluxes and pumping within Garnet Valley and the Black Mountains Area resulted in the groundwater declines observed during the Order 1169 aquifer test.<sup>83</sup> Ultimately, Georgia Pacific and Republic do not believe sufficient information exists to draw distinct conclusions as to the cause of the groundwater declines during the Order 1169 aquifer test and whether carbonate-rock aquifer pumping within

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<sup>80</sup> CSI Closing.

<sup>81</sup> CSI Ex. 2, p. 17.

<sup>82</sup> The initial response was submitted on behalf of Dry Lake Water, LLC, Georgia Pacific, and Republic. See GP-REP Ex. 1, *Broadbent July 2, 2019 Initial Report*, Hearing on Interim Order 1303, official records of the Division of Water Resources. The rebuttal response was submitted on behalf of Dry Lake Water, LLC, Georgia Pacific Gypsum LLC, and Republic. See GP-REP Ex. 2, *Broadbent August 16, 2019 Rebuttal Report*, Hearing on Interim Order 1303, official records of the Division of Water Resources. However, the expert only appeared at the Hearing on Interim Order 1303 on behalf of Georgia Pacific and Republic. See Tr. 1588-91.

<sup>83</sup> See GP-REP Ex. 01, GP-REP Ex. 02, and *Closing Argument of Georgia Pacific Corporation and Republic Environmental Technologies, Inc.* (Closing GP-REP), Hearing on Interim Order 1303, official records of the Division of Water Resources.

the Garnet Valley and the Black Mountains Area has a measurable impact to spring flow in the Warm Springs area.<sup>84</sup>

#### *Great Basin Water Network*

GBWN elected to pose procedural suggestions relating to public involvement, availability of documents and data, transparency, and decision making, and did not submit a report with an independent analysis addressing the questions in Interim Order 1303.<sup>85</sup> GBWN advocates for sustainable management of the entirety of the White River Flow System as one unit based on the interconnected nature of all of the hydrologically connected basins, although no analysis to support which areas this would include was provided. GBWN relies on conclusory statements to establish the interconnected nature of the system as support for its position. Later, GBWN chose not to participate in the hearing nor submit a rebuttal report, closing arguments, or public comment.

#### *Lincoln County Water District and Vidler Water Company*

LC-V's participation in the LWRFS hearing was driven by their existing and pending groundwater rights in Kane Springs Valley, and an interest in excluding Kane Springs Valley from the LWRFS management area.<sup>86</sup> They disputed that Kane Springs Valley should be included within the LWRFS boundary based on their assertion of: prior decisions of the State Engineer that acknowledged the separate nature of the basin from the rest of the LWRFS, groundwater elevation comparisons, precipitation and recharge data, groundwater chemistry, and geophysical study results. In general, Kane Springs Valley should be managed based on its perennial yield, recognizing that there is groundwater flow to the LWRFS as there are from other basins into the LWRFS, but where they are excluded from the proposed management area.<sup>87</sup>

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<sup>84</sup> See Closing GP-REP.

<sup>85</sup> *GBWN Report on Order 1303*, (GBWN Report), Hearing on Interim Order 1303, official records of the Division of Water Resources.

<sup>86</sup> LC-V Ex. 1, *Lower White River Flow System Interim Order #1303 Report Focused on the Northern Boundary of the Proposed Administrative Unit*, prepared by Lincoln County Water District and Vidler Water Company in Association with Zonge International Inc., dated July 3, 2019, Hearing on Interim Order 1303, official records of the Division of Water Resources, p. 2-1.

<sup>87</sup> LC-V Ex. 2, *Rebuttal Submittal to Reports Submitted in Response to Interim Order #1303*, dated August 16, 2019 and Attachments A, B, C, D and E containing the reports or technical memorandums of Greg Bushner, Peter Mock, Thomas Butler, Todd Umstot and Norman Carlson., Hearing on Interim Order 1303, official records of the Division of Water Resources, pp. 7, 14-15.

Various rulings of the State Engineer have previously addressed whether appropriation of groundwater from Kane Springs Valley would affect the Muddy River Springs Area.<sup>88</sup> LC-V states that these findings have not been challenged by any of the Order 1169 participants.<sup>89</sup> However, to the extent that SNWA relied on multiple linear regression models to establish groundwater flow from Kane Springs Valley to the LWRFS, LC-V do not agree.<sup>90</sup>

LC-V identified a distinct “break,” or local increase, in water levels in the regional hydraulic gradient between wells drilled in the LWRFS versus wells drilled in Kane Springs Valley and northern Coyote Spring Valley.<sup>91</sup> It attributed the break to geologic structures located throughout the carbonate-rock aquifer. Although wells within the LWRFS exhibit very consistent groundwater levels, indicative of high transmissivity values across the area, the gradient between well KPW-1 and down-basin wells is much steeper, implying an impediment to groundwater flow near the mouth of Kane Springs Valley.<sup>92</sup>

In a 2006 hearing for protested water rights applications, LC-V presented an analysis of the regional geochemistry data including stable isotopes, temperature, and carbon-14 data.<sup>93</sup> That analysis found that the groundwater pumped from Kane Springs Valley could not be identified in the source water for the Big Muddy Spring, nor other springs farther south and outside the boundaries of the LWRFS.<sup>94</sup> LC-V concluded that groundwater pumped from production well KPW-1 is on a different groundwater flow path from the springs, consistent with the differences in hydraulic gradients, groundwater levels, and geophysical data.<sup>95</sup> CSVM-4, a well located in Coyote Spring Valley, and KPW-1, in Kane Springs Valley, have similar temperatures compared to the other wells in the basin, and a lower percentage difference on other markers tracked throughout groundwater in the basin.<sup>96</sup> LC-V argues that the water from these wells is chemically

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<sup>88</sup> LC-V Ex. 1, pp. 2-2 through 2-3, citing State Engineer’s Rulings 5712, 6254, 5712.

<sup>89</sup> LC-V Ex. 1, p. 2-3.

<sup>90</sup> Testimony generally at Tr. 1311–1318. “... simply having correlation is not proof of causation. Causation is neither proved nor evaluated in a regression analysis.” Tr. 1303.

<sup>91</sup> LC-V Ex. 1, p. 3-1.

<sup>92</sup> LC-V Ex. 1, pp. 1-1, 3-1 through 3-4. LC-V went on to conclude that local groundwater recharge occurs in Kane Springs Valley that does not flow to the LWRFS, and therefore there is available unappropriated water in the basin. LC-V Ex. 1, p. 3-5.

<sup>93</sup> LC-V Ex. 1, Appendix C, pp. 111–153.

<sup>94</sup> *Id.*, pp. 124–125.

<sup>95</sup> “Gradient alone does not mean flow.” Thomas Butler, witness on behalf of LC-V, Tr. 1281.

<sup>96</sup> Tr. 1281–1282; LC-V Ex. 1, pp. 3-7 through 3-11.

unique and does not appear in any other wells in the LWRFS.<sup>97</sup> LC-V concludes carbon isotope data also confirmed that the water from Kane Springs Valley does not appear in the Muddy River Springs area.<sup>98</sup>

LC-V engaged a geophysical company to perform a CSAMT survey across the boundary line between Kane Springs Valley and Coyote Spring Valley, and identified significant geologic structures in southern Kane Springs Valley and northern Coyote Spring Valley.<sup>99</sup> Several transect lines were conducted perpendicular to the axis of the Kane Springs Valley, and one was also conducted along the axis of the southern part of the basin.<sup>100</sup> Additional transects were run in Coyote Spring Valley.<sup>101</sup> The results of the geophysical data validated concealed faulting indicated on existing maps, and was ground-truthed with observations in the field.<sup>102</sup> Results indicated a previously unmapped fault at the mouth of Kane Springs Valley, which LC-V named the Northern Boundary LWRFS fault, with a potentially 2,500-foot offset of materials with different resistivities.<sup>103</sup> LC-V argues that the extensive faulting that occurs in southern Kane Springs Valley and northern Coyote Spring Valley form the basis for the exclusion of Kane Springs Valley from the LWRFS.<sup>104</sup>

LC-V gave no opinion on the long-term annual quantity of groundwater that could be pumped from the LWRFS.<sup>105</sup> LC-V attributes all reduction in flows of the Muddy River and its associated springs to carbonate-rock aquifer pumping within the Muddy River Springs Area, and finds no discernable effect from carbonate-rock aquifer pumping occurring in Coyote Springs

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<sup>97</sup> Tr. 1284.

<sup>98</sup> Tr. 1286.

<sup>99</sup> LC-V Ex. 1, pp. 1-1, 4-1 through 4-10.

<sup>100</sup> LC-V Ex. 1, p. 4-3.

<sup>101</sup> LC-V Ex. 1, p. 4-3.

<sup>102</sup> LC-V Ex. 1, p. 4-8, Tr. 1322.

<sup>103</sup> Tr. 1271-1272; LC-V Ex. 1, p. 4-9.

<sup>104</sup> LC-V Ex. 1, p. 7-1 through 7-2; Tr. 1408. Questions from the National Park Service and the State Engineer inquired whether the areas of high resistivity in the CSAMT necessarily implied low transmissivity, low permeability of the rock. LC-V conceded that the resistivity information alone does not provide data about the hydraulic properties of either side of the resistive area, but when considered with all available information, LC-V concluded that the fault is likely an impediment to groundwater flow. Tr. 1327-1328, 1363-1364.

<sup>105</sup> LC-V Ex. 1, p. 5-2.

Valley.<sup>106</sup> As a result, LC-V finds that the efforts to protect the Warm Springs area must focus on groundwater pumping within the Muddy River Springs Area itself.<sup>107</sup>

*Moapa Band of Paiutes*

The MBOP participated in the administrative hearing due to their interest in the outcome of the proceedings and how it may affect their pending water right applications within California Wash. A regional approach, spanning a large aerial expanse, was taken by MBOP; the analysis and modeling efforts extended into central Nevada and Utah. MBOP stands apart from other participants with their interpretation of the data.<sup>108</sup> MBOP opposed management of the LWRFS as one basin and argues the scientific consensus is lacking amongst participants.<sup>109</sup> Regarding the interpretation of other participants, MBOP disagreed with the methodology and application of the 2013 USFWS SeriesSEE analysis and SNWA's multiple linear regression and requests repudiation of both.<sup>110</sup>

While not agreeing with the proposed boundaries of the LWRFS, MBOP did not provide a clear suggestion for which basins or portions therein should be included or excluded. MBOP suggested that pumping in California Wash has little to no impact on the Warm Springs area.<sup>111</sup> MBOP further suggested there are two capture zones, separated by a hydrodynamic and hydrochemical divide, which transects the Moapa River Indian Reservation area and results in south-flowing groundwater into the Las Vegas Valley through the LWRFS, bypassing the Muddy

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<sup>106</sup> LC-V Ex. 1, p. 5-3.

<sup>107</sup> LC-V Ex. 1, p. 5-3.

<sup>108</sup> Tr. 772– 773; 839.

<sup>109</sup> See *Closing Statement by the Moapa Band of Paiute Indians for Order 1303 Hearing* (MBOP Closing), Hearing on Interim Order 1303, official records of the Division of Water Resources, pp. 1–2, 6.

<sup>110</sup> *Id.*, pp. 7–12, 15–16; See MBOP Ex. 3, *Johnson, C., and Mifflin, M. Rebuttal Report of the Moapa Band of Paiutes in Response to Stakeholder Technical Reports Filed under Order #1303: unpublished report and appendices, August 16, 2019. 27 p.*, Hearing on Interim Order 1303, official records of the Division of Water Resources.

<sup>111</sup> See MBOP Ex. 2, *Johnson, C., and Mifflin, M. Water Level Decline in the LWRFS: Managing for Sustainable Groundwater Development. Initial Report of the Moapa Band of Paiutes in Response to Order #1303: unpublished report and appendices, July 3, 2019. 84 p.*, Hearing on Interim Order 1303, official records of the Division of Water Resources, pp. 2, 4, 14, 35; Tr. 819.



River Springs Area.<sup>112</sup> This hydrodynamic divide theory was not shared by SNWA, CBD, CSI, and NPS.<sup>113</sup>

Several participants agree that climate impacts were observed in the hydrographs, e.g., periods of wet and dry; however, MBOP interpreted the existing data to show that climate-driven decline, specifically drought, as the primary response observed in the long-term declining groundwater levels.<sup>114</sup> Thus, MBOP concluded that no reduction in pumping will restore high-elevation spring flows.<sup>115</sup> MBOP did not agree with other participants that decreasing groundwater levels and spring flows were attributed to increased carbonate-rock aquifer pumping beginning in the early 1990s.<sup>116</sup>

A quantity available for sustainable pumping was not proposed, but MBOP presumed more water is available in California Wash than previously thought.<sup>117</sup> A flux of approximately 40,000 cfs of south-flowing groundwater into the Las Vegas Valley, bypassing the Muddy River Springs Area, was postulated in the initial report as possible with the hydrodynamic divide; however, during the hearing this quantity was given a range of plus or minus an order of magnitude based on assumptions for calculations.<sup>118</sup>

MBOP acknowledged that the Muddy River is connected to the alluvial aquifer and thus pumping from the alluvial and carbonate-rock aquifers in the Muddy River Springs Area impact the Muddy River flows.<sup>119</sup> Therefore, to mitigate impacts to the Muddy River, MBOP proposed that alluvial aquifer pumping, specifically between Arrow Canyon and White Narrows, can be moved to the carbonate-rock aquifer in basins to the south, such as California Wash, with minimal anticipated impacts to the Muddy River flows, rather than moving alluvial aquifer pumping from the Muddy River Springs Area to the carbonate-rock aquifer in connected areas, where impacts

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<sup>112</sup> See MBOP Ex. 2, pp. 2, 4, 12, 14, 20, 35, 55; Tr. 812; 845.

<sup>113</sup> SNWA Ex. 9, pp. 12–13; CBD Ex. 4, p. 15; CSI Ex. 2, p. 23; NPS Ex. 3, *National Park Service's Response to July 2019 Interim Order 1303 Reports, Waddell, August 16, 2019*, Hearing on Interim Order 1303, official records of the Division of Water Resources, p. 4.

<sup>114</sup> See MBOP Ex. 2, pp. 3, 26–32, 35; Tr. 764–771; 805.

<sup>115</sup> See MBOP Ex. 2, pp. 3, 35; Tr. 821–826.

<sup>116</sup> See MBOP Ex. 2, p. 29; Tr. 775, 838–840; 848.

<sup>117</sup> See MBOP Ex. 2, pp. 2, 20, 35.

<sup>118</sup> See MBOP Ex. 2, pp. 6, 19, 35; Tr. 850–851.

<sup>119</sup> See MBOP Ex. 2, pp. 23–24, 35; Tr. 836.

proportional to pumping may be expected.<sup>120</sup> Thus, MBOP proposed favoring temporary over permanent uses and transferring of rights between the carbonate-rock and alluvial aquifers on a case-by-case basis.<sup>121</sup>

#### *Moapa Valley Water District*

MVWD was created by the Nevada legislature in 1983, pursuant to NRS Chapter 477, to provide water service “vital to the economy and well-being of Moapa Valley.”<sup>122</sup> MVWD provides municipal water service to approximately 8,500 people with 3,250 metered service connections, including service to the MBOP.<sup>123</sup>

MVWD supported the inclusion of Kane Springs Valley within the LWRFS boundary.<sup>124</sup> Data indicated a direct connection between Kane Springs Valley and Coyote Spring Valley. This data included observations that the water level in KMW-1/KSM-1 decreased 0.5 foot over the duration of the Order 1169 aquifer test.<sup>125</sup> State Engineer’s rulings have concluded that geochemical evidence and groundwater gradient data indicate that groundwater flows from the Kane Springs Valley into Coyote Spring Valley, and MVWD supports LVVWD’s 2001 calculation of that quantity of water at approximately 6,000 afy.<sup>126</sup> MVWD performed its own calculations of the groundwater gradients from Kane Springs Valley at KMW-1 to EH-4, and concluded that the gradient was “an uninterrupted, continuous, exceptionally flat gradient,” unlike gradients commonly seen in the western U.S., especially in highly fractured areas.<sup>127</sup> MVWD also

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<sup>120</sup> See MBOP Ex. 2, pp. 23, 35.

<sup>121</sup> See MBOP Closing.

<sup>122</sup> Tr. 1172.

<sup>123</sup> MVWD Ex. 3, *District July 1, 2019 Report in response to Interim Order 1303*, p.5, Hearing on Interim Order 1303, official records of the Division of Water Resources; MVWD Ex. 4, *District August 16, 2019 Rebuttal Report*, p. 1, Hearing on Interim Order 1303, official records of the Division of Water Resources. MVWD has 3,147 afa of water rights in Arrow Canyon. Tr. 1169–1170.

<sup>124</sup> MVWD Ex. 3, p. 1; Tr. 1175.

<sup>125</sup> MVWD Ex. 3, p. 1; MVWD Ex. 4, p. 2.

<sup>126</sup> MVWD Ex. 3, pp. 1–2, referring to State Engineer’s Ruling 5712 (*see*, NSE Ex. 12, *Ruling 5712*, Hearing on Interim Order 1303, official records of the Division of Water Resources) and MVWD Ex. 8, *Las Vegas Valley Water District, Water Resources and Ground-Water Modeling in the White River and Meadow Valley Flow Systems, Clark, Lincoln, Nye, and White Pine Counties, Nevada (2001)*, Hearing on Interim Order 1303, official records of the Division of Water Resources, p. 6-3.

<sup>127</sup> Tr. 1177–1178.

introduced evidence of a stipulation between LC-V and the USFWS that bases a reduction in pumping in Kane Springs Valley on a lowering of spring discharges in the Warm Springs area, and introduced a letter from SNWA to the State Engineer, as additional support that the participants to the Interim Order 1303 hearing have previously recognized Kane Springs Valley is part of the LWRFS.<sup>128</sup>

MVWD disagreed that a hydrologic barrier exists between Coyote Springs Valley and Kane Springs Valley.<sup>129</sup> Relying on a 2006 report prepared by another consultant, MVWD said the evidence indicated that the fault at the mouth of Kane Springs Valley was not an impediment to flow, and that there was no evidence of having encountered hydraulic barriers to groundwater flow during a seven-day aquifer test.<sup>130</sup> Additionally, the “highly transmissive fault zone” is continuous across the basin boundary between Kane Springs Valley and Coyote Spring Valley.<sup>131</sup> MVWD found further support for its position from evidence that KMW-1 showed drawdown during both the seven-day aquifer test on KPW-1, as well as from the Order 1169 aquifer test pumping that occurred from MX-5.<sup>132</sup> MVWD considered the water level data collected before, during and after the Order 1169 aquifer test, and Warm Springs area spring discharge to support its finding that the fault is not interrupting groundwater flow.<sup>133</sup> MVWD found it “questionable” that the first suggestion of a fault that impedes southward groundwater flow would be prepared by LC-V for this hearing.<sup>134</sup>

Although water levels and spring discharge did not recover to the levels measured before the Order 1169 aquifer test, MVWD believed that the LWRFS is at or near steady-state conditions

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<sup>128</sup> Tr. 1195–1197.

<sup>129</sup> Tr. 1176–1177.

<sup>130</sup> Tr. 1181–1182. MVWD also quoted from the report that “the fracturing was so extensive that the fractured aquifer system really behaved as an equivalent porous media.” *Id.* MVWD later agreed that this would behave like a sandy aquifer. Tr. 1224.

<sup>131</sup> Tr. 1185.

<sup>132</sup> Tr. 1250.

<sup>133</sup> Tr. 1219.

<sup>134</sup> *Post-Hearing Brief of Moapa Valley Water District (MVWD Closing)*, Hearing on Interim Order 1303, official records of the Division of Water Resources, p. 5.

regarding aquifer recovery.<sup>135</sup> MVWD viewed this as being consistent with the State Engineer's statements in Interim Order 1303.<sup>136</sup>

Finally, MVWD did not provide a specific quantity of available water but did acknowledge that the "actual safe pumpage" is less than current pumping rates, and recognized a direct relationship between pumping from the carbonate-rock aquifer, spring and Muddy River flows, and alluvial aquifer pumping.<sup>137</sup> The timing and magnitude of carbonate-rock aquifer pumping effects on spring discharge is dependent on the volume of water pumped and the proximity of a pumping center to the springs; however, all cumulative carbonate-rock aquifer pumping in the seven interconnected basins will eventually cause depletions on the Warm Springs area springs.<sup>138</sup> Further, if carbonate rights are transferred to the alluvial aquifer there will be depletions to Muddy River flows and impacts to senior Muddy River water right owners.<sup>139</sup>

MVWD raised additional matters that they believed relevant to the analysis under Interim Order 1303. First, they stressed the importance of municipal water rights, and the necessity for a reasonably certain supply of water for future permanent uses without jeopardizing the economies of the communities that depend on the water supply, and to protect the health and safety of those who rely on the water supply.<sup>140</sup> To that end, MVWD requested that the State Engineer consider designating municipal use as the most protected and highest use of water, and to give MVWD the perpetual right to divert 6,791 afa of permitted and certificated rights from its carbonate-rock aquifer wells.<sup>141</sup> Second, MVWD stated that it had already satisfied its obligation to protect Moapa dace habitat and senior water rights when it dedicated 1cfs/724 afa, or approximately 25% of the MVWD current diversions, from its most senior water right, to the enhancement of the Moapa dace habitat.<sup>142</sup>

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<sup>135</sup> Tr. 1198, MVWD Ex. 3, p. 4.

<sup>136</sup> Tr. 1199.

<sup>137</sup> Tr. 1199-1200; MVWD Closing, pp. 9-10.

<sup>138</sup> MVWD Ex. 3, p. 5.

<sup>139</sup> *Id.*

<sup>140</sup> MVWD Ex. 3, p. 5.

<sup>141</sup> MVWD Ex. 3, p. 6; Tr. 1203-1204; 6,791 afa constitutes an increase in the carbonate-rock aquifer pumping for MVWD. Tr. 1228.

<sup>142</sup> MVWD Ex. 3, pp. 6-7; Tr. 1202-1203.

*Muddy Valley Irrigation Company*

The MVIC is a non-profit Nevada corporation with the senior decreed water rights to the Muddy River, who provided testimony that SNWA is a majority shareholder while other participants such as CSI, LC-V, and MVWD are minority shareholders of the decreed rights.<sup>143</sup> MVIC concurred with SNWA's conclusions regarding aquifer recovery, long-term quantity of groundwater, and movement of water between the alluvial and the carbonate-rock aquifers.<sup>144</sup> Specifically, that any groundwater pumping, from both alluvial or carbonate-rock aquifers, within the Muddy River Springs Area impacts Muddy River flows, thus violating the Muddy River Decree.<sup>145</sup> MVIC did not dispute the geographic boundaries as identified in Interim Order 1303.<sup>146</sup> MVIC argued that the Muddy River and all of its sources are fully appropriated and emphasized the decreed seniority to groundwater rights, and further asserts that these surface water rights are protected by the Muddy River Decree and the prior appropriation doctrine.<sup>147</sup>

*United States Department of the Interior, National Park Service*

NPS submitted both an initial and rebuttal report in response to the Interim Order 1303 solicitation and presented testimony during the hearing.<sup>148</sup> Based upon NPS's evaluation of the evidence relating to the Order 1169 aquifer test, the use of an updated numerical groundwater flow model previously developed to predict conditions within the LWRFS, data compiled since the conclusion of the Order 1169 aquifer test, and review of other available data, NPS came to multiple conclusions relating to the delineation and management of the LWRFS. NPS advocates for the

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<sup>143</sup> Tr. 1693–1696, 1705.

<sup>144</sup> MVIC Ex. 1, *MVIC Rebuttal Report dated August 15, 2019*, Hearing on Interim Order 1303, official records of the Division of Water Resources. MVIC identified sections from the SNWA report, but the references do not correspond with sections in SNWA's report. The State Engineer assumes that these section numbers correspond to page numbers of the SNWA report; *See also*, SNWA Ex. 7, *Burns, A., Drici, W., Collins, C., and Watrus, J., 2019, Assessment of Lower White River Flow System water resource conditions and aquifer response, Presentation to the Office of the Nevada State Engineer: Southern Nevada Water Authority, Las Vegas, Nevada*, Hearing on Interim Order 1303, official records of the Division of Water Resources.

<sup>145</sup> MVIC Ex. 1, p. 5; Tr. 1698.

<sup>146</sup> *See* MVIC Ex. 1, p. 3; Tr. 1697–1968.

<sup>147</sup> *Muddy Valley Irrigation Company Post Hearing Closing Statement (MVIC Closing)*, Hearing on Interim Order 1303, official records of the Division of Water Resources; Tr. 1967, 1700–1708. *See also*, NSE Ex. 333, *Muddy River Decree*, Hearing on Interim Order 1303, official records of the Division of Water Resources.

<sup>148</sup> *See* NPS Ex. 2, *Prediction of the Effects of Changing the Spatial Distribution of Pumping in the Lower White River Flow System, Waddell, July 3, 2019*; Tr. 494–597.

inclusion of the entirety of the Black Mountains Area within the geographic boundary of the LWRFS based upon its review of geologic conditions that facilitate flow from the southern portion of the LWRFS through the Muddy Mountains thrust sheet and discharging in Rogers Spring and Blue Point Spring.<sup>149</sup> Further supporting this opinion, NPS cites to spring chemistry and isotopic composition of the water discharging from Rogers Spring and Blue Point Spring and the hydraulic head conditions that NPS believes supports the flow of groundwater beneath the Muddy Mountains from the carbonate-rock aquifer to those springs.<sup>150</sup> NPS acknowledge that there is a weak hydraulic connection between Rogers Spring and Blue Point Spring to the LWRFS based upon the geologic conditions within the Muddy Mountains, but argues that the entirety of the Black Mountains Area should be included to allow for management of the regional carbonate-aquifer to protect against diminished discharge to those springs.<sup>151</sup>

In addition to advocating for the inclusion of the entirety of the Black Mountains Area, the NPS provided evidence and analysis to support its conclusion that Kane Springs Valley too should be included within the geographic boundary of the LWRFS.<sup>152</sup> Based upon a review of the hydrologic data, geology of the Kane Springs Valley and basin boundaries, Coyote Spring Valley, and data from the Order 1169 aquifer test, NPS concludes that there is a clearly established hydrological connection between Kane Springs Valley and the other LWRFS basins, including discharge to the Warm Springs area.<sup>153</sup> While NPS advocates for the inclusion of the entire Black Mountains Area and Kane Springs Valley, it did not find any evidence to support the inclusion of the Las Vegas Valley within the LWRFS based upon a similar review of the geology and hydrological data.<sup>154</sup>

In interpreting data since the conclusion of the Order 1169 aquifer test, NPS reviewed the available data, concluding that the decades long decline of groundwater levels is not attributable to climate, but rather that the groundwater pumping within the LWRFS is the contributing

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<sup>149</sup> See NPS Ex. 2, p. 22. See also, Tr. 569–70; NPS, *Closing Statements Interim Order 1303 Hearing Testimony* (NPS Closing), Hearing on Interim Order 1303, official records of the Division of Water Resources, p. 2.

<sup>150</sup> NPS Ex. 2, p. 22; NPS Closing, pp. 2–4.

<sup>151</sup> *Id.*

<sup>152</sup> NPS Ex. 2, p. 22; NPS Ex. 3, pp. 5–11; Tr. 550–551; NPS Closing, pp. 4–5.

<sup>153</sup> NPS Ex. 2, p. 22; NPS Ex. 3, pp. 5–11; Tr. 550–551; NPS Closing, pp. 5–6.

<sup>154</sup> NPS Ex. 2, p. 22; Tr. 552–554.

factor.<sup>155</sup> NPS opined that if recent pumping withdrawals continued, the current declining trend would be accelerated, adversely impacting spring discharge in the Warm Springs area and Muddy River flow.<sup>156</sup> Further, NPS's review of the data lead to its conclusion that it will take many years, if not decades for the LWRFS carbonate-rock aquifer to reach equilibrium, particularly at the current groundwater pumping withdrawals and even longer if pumping withdrawals occurred at Order 1169 aquifer test levels.<sup>157</sup> However, NPS did not provide an opinion as what rate of groundwater withdrawals would be sustainable within the LWRFS.

Finally, NPS concluded that the movement of groundwater withdrawals from the alluvial aquifer within the Muddy River Springs Area to the carbonate-rock aquifer within the LWRFS would ultimately have little impact on capture of Muddy River flow. Specifically, NPS found that while there may be near-term benefits to the Warm Springs area and Muddy River flow, those benefits would eventually disappear, as the impact would only be delayed and not eliminated.<sup>158</sup>

*Nevada Cogeneration Associates*

NCA submitted a Rebuttal Report Pertaining to Interim Order 1303 and provided testimony at the Interim Order 1303 hearing.<sup>159</sup> NCA objected to the inclusion of certain non-profit organizations on the basis that those organizations were not stakeholders and did not have an interest to protect as the non-governmental organizations did not have water rights within the LWRFS basins effected by the proceedings.<sup>160</sup>

With respect to the geographic boundary of the LWRFS, in its Rebuttal Report, NCA is of the opinion that the northwestern portion of the Black Mountains Area, as identified by the State Engineer, should be within the LWRFS basins, but expressed its disagreement with other opinions advocating for the inclusion of the entire Black Mountains Area based upon NCA's analysis of the geology and groundwater elevations.<sup>161</sup> During the Interim Order 1303 hearing and in its Post-Hearing Brief, NCA's opinion shifted to advocate for the boundary of the LWRFS to be adjusted

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<sup>155</sup> NPS Ex. 2, pp. 7, 22–23. *See also* NPS Closing, pp. 5–6.

<sup>156</sup> *Id.*

<sup>157</sup> *Id.*

<sup>158</sup> NPS Ex. 2, p. 23. *See also* NPS Closing, p. 6, and Tr. 593–594.

<sup>159</sup> NCA Ex. 1, *NCA Rebuttal Report Pertaining to Interim Order 1303 August 16, 2019*, Hearing on Interim Order 1303, official records of the Division of Water Resources; Tr. 1602–50.

<sup>160</sup> NCA Ex. 1, pp. 1, 23.

<sup>161</sup> *Id.*, pp. 2, 23.

to exclude its production wells in the Black Mountains Area; however, NCA did not alter its opinion regarding the remaining portion of the Black Mountains Area staying within the LWRFS.<sup>162</sup>

NCA further expressed that the Lower Meadow Valley Wash should not be included in the LWRFS boundaries based upon the fact that observed groundwater levels do not indicate a hydrologic response to carbonate-rock aquifer pumping and that insufficient data supports a finding of continuity between water level trends to support its inclusion in the LWRFS.<sup>163</sup> However, NCA advocated for the inclusion of the Kane Springs Valley within the LWRFS based upon its opinion that the groundwater data demonstrated hydrologic connectivity between Coyote Spring Valley and Kane Springs Valley, acknowledging that the data is slightly attenuated resulting from the Kane Springs fault.<sup>164</sup> Ultimately, NCA concluded that Kane Springs Valley is tributary to the Coyote Spring Valley and the other LWRFS basins, which justify its inclusion within the boundary of the LWRFS.<sup>165</sup>

Similarly, based upon the groundwater data from the northern portion of Coyote Spring Valley demonstrating similar water level responses as other wells throughout the LWRFS and pumping data demonstrating high hydrologic connectivity across all the LWRFS basins, NCA concluded that there was no basis to exclude the northern portion of Coyote Spring Valley.<sup>166</sup> Finally, NCA rejected a suggestion that the entirety of the White River Flow system, which extends into northeastern Nevada, be included within the management area.<sup>167</sup> Specifically, NCA concluded that the Pahrangat Shear Zone creates a significant barrier to the northwestern portion of the LWRFS and that review of groundwater levels does not support a finding that groundwater level declines propagate into the northern reaches of the White River Flow System.<sup>168</sup> NCA concluded, advocating that proper management of the LWRFS is appropriate and sufficient for the

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<sup>162</sup> *Post-hearing brief of Nevada Cogeneration Associates Nos. 1 and 2 pertaining to Amended Notice of Hearing Interim Order #1303 following the hearing conducted September 23, 2019, through October 4, 2019, before the Nevada State Engineer (NCA Closing), Hearing on Interim Order 1303, official records of the Division of Water Resources, pp. 2–10. See also* Tr. 1619–22.

<sup>163</sup> NCA Ex. 1 pp. 3–7, 23. *See also* NCA Closing, pp. 15–16.

<sup>164</sup> NCA Ex. 1, pp. 8–17, 23. *See also* NCA Closing, pp. 10–14, and Tr. 1629–44.

<sup>165</sup> NCA Ex. 1, pp. 11–16.

<sup>166</sup> *Id.*, pp. 17–18, 23.

<sup>167</sup> *Id.*, pp. 19, 24.

<sup>168</sup> *Id.*



purpose of managing discharge of groundwater to the Warm Springs area to support habitat for the Moapa dace and serve senior Muddy River decreed rights.<sup>169</sup>

In addressing the annual amount of groundwater that could be developed within the LWRFS without adversely impacting senior decreed rights on the Muddy River or Warm Springs area discharge supporting the habitat for the Moapa dace, NCA supported a target of 9,318 afa, a recent three-year average of annual pumping within the LWRFS,<sup>170</sup> as it did not believe there to be sufficient data to support either an increase or decrease from this amount.<sup>171</sup> However, in its post-hearing brief, NCA opined that if their production wells located within the northwestern portion of the Black Mountains Area were excluded from the LWRFS boundary, then the annual amount of water that could be sustainably developed was less than the 9,318 afa.<sup>172</sup>

Finally, NCA did not support movement of water rights from the Muddy River Springs Area alluvial aquifer to the carbonate-rock aquifer, as it was of the opinion that the movement of those rights would not mitigate impact to the Warm Springs area.<sup>173</sup> Rather, NCA concluded that movement of those rights would compound the impact of pumping from the carbonate-rock aquifer.<sup>174</sup> However, NCA did express some support for movement of senior alluvial water rights as a management tool to offset existing junior carbonate-rock aquifer pumping within the LWRFS.<sup>175</sup>

#### *NV Energy*

NV Energy submitted a rebuttal report outlining its responses to the five matters the State Engineer solicited in Interim Order 1303 and presented its opinions and conclusions during the Interim Order 1303 hearing.<sup>176</sup> In its rebuttal report, NV Energy opined that the geographic boundary of the LWRFS should be as established in Interim Order 1303.<sup>177</sup> NV Energy further

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<sup>169</sup> *Id.*

<sup>170</sup> NCA Ex. 1, p. 19. *See, e.g.* Draft order of the State Engineer distributed to LWRFS stakeholders at the LWRFS Working Group meeting, September 19, 2018, official records of the Division of Water Resources.

<sup>171</sup> *Id.*, pp. 18, 24.

<sup>172</sup> NCA Closing, pp. 14–15.

<sup>173</sup> NCA Ex. 1, pp. 19–23, 24.

<sup>174</sup> *Id.*

<sup>175</sup> *Id.*

<sup>176</sup> NVE Ex. 1, *NV Energy Rebuttal Report to State Engineer's Order 1303 Initial Reports by Respondents*, Hearing on Interim Order 1303, official records of the Division of Water Resources.

<sup>177</sup> *Id.*, pp. 1–2.

opined that the existence of subsurface outflow from Kane Springs Valley into the LWRFS basins was insufficient to support its inclusion.<sup>178</sup>

NV Energy, in its rebuttal report, disagreed with MBOP's conclusion that the groundwater level declines observed during and after the Order 1169 aquifer test were primarily caused by drought. Rather, NV Energy agreed with SNWA's and MVWD's conclusions that the groundwater recovery occurred between 2–3 years following the conclusion of the aquifer test, but that continued pumping within the carbonate-rock aquifer has inhibited recovery to pre-Order 1169 aquifer test groundwater levels, and that at the current rate of carbonate-rock aquifer pumping the aquifer has nearly reached steady-state conditions and discharge to the Warm Springs area has reached equilibrium.<sup>179</sup>

NV Energy further agreed in its rebuttal report with MBOP's and CNLV's conclusions that some groundwater flowing within the carbonate-rock aquifer bypassed the Muddy River Springs Area, and ultimately the Muddy River. NV Energy also agreed that groundwater development within the southern boundary of the LWRFS would likely have less of an effect on discharge to the Warm Springs area and the river. NV Energy did not opine as to the quantity of water that bypassed the springs, but inferred that the current 7,000–8,000 afy of carbonate-rock aquifer pumping appeared to support the conclusion that steady-state conditions had been reached.<sup>180</sup> NV Energy also opined that movement of senior certificated alluvial water rights in the Muddy River Springs Area to carbonate-rock aquifer wells located in the southern portion of the LWRFS may be considered acceptable as Nevada law allows for the reasonable lowering of the groundwater table, and such movement would not necessarily result in a conflict to existing rights.<sup>181</sup> NV Energy further concluded that, contrary to the conclusions of MBOP, drought was not a significant cause for the groundwater level declines observed.<sup>182</sup> Finally, NV Energy concluded with suggestions that the State Engineer either: (1) combine the LWRFS basins into a single hydrographic basin and declare the new basin to be a Critical Management Area pursuant to NRS 534.037 and 534.110; or, (2) for the State Engineer to, under his authority in NRS 534.020 and

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<sup>178</sup> *Id.*

<sup>179</sup> *Id.*, pp. 2–7.

<sup>180</sup> NVE Ex. 1, p. 8.

<sup>181</sup> *Id.*, pp. 8–9; *Nevada Energy's Closing Statements* (NV Energy Closing), Hearing on Interim Order 1303, official records of the Division of Water Resources, pp. 4–5.

<sup>182</sup> *Id.*, pp. 9–12.

534.120, require the water right holders within the LWRFS to develop a conjunctive management plan.<sup>183</sup>

After considering all of the evidence and testimony presented at the Interim Order 1303 hearing, NV Energy ultimately altered its opinion and found compelling arguments to both support the inclusion of Kane Springs Valley in the LWRFS as well as its exclusion.<sup>184</sup> Ultimately, NV Energy changed its opinion with respect to the geographic boundary of the LWRFS and in its closing statement expressed support for the inclusion of Kane Springs Valley within the LWRFS boundary due to the connection with Coyote Spring Valley and thus the potential for impacts to LWRFS from pumping within Kane Springs Valley.<sup>185</sup> NV Energy proposes that the current pumping regime of 7,000 to 8,000 afy be maintained to evaluate the potential for steady-state conditions and the continued monitoring of the Warm Springs West gage and agrees that moving pumping further south may reduce impact to the Muddy River and springs. With regards to moving water between the alluvial and carbonate-rock aquifers, similar to others, NV Energy agrees with the evaluation of change applications on a case-by-case basis with demonstration that impacts are reduced or unchanged by the proposed point of diversion compared to the existing point of diversion. NV Energy supports an agreement that would include all water users within the LWRFS for the purposes of not exceeding stresses within system and protecting the Moapa dace.<sup>186</sup>

*Southern Nevada Water Authority and Las Vegas Valley Water District*

The SNWA and LVVWD submitted multiple reports in response to the Interim Order 1303 solicitation.<sup>187</sup> SNWA and LVVWD supported the boundary of the LWRFS as identified in Interim Order 1303, and argued that there was a general consensus of the participants regarding the

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<sup>183</sup> *Id.*, p. 12.

<sup>184</sup> Tr. 1761–1762.

<sup>185</sup> NV Energy Closing, pp. 2–3.

<sup>186</sup> *Id.*, pp. 3–6.

<sup>187</sup> SNWA Ex. 7; SNWA Ex. 8, *Marshall, Z.L., and Williams, R.D., 2019, Assessment of Moapa dace and other groundwater- dependent special status species in the Lower White River Flow System, Presentation to the Office of the Nevada State Engineer: Southern Nevada Water Authority, Las Vegas, Nevada*, Hearing on Interim Order 1303, official records of the Division of Water Resources; SNWA Ex. 9, *Burns, A., Drici, W., and Marshall Z.L., 2019, Response to stakeholder reports submitted to the Nevada State Engineer with regards to Interim Order 1303, Presentation to the Office of the Nevada State Engineer: Southern Nevada Water Authority, Las Vegas, Nevada*, Hearing on Interim Order 1303, official records of the Division of Water Resources.

boundaries based upon the hydraulic connectivity within the identified basins.<sup>188</sup> Further, SNWA and LVVWD argued against the exclusion of the northern and western portions of Coyote Spring Valley, that management of adjoining basins should be done in a manner recognizing an impact on pumping from those basins on water availability in the LWRFS basins, and that the Las Vegas Valley should be excluded from the LWRFS.<sup>189</sup>

With respect to the evaluation of the carbonate-rock aquifer recovery since the conclusion of the Order 1169 aquifer test, SNWA and LVVWD concluded that the aquifer has not returned to pre-Order 1169 levels, and that the evidence demonstrates a continued declining trend within the carbonate-rock aquifer as a result of continued groundwater pumping.<sup>190</sup> SNWA and LVVWD concluded that the current pumping continues to capture groundwater storage and that based upon the current rate of groundwater withdrawals, water levels within the carbonate-rock aquifer will continue to decline for the foreseeable future.<sup>191</sup> Further, SNWA and LVVWD rejected the premise that climate was a significant factor over groundwater withdrawals for the observed groundwater level decline.<sup>192</sup>

Based upon a review of the evidence, SNWA and LVVWD concluded that current rate of groundwater withdrawals were not sustainable without adversely impacting senior Muddy River water rights and Moapa dace habitat.<sup>193</sup> Based upon the analysis performed by SNWA and LVVWD, examining the discharge from the Muddy River Springs Area and groundwater production within the carbonate-rock aquifer within the LWRFS, SNWA and LVVWD concluded that any groundwater development within the carbonate-rock aquifer resulted in a one-to-one (1:1) ratio of capture of Muddy River flow, and that regardless of where that pumping occurred, it still resulted in a 1:1 ratio of capture, only that the period of time that the capture was realized was longer.<sup>194</sup> Ultimately, SNWA and LVVWD concluded that while any amount of pumping results

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<sup>188</sup> SNWA Ex. 7, pp. 5-1 through 5-18, 8-1. *See also*, Tr. 953.

<sup>189</sup> *Closing Brief of Southern Nevada Water Authority and Las Vegas Valley Water District* (SNWA Closing), pp. 4-9, Hearing on Interim Order 1303, official records of the Division of Water Resources. *See also* SNWA Ex. 9 at sections 6, 7 and 12.

<sup>190</sup> SNWA Closing, pp. 9-12. *See also* SNWA Ex. 7, pp. 5-1 through 5-18, and SNWA Ex. 9, pp. 15-20.

<sup>191</sup> SNWA Closing, pp. 11-12. *See also* Tr. 932.

<sup>192</sup> SNWA Closing, pp. 12-14. *See also* SNWA Ex. 9, pp. 15-17.

<sup>193</sup> SNWA Ex. 7, pp. 6-3 through 6-4, 8-2 through 8-4.

<sup>194</sup> *Id.*, pp. 6-4 through 6-11, 8-2 through 8-4; SNWA Ex. 9, pp. 22-27.

in a conflict with senior decreed Muddy River rights, approximately 4,000 to 6,000 afa could be sustainably pumped from the aquifer.<sup>195</sup> In conjunction with SNWA and LVVWD's evaluation of the quantity of water that may be sustainably developed within the LWRFS, SNWA and LVVWD reviewed the interrelationship between discharge from the carbonate-rock aquifer underlying the LWRFS, groundwater pumping and the impact on the habitat and recovery of the Moapa dace.<sup>196</sup> SNWA and LVVWD ultimately concluded that the flow required to sustain the Moapa dace from adverse effects, including habitat loss and fish population declines was a minimum 3.2 cfs at the Warm Springs West gage.<sup>197</sup>

Finally, it was SNWA and LVVWD's opinion that movement of water rights from the Muddy River Springs Area alluvial aquifer to the carbonate-rock aquifer within the LWRFS may delay the capture of water serving senior decreed rights on the Muddy River, but that movement of water from the alluvial aquifer to the carbonate-rock aquifer would adversely impact the habitat of the Moapa dace.<sup>198</sup> Thus, SNWA and LVVWD concluded transfer of water rights from the Muddy River Springs Area alluvial aquifer to the LWRFS carbonate-rock aquifer would result in further depletion of flow to the Warm Springs area.<sup>199</sup>

#### *Technichrome*

Technichrome submitted a response and additional response to the Interim Order in July 2019 but did not participate in the hearing.<sup>200</sup> Technichrome stated that it had no objection to a "joint administrative basin" consisting of Coyote Spring Valley, Black Mountain Area, Garnet Valley, Hidden Valley, Muddy River Springs Area, and Lower Moapa Valley, expressed no comment regarding the inclusion of Kane Springs Valley, but questioned whether the entirety of the White River Flow System should be included in the State Engineer's analysis.<sup>201</sup> However,

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<sup>195</sup> Tr. 921–22. *See also* SNWA Ex. 7, pp. 8-1 through 8-5; SNWA Ex. 9, p. 27.

<sup>196</sup> *See* SNWA Ex. 8.

<sup>197</sup> *Id.*, pp. 8-1 through 8-2. *See also* SNWA Closing, pp. 17–19.

<sup>198</sup> *See* SNWA Closing, pp. 19–20. *See also* SNWA Ex. 7, pp. 6-3 through 6-11, 8-4; SNWA Ex. 9, pp. 21–22.

<sup>199</sup> SNWA Closing, p. 20. *See also* Tr. 904–05.

<sup>200</sup> *Response to Interim Order #1303 Submitted [sic] by Technichrome* (Technichrome Response), Hearing on Interim Order 1303, official records of the Division of Water Resources, and *Additional Comments from Technichrome* (Technichrome Addendum), Hearing on Interim Order 1303, official records of the Division of Water Resources.

<sup>201</sup> Technichrome Response, pp. 1–3.

Technichrome did note that it believed that combining all water rights into a single management structure reduced the State Engineer's ability to control groundwater withdrawals. Technichrome stated that it believed that the State Engineer should have the ability to control withdrawals in small areas to best manage the discharge to the Warm Springs area, and that more targeted control over the groundwater withdrawals would be more effective in managing the discharge.<sup>202</sup> Technichrome supported this opinion with some analysis of the results of the Order 1169 aquifer test and its opinion that pumping farther from the Warm Springs area had little to no impact on discharge to Pederson Spring.<sup>203</sup>

In Technichrome's additional comments, Technichrome addressed concerns regarding the injury that would result from a system-wide reduction of groundwater rights throughout the LWRFS.<sup>204</sup> Finally, Technichrome addressed concerns regarding reliance on the priority system, as utilization of the prior appropriation system would benefit senior irrigation uses over the junior industrial uses, and that removal of basin boundaries would remove limitations on movement of water rights between the existing hydrographic basins, which would disrupt junior uses in areas where senior rights may be moved.<sup>205</sup>

#### *U.S. Fish and Wildlife Service*

USFWS holds several water rights within the LWRFS and its mission is consistent with the scientific and management aspects of the LWRFS and the management area as established in Interim Order 1303.<sup>206</sup> USFWS opted to participate in the proceeding by submitting initial and rebuttal reports and providing testimony during the administrative hearing.<sup>207</sup> The approach of

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<sup>202</sup> *Id.*

<sup>203</sup> *Id.*, and Technichrome Addendum.

<sup>204</sup> Technichrome Addendum.

<sup>205</sup> *Id.*

<sup>206</sup> The USFWS' mission is to work with others to conserve, protect and enhance fish, wildlife and plants and their habitats for the continuing benefit of the American people. *See also*, USFWS, *About the U.S. Fish and Wildlife Service*, <https://bit.ly/aboutusfws> (last accessed June 4, 2020).

<sup>207</sup> USFWS Ex. 5, *Report in Response to Order 1303*, Hearing on Interim Order 1303, official records of the Division of Water Resources; USFWS Ex. 7, *Rebuttal to: Water Level Decline in the LWRFS: Managing for Sustainable Groundwater Development by Cady Johnson and Martin Mifflin [sic], Mifflin & Associates, Inc., submitted by the Moapa Band of Paiutes in accordance with Order 1303*, Hearing on Interim Order 1303, official records of the Division of Water Resources.

USFWS was to review available data, develop a hydrogeologic conceptual model, and answer the specific questions posed in Interim Order 1303.

USFWS proposed that the boundary be based on geologic breaks rather than the surface drainage areas. The boundary would then encompass all Muddy River Springs Area, Hidden Valley, Garnet Valley, most of Coyote Spring Valley, most of California Wash, the northwest portion of the Black Mountains area, Kane Springs Valley, and most of Lower Meadow Valley Wash. The extent to which Kane Springs Valley and Lower Meadow Valley Wash are included would depend on the data from an aquifer test that has not yet been performed.<sup>208</sup>

Although, USFWS did not directly opine their view on recovery, their report discusses a conceptual model with insight into lag times and hydraulic connections, and how current conditions relate to sustainable pumping. An “undiminished state of decline” in water levels and spring flows indicated that the system was not in equilibrium at the end of the Order 1169 aquifer test. USFWS postulated there was generally good connectivity within the aquifer system with areas of higher and lower transmittivity. Trends in water levels and spring flows allude to the connection between high elevation springs and carbonate-rock aquifer pumping, with a time lag observed in the recovery of carbonate-rock aquifer water levels and spring flows following the cessation of the Order 1169 aquifer test. The exception is Big Muddy Spring where surface water level trends appeared to be unrelated to the carbonate-rock aquifer water levels.<sup>209</sup>

USFWS determined that the optimum method currently available to estimate the maximum allowable rate of pumping in the LWRFS is the average annual rate of pumping from 2015–2017.<sup>210</sup> USFWS considered the period from 2015 to 2017 because it found that the groundwater withdrawals, the discharge of the Muddy River Springs, and the flow of the Muddy River were all relatively constant; flow rates from Plummer, Pederson, Jones and Baldwin springs, though generally lower than before the Order 1169 aquifer test, were reasonably stable compared to earlier

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<sup>208</sup> See USFWS Ex. 5, pp. 2, 28–36.

<sup>209</sup> USFWS Ex. 5, pp. 3, 32–33, 35, 37–45; Tr. 266–270, 273–281, 299–301, 433–435.

<sup>210</sup> USFWS Ex. 5, p. 3.

periods.<sup>211</sup> Using the pumpage inventories for this time period, USFWS estimated the sustainable groundwater withdrawals to be 9,318 afa.<sup>212</sup>

Even if total carbonate-rock and alluvial aquifer pumping is maintained at a “sustainable” overall level, USFWS did not support increased carbonated-rock aquifer pumping in exchange for reductions in alluvial aquifer pumping, nor did USFWS support increased alluvial aquifer pumping in exchange for reductions in carbonate-rock aquifer pumping. USFWS suggested that carbonate-rock aquifer pumping should not be moved closer to the springs or the river. Similarly, USFWS suggests that alluvial aquifer pumping in the vicinity of the river should not be moved closer to the river. USFWS opines that any movement of water nearer to the springs or the river is anticipated to decrease the lag time for observing responses from pumping and shorten the time to respond to unfavorable impacts.<sup>213</sup>

Moving forward with management of the LWRFS, USFWS supported the use of the triggers at the Warm Springs West gage, as established under the 2006 MOA. Continuing to use these Warm Springs West flows as a trigger for management will protect and provide habitat for the Moapa dace; a reduction in the flow translates to a reduction in habitat.<sup>214</sup>

USFWS did not deny that water levels were independent of a climate response signal. Using observed data for Nevada Climate Divisions, USFWS visually inspected hydrographs for climate signals. USFWS opined that response to wet periods are observed for wells in both the carbonate-rock and alluvial aquifers and springs that discharge from the carbonate-rock aquifer but stated that response to dry periods cannot be separated from the impacts of pumping. USFWS did not observe these same climate signals in the hydrographs for Jones and Baldwin Springs or the Big Muddy Spring. USFWS disagreed with the conclusion of the MBOP regarding long-term, regional drought, as well as the analytical methods.<sup>215</sup>

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<sup>211</sup> USFWS Ex. 5, pp. 3, 37; Tr. 269–270, 433–435.

<sup>212</sup> USFWS Ex. 5, pp. 3, 36–38; Tr. 268–270.

<sup>213</sup> See USFWS Ex. 5, pp. 3–4, 38–39; Tr. 272–273.

<sup>214</sup> See USFWS Ex. 5, pp. 4, 39–45; Tr. 273–282; See also, NSE Ex. 256; NSE Ex. 244, 2006 Memorandum of Agreement Trigger Levels agreed to by the Southern Nevada Water Authority, Moapa Valley Water District, Coyotes Springs Investments LLC and Moapa Band of Paiute Indians, Hearing on Interim Order 1303, official records of the Division of Water Resources.

<sup>215</sup> See USFWS Ex. 5, pp. 24–28, 34–35; See USFWS Ex. 7, pp. 2–16; Tr. 258–260, 299–322, 429–432.



*Western Elite Environmental/Bedroc*

Bedroc is the land holding and water-right holding entity for Western Elite Environmental, Inc., a provider of construction and recyclable waste collection and disposal in Southern Nevada.<sup>216</sup> Bedroc submitted an undated rebuttal report signed by Derek Muaina, General Counsel, and a closing statement.<sup>217</sup> Bedroc presented Jay Dixon as its expert to give a presentation and to discuss the rebuttal report.<sup>218</sup> Mr. Dixon stated that he contributed to the report, and that he agreed with it, but he did not sign the report because he was working for another participant in the hearing (NCA).<sup>219</sup> Mr. Dixon did provide testimony consistent with the report, and adopted the findings of that report, and both the testimony and the report will be considered in this Order.<sup>220</sup>

Bedroc presented testimony and evidence that its source of groundwater is hydraulically disconnected from the regional carbonate aquifer of the LWRFS and that additional groundwater may be available for pumping in their part of Coyote Spring Valley. Bedroc also argued that its basin fill alluvial groundwater pumping should be managed outside of the proposed LWRFS joint administrative unit.<sup>221</sup>

To show the hydraulic disconnect, Bedroc presented geologic information demonstrating its unique location.<sup>222</sup> Bedroc showed that a confining shelf of sedimentary rock was noticeably absent in the vicinity of the Bedroc site where recharge from the Sheep Range rises toward the surface between two faults, which results in shallow groundwater that is subject to ET and capture from shallow groundwater wells at the Bedroc site.<sup>223</sup> Recharge from the Sheep Range was estimated to be 750 afy, an average of the high and low estimates of the maximum recharge

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<sup>216</sup> Bedroc Ex. 2, *Interim Order 1303- Rebuttal Report- Prepared by Bedroc and Dixon Hydrologic, PLLC- August 2019*, Hearing on Interim Order 1303, official records of the Division of Water Resources.

<sup>217</sup> Bedroc Ex. 2; *Western Elite Environmental Inc.'s and Bedroc Limited, LLC's Closing Statement* (Bedroc Closing), Hearing on Interim Order 1303, official records of the Division of Water Resources.

<sup>218</sup> See Tr. 1718–1719.

<sup>219</sup> Tr. 1719, 1741.

<sup>220</sup> Tr. 1718–1757, 1749–1750.

<sup>221</sup> Bedroc Closing, pp. 13–14. Bedroc offered summary responses to the first four questions posed by Order 1303 but did no independent analysis. See Bedroc Closing, p. 12.

<sup>222</sup> Bedroc Closing, p. 2.

<sup>223</sup> *Id.*; Tr. 1726–1733.

available.<sup>224</sup> SNWA challenged this calculation, pointing out that the estimated recharge could be as low as 130 acre-feet.<sup>225</sup>

Bedroc believes that it is capturing the recharge that would otherwise be lost to evapotranspiration.<sup>226</sup> Groundwater conditions at Bedroc's site show a rise in water levels between 2003 and 2006.<sup>227</sup> Bedroc attributed this rise in part to the installation of an unlined storage pond upgradient from the well, but also to the 2005 recharge event that was discussed by many participants to the proceeding.<sup>228</sup> Between 2006 and 2011, Bedroc showed that groundwater levels had been relatively stable even though pumping by Bedroc was fairly constant.<sup>229</sup> Bedroc showed photo evidence of evapotranspiration occurring around the Bedroc site, pointing to areas of white surface soils and green occurring in the photo as evidence of salt residue and phreatophytes, both occurring as a result of shallow groundwater evaporation.<sup>230</sup> The area is estimated to be about 2,200 acres, and the ET range is estimated to be 0.2 to 0.3 feet per year.<sup>231</sup> This results in an estimate of 400 to 600 afa of groundwater that potentially could be captured every year without pulling groundwater from storage.<sup>232</sup> If pumping in this area exceeded ET, water levels to the east of Bedroc would be dropping.<sup>233</sup>

Bedroc considered the alluvial system at its location to be a separate aquifer from the carbonate-rock aquifer in the LWRFS.<sup>234</sup> CBD in its report also supports this conclusion, suggesting that some groundwater can be withdrawn from the Coyote Spring Valley alluvial aquifer system because that system is disconnected from and not responsible for substantial recharge to the carbonate-rock aquifer.<sup>235</sup> SNWA testified similarly during the hearing.<sup>236</sup>

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<sup>224</sup> Tr. 1724–1725, 1755.

<sup>225</sup> Tr. 1755.

<sup>226</sup> Bedroc Closing, pp. 5–9.

<sup>227</sup> Tr. 1735.

<sup>228</sup> *Id.*

<sup>229</sup> Tr. 1735–1736.

<sup>230</sup> Tr. 1734, 1738.

<sup>231</sup> Tr. 1739.

<sup>232</sup> Tr. 1739.

<sup>233</sup> Tr. 1739. *See also* Bedroc Closing, p. 8.

<sup>234</sup> Tr. 1746.

<sup>235</sup> Bedroc Ex. 2, p. 5.

<sup>236</sup> Tr. 1024.

Relying on a lack of connection between pumping at Bedroc and the carbonate-rock aquifer, Bedroc asserted that there is no likely impact to the Warm Springs area caused by Bedroc.<sup>237</sup> Bedroc compared groundwater elevations over time in two alluvial wells, CSV-3009M and CSV-7, and showed an upward trend in groundwater elevations.<sup>238</sup> But, when comparing groundwater elevations of two monitoring wells in different sources, CSV-7 in the alluvium and CSV-4 in the carbonate-rock aquifers, the carbonate-rock aquifer well elevations showed a decline during the Order 1169 aquifer test, but the alluvial well elevation rose during the same period and leveled off after the conclusion of the test.<sup>239</sup> Bedroc concluded that these data illustrate 1) the hydraulic disconnect between the local alluvial aquifer and carbonate-rock aquifer and 2) if historical alluvial pumping at Bedroc has not impacted water levels in nearby alluvial wells, then there is likely no impact to spring or streamflow in the Muddy River Springs Area.

Finally, Bedroc stated that managing all users in the region under the same system would arbitrarily impact users whose water neither comes from the regional carbonate-rock aquifer system nor impacts the springs of concern downstream.<sup>240</sup> It urged caution in allowing transfer of water rights between alluvial and carbonate-rock aquifers due to potential impacts on senior users that are using local recharge that may not sustain pumping from additional users.<sup>241</sup> Transfers of senior alluvial rights from the Muddy River Springs Area to the area near Bedroc should be considered on a case-by-case basis to protect Bedroc's senior water rights.<sup>242</sup>

### III. PUBLIC COMMENT

**WHEREAS**, following the conclusion of the Interim Order 1303 hearing, opportunity for public comment was offered, including the opportunity to submit written public comment, which was due to be submitted to the Division no later than December 3, 2019. Lincoln County Board of

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<sup>237</sup> Bedroc Closing, p.11. *See also* SNWA testimony of Andrew Burns that pumping at Bedroc wells is not likely to impact the carbonate system or the Muddy River. Tr. 1024–1025.

<sup>238</sup> Bedroc Closing, p. 12. *See also* Tr. 1736–1737, 1752.

<sup>239</sup> Tr. 1737–1738.

<sup>240</sup> Bedroc Ex. 2, pp. 2–4.

<sup>241</sup> *Id.*, p. 6.

<sup>242</sup> Tr. 1740.

County Commissioners submitted written public comment in addition to the closing argument submitted by LC-V.<sup>243</sup>

#### IV. AUTHORITY AND NECESSITY

**WHEREAS**, NRS 533.024(1)(c) directs the State Engineer “to consider the best available science in rendering decisions concerning the availability of surface and underground sources of water in Nevada.”

**WHEREAS**, in 2017 the Nevada Legislature added NRS 533.024(1)(e), declaring the policy of the State to “manage conjunctively the appropriation, use and administration of all waters of this State regardless of the source of the water.”

**WHEREAS**, NRS 534.020 provides that all waters of the State belong to the public and are subject to all existing rights.

**WHEREAS**, as demonstrated by the results of the Order 1169 aquifer test and in the data collected in the years since the conclusion of the aquifer test, the LWRFS exhibits a direct hydraulic connection that demonstrates that conjunctive management and joint administration of these groundwater basins is necessary and supported by the best available science.<sup>244</sup>

**WHEREAS**, the pre-development discharge of 34,000 acre-feet of the fully appropriated Muddy River system plus the more than 38,000 acre-feet of groundwater appropriations within the LWRFS greatly exceed the total water budget that may be developed without impairment of senior existing rights or proving detrimental to the public interest.

**WHEREAS**, the available groundwater supply within the LWRFS that can be continually pumped over the long-term is limited to the amount that may be developed without impairing existing senior rights, rights on the Muddy River or adversely affecting the public interest in

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<sup>243</sup> See Board of County Commissioners, Lincoln County, Nevada, *Public Comment to Interim Order #1303 Hearing, Reports, and Evidence on the Lower White River Flow System*, Hearing on Interim Order 1303, official records of the Division of Water Resources.

<sup>244</sup> See, e.g., NSE Ex. 245; NSE Ex. 248; NSE Ex. 256; NSE Ex. 252; NSE Ex. 282, *Federal Bureaus Order 1169 Report Selected References: Comparison of Simulated and Observed Effects of Pumping from MX-5 Using Data Collected to the Endo of the Order 1169 Test, and Prediction of the Rates of Recovery from the Test*, TetraTech, 2013, Hearing on Interim Order 1303, official records of the Division of Water Resources. See also, e.g., CBD Ex. 3; MVWD Exs. 3–4; MVIC Ex. 1; NCA Ex. 1, SNWA Exs. 7–9; USFWS Exs. 5–6; NPS Exs. 2–3.

protection of the endangered Moapa dace and the habitat necessary to support the management and recovery of the Moapa dace.

**WHEREAS**, pursuant to NRS 532.120, the State Engineer is empowered to make such reasonable rules and regulations as may be necessary for the proper and orderly execution of the powers conferred by law.

**WHEREAS**, pursuant to NRS 534.110(6) the State Engineer is directed to conduct investigations in groundwater basins where it appears that the average annual replenishment of the groundwater is insufficient to meet the needs of all water right holders, and if there is such a finding, the State Engineer may restrict withdrawals to conform to priority rights.

**WHEREAS**, within an area that has been designated by the State Engineer, as provided for in NRS Chapter 534, and specifically, NRS 534.120, where, in the judgment of the State Engineer, the groundwater basin is being depleted, the State Engineer in his or her administrative capacity may make such rules, regulations and orders as are deemed essential for the welfare of the area involved.<sup>245</sup>

**WHEREAS**, the State Engineer has the authority to hold a hearing to take evidence and the interpretation of the evidence with respect to its responsibility to manage Nevada's water resources and to allow willing participants to present evidence and testimony regarding the conclusions relating to the questions presented in Interim Order 1303. The State Engineer recognizes that the MBOP is a federally recognized tribe, and that its participation in the hearing was to facilitate the understanding of the interpretation of data with respect to the Interim Order 1303 solicitation.

#### **V. ENDANGERED SPECIES ACT**

**WHEREAS**, the Endangered Species Act (ESA), 16 U.S.C. §1531 et seq. is a federal law designed to serve the purpose of identifying, conserving and ultimately recovering species declining toward extinction.<sup>246</sup> Specifically, while the ESA is primarily a conservation program, a critical element of the conservation component seeks to encourage cooperation and coordination

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<sup>245</sup> See also NRS 534.030, NRS 534.110.

<sup>246</sup> 16 U.S.C. § 1531(a)-(b).

with state and local agencies.<sup>247</sup> The responsibility of enforcement and management under the ESA rests predominately with the federal government; however, the ultimate responsibility is shared.<sup>248</sup>

WHEREAS, the ESA makes it unlawful for any person to “take” an endangered species – or to attempt to commit, solicit another to commit, or cause to be committed, a taking.<sup>249</sup> The term “person” is broadly defined to include the State and its instrumentalities.<sup>250</sup> “Take” encompasses actions that “harass, harm” or otherwise disturb listed species, including indirect actions that result in a take.<sup>251</sup> For example, a state regulator is not exempted from the ESA for takings that occur as a result of a licensee’s regulated activity. States have been faced with the impediment of their administrative management actions being subservient to the ESA. For example, the Massachusetts Division of Marine Fisheries was subject to an injunction prohibiting it from issuing commercial fishing licenses because doing so would likely lead to the taking of an endangered species.<sup>252</sup> In *Strahan v. Coxe*, the court’s decision relied on reading two provisions of the ESA— the definition of the prohibited activity of a “taking” and the causation by a third party of a taking— “to apply to acts by third parties that allow or authorize acts that exact a taking and that, but for the permitting process, could not take place.”<sup>253</sup> Although Massachusetts was not the one directly causing the harm to the endangered species, the court upheld the injunction because “a governmental third party pursuant to whose authority an actor directly exacts a taking of an endangered species may be deemed to have violated the provisions of the ESA.”<sup>254</sup> At least three other circuits have held similarly.<sup>255</sup> In each case, “the regulatory entity purports to make lawful an activity that allegedly violates the ESA.”<sup>256</sup> Thus the action of granting the permit for the regulated activity has been considered an indirect cause of a prohibited taking under the ESA.

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<sup>247</sup> 16 U.S.C. § 1531(c); 16 U.S.C. § 1536.

<sup>248</sup> 16 U.S.C.A. § 1536.

<sup>249</sup> 16 U.S.C.A. § 1538(g).

<sup>250</sup> 16 U.S.C.A. § 1532(13).

<sup>251</sup> 16 U.S.C.A. § 1532(19). The term “harm” is defined by regulation, 50 C.F.R. § 17.3 (1999).

<sup>252</sup> *Strahan v. Coxe*, 127 F.3d 155 (1st Cir. 1997), *cert denied* 525 U.S. 830 (1998).

<sup>253</sup> *Id.*, p. 163.

<sup>254</sup> *Id.*

<sup>255</sup> See *Sierra Club v. Yeutter*, 926 F.2d 429 (5th Cir. 1991); *Defenders of Wildlife v. EPA*, 882 F.2d 1294 (8th Cir. 1989); *Loggerhead Turtle v. County Council*, 148 F.3d 1231 (11th Cir. 1998); *Palila v. Hawaii Dept. of Land & Natural Resources*, 852 F.2d 1106 (9th Cir. 1988).

<sup>256</sup> *Loggerhead Turtle*, 148 F.3d at 1251.

**WHEREAS**, the use of water in Nevada is a regulated activity.<sup>257</sup> It is the responsibility of the State to manage the appropriation, use and administration of all waters of the state.<sup>258</sup> Based on *Strahan* and similar decisions, the act of issuing a permit to withdraw groundwater that reduces the flow of the springs that form the habitat of the Moapa dace and were to result in harm to the Moapa dace exposes the Division, the State Engineer and the State of Nevada to liability under the ESA.

**WHEREAS**, a USFWS biological opinion for the MOA found that the reduction in spring flow from the warm springs could impact the dace population in multiple ways. First, the USFWS found that declines in groundwater levels will reduce the flow to the Warm Springs area and allow for cooler groundwater seepage into streams. With reduced spring flow, Moapa dace habitat is reduced.<sup>259</sup> Additionally, USFWS determined that the reduced flows of warm water from the springs will also result in cooler water available throughout the dace habitat, reducing spawning habitat and resulting in a population decline.<sup>260</sup>

**WHEREAS**, based upon the testimony and evidence offered in response to Interim Order 1303, it is clear that it is necessary for spring flow measured at the Warm Springs West gage to flow at a minimum rate of 3.2 cfs in order to maintain habitat for the Moapa dace.<sup>261</sup> A reduction of flow below this rate may result in a decline in the dace population. This minimum flow rate is not necessarily sufficient to support the rehabilitation of the Moapa dace.<sup>262</sup>

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<sup>257</sup> NRS 533.030; 533.325; 534.020.

<sup>258</sup> NRS 533.325; 533.024(1)(e); 534.020.

<sup>259</sup> USFWS Ex. 5, pp. 50–52.

<sup>260</sup> SNWA Ex. 8, pp. 6-2 through 6-3; SNWA Ex. 40, *Hatten, J.R., Batt, T.R., Scoppettone, G.G., and Dixon, C.J., 2013, An ecohydraulic model to identify and monitor Moapa dace habitat. PLoS ONE 8(2):e55551, doi:10.1371/journal.pone.0055551.*, Hearing on Interim Order 1303, official records of the Division of Water Resources; SNWA Ex. 41, *U.S. Fish and Wildlife Service, 2006a, Intra-service programmatic biological opinion for the proposed Muddy River Memorandum of Agreement regarding the groundwater withdrawal of 16,100 acre-feet per year from the regional carbonate aquifer in Coyote Spring Valley and California Wash basins, and establish conservation measures for the Moapa Dace, Clark County, Nevada. File No. 1-5-05 FW-536, January 30, 2006.*, Hearing on Interim Order 1303, official records of the Division of Water Resources.

<sup>261</sup> Tr. 1127–1128.

<sup>262</sup> Tr. 401–402, 1147, 1157–1158.

**WHEREAS**, the ESA prohibits any loss of Moapa dace resulting from actions that would impair habitat necessary for its survival. Some groundwater users are signatories to an MOA that authorizes incidental take of the Moapa dace; however, the State Engineer and many other groundwater users are not covered by the terms of the MOA.<sup>263</sup> Not only would liability under the ESA for a “take” extend to groundwater users within the LWRFS, but would so extend to the State of Nevada through the Division as the government agency responsible for permitting water use.

**WHEREAS**, the State Engineer concludes that it is against the public interest to allow groundwater pumping from the LWRFS that will reduce spring flow in the Warm Springs area to a level that would impair habitat necessary for the survival of the Moapa dace and could result in take of the endangered species.

#### **VI. GEOGRAPHIC BOUNDARY OF THE LWRFS**

**WHEREAS**, the geographic boundary of the hydrologically connected groundwater and surface water systems comprising the LWRFS, as presented in Interim Order 1303, encompasses the area that includes Coyote Spring Valley, Muddy River Springs Area, California Wash, Hidden Valley, Garnet Valley and the northwest portion of the Black Mountains Area.<sup>264</sup> The rationale for incorporating these areas into a single administrative unit included the presence of a distinct regional carbonate-rock aquifer that underlies and uniquely connects these areas; the remarkably flat potentiometric surface observed within the area; the diagnostic groundwater level hydrographic pattern exhibited by monitoring wells distributed across the area; and the area-wide diagnostic water level response to pumping during the Order 1169 aquifer test. Each of these characteristics were previously identified and examined in the hydrological studies and subsequent hearing that followed the completion of the Order 1169 aquifer test. Indeed, these characteristics were the foundational basis for the State Engineer’s determination in Rulings 6254–6261 that the

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<sup>263</sup> NSE Ex. 236; SNWA Ex. 8, pp. 5-1 through 5-8.

<sup>264</sup> See NSE Ex. 1, p. 6.



close hydrologic connection<sup>265</sup> and shared source and supply of water in the LWRFS required joint management.<sup>266</sup>

WHEREAS, evidence and testimony presented during the Interim Order 1303 hearing indicated a majority consensus among stakeholder participants that this originally defined area is appropriately combined into a single unit.<sup>267</sup> Evidence and testimony was also presented on whether to add adjacent basins, or parts of basins to the administrative unit; to modify boundaries within the existing administrative unit; or to eliminate the common administrative unit boundaries. The State Engineer has considered this evidence and testimony on the basis of a common set of criteria that are consistent with the original characteristics considered critical in demonstrating a close hydrologic connection requiring joint management in Rulings 6254–6261 and more specifically, include the following:

1) Water level observations whose spatial distribution indicates a relatively uniform or flat potentiometric surface are consistent with a close hydrologic connection.

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<sup>265</sup> The State Engineer notes that the terminology “*hydrologic connection*” and “*hydraulic connection*” have been used by different parties sometimes interchangeably, and commonly with nearly the same meaning. The State Engineer considers a hydraulic connection to be intrinsically tied to the behavior and movement of water. With regard to aquifers, it may be thought of as the natural or induced movement of water through permeable geologic material. The degree of hydraulic connection can be considered a measure of the interconnection between locations as defined by a cause and effect change in potentiometric surface or a change in groundwater inflow or outflow that reflects characteristics of both the aquifer material and geometry, and groundwater behavior. It is commonly characterized by a response that is transmitted through the aquifer via changes in hydraulic head, i.e., groundwater levels. Hydrologic connections may include hydraulic connections but can also represent more complex system interactions that can encompass all parts of the water cycle, and in some cases may focus on flow paths, water budgets, geochemical interactions, etc. The State Engineer’s use of the term “*close hydrological connection*” is intended to encompass and include a direct hydraulic connection that is reflected in changes in groundwater levels in response to pumping or other fluxes into or out of the aquifer system within a matter of days, months, or years. The closeness, strength, or directness of the response is indicated by timing, with more distinct and more immediate responses being more “close”.

<sup>266</sup> See NSE Ex. 14, p. 12, 24.

<sup>267</sup> See Participant testimony from SNWA (Tr. 875–876), CNLV (Tr. 1418), and CSI (Tr. 95–96). Several other participants agreed, too, that the State Engineer’s delineation of the LWRS as defined in Interim Order 1303 was acceptable. See also Bedroc Closing, p. 12, Church Closing, p. 1; Technichrome Response, p. 1. Other participants recommended larger areas be included within the LWRFS boundary. See Tr. 261–266 (USFWS), 1571–1572 (CBD), 1697–1698 (MVIC). See also NV Energy Closing, pp. 2–3; NPS Closing pp. 2–5.

2) Water level hydrographs that, in well-to-well comparisons, demonstrate a similar temporal pattern, irrespective of whether the pattern is caused by climate, pumping, or other dynamic is consistent with a close hydrologic connection.

3) Water level hydrographs that demonstrate an observable increase in drawdown that corresponds to an increase in pumping and an observable decrease in drawdown, or a recovery, that corresponds to a decrease in pumping, are consistent with a direct hydraulic connection and close hydrologic connection to the pumping location(s).

4) Water level observations that demonstrate a relatively steep hydraulic gradient are consistent with a poor hydraulic connection and a potential boundary.

5) Geological structures that have caused a juxtaposition of the carbonate-rock aquifer with low permeability bedrock are consistent with a boundary.

6) When hydrogeologic information indicate a close hydraulic connection (based on criteria 1-5), but limited, poor quality, or low resolution water level data obfuscate a determination of the extent of that connection, a boundary should be established such that it extends out to the nearest mapped feature that juxtaposes the carbonate-rock aquifer with low-permeability bedrock, or in the absence of that, to the basin boundary.

**WHEREAS**, some testimony was presented advocating to include additional areas to the LWRFS based principally on water budget considerations and/or common groundwater flow pathways.<sup>268</sup> Indeed, some participants advocate to include the entire White River Flow System, or other basins whose water may ultimately flow into or flow out of the system.<sup>269</sup> Other participants used, but did not rely on, water budget and groundwater flow path considerations to support their analysis. Like those participants, the State Engineer agrees that while water budget and groundwater flow path analysis are useful to demonstrate a hydrologic connection, additional information is required to demonstrate the relative strength of that connection. Thus, the State

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<sup>268</sup> See e.g., CNLV Ex. 3, p. 33, Tr. 1430; NPS Closing, p. 2. See also Tr. 253–257; Sue Braumiller, *Interpretations of available Geologic and Hydrologic Data Leading to Responses to Questions Posed by the State Engineer in Order 1303 regarding Conjunctive Management of the Lower White River Flow System* (USFWS Braumiller presentation), slide 11, Item 6., bullet 1, official records of the Division of Water Resources; MBOP Ex. 2, p. 11.

<sup>269</sup> See e.g., GBWN Report, pp. 1–2.

Engineer recognizes that while any hydrologic connection, weak or strong, needs to be considered in any management approach, many of the connections advocated based principally on a water budget or flow path analysis, including those between nearby basins like Las Vegas Valley and Lower Meadow Valley Wash, are not demonstrated to provide for the uniquely close hydraulic connection that require joint management.

**WHEREAS**, in their closing statement, NPS proposes that all adjacent hydrographic areas to the original Interim Order 1303 administrative unit where a hydraulic interconnection exists, whether weak or strong, be included in the LWRFS.<sup>270</sup> It does so to alleviate the need for developing new management schemes for the excluded remnants and to provide for appropriate management approaches based on new information and improved understanding of differing degrees of hydraulic interconnection in various sub-basins. The State Engineer agrees with this logic, up to a point, and has applied these concepts to the extent practical as demonstrated in his criteria for determining the extent of the LWRFS. However, the State Engineer also finds that there must be reasonable and technically defensible limits to the geographic boundary. Otherwise, if management were to be based on the entire spectrum of weak to strong hydraulic interconnection, then exclusion of an area from the LWRFS would require absolute isolation from the LWRFS; every sub-basin would have its own management scheme based on some measure of its degree of connectedness; and proper joint management would be intractable.

**WHEREAS**, evidence and testimony was also presented by the NPS regarding the specific inclusion of the entirety of the Black Mountains Area in the LWRFS.<sup>271</sup> The State Engineer recognizes that there may be a hydrologic connection between the Black Mountains Area and upgradient basins that are sources of inflow, and that outflow from the LWRFS carbonate-rock aquifer may contribute to discharge from Rogers and Blue Point Springs. However, the State Engineer does not find that this supports inclusion of the entirety of the Black Mountains Area. This determination is made based on the lack of contiguity of the carbonate-rock aquifer into this

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<sup>270</sup> NPS Closing, pp. 3–5.

<sup>271</sup> NPS Closing pp. 3–4. *See also* Tr.534, 555–569; Richard K. Waddell, Jr., *Testimony of Richard K. Waddell on behalf of the National Park Service*, presentation during hearing for Interim Order 1303 (NPS Presentation), slides 32–46, official records of the Division of Water Resources.

area,<sup>272</sup> the difference in observed water level elevations compared to those in adjacent carbonate-rock aquifer wells to the north and west,<sup>273</sup> and the absence of observed diagnostic hydrographic patterns and responses that define the uniquely close hydraulic connection that characterizes the LWRFS.<sup>274</sup>

**WHEREAS**, evidence and testimony presented by USFWS relied principally on SeriesSEE analysis of water level responses submitted by the Department of Interior Bureaus following the Order 1169 aquifer test to establish the general extent of the LWRFS. This was supported by the application of hydrogeology and principles of groundwater flow to define specific boundary limits to the LWRFS. It proposed that most of the Lower Meadow Valley Wash be considered for inclusion in the LWRFS based on the potential geologic continuity between carbonate rocks underlying the Lower Meadow Valley Wash and the carbonate-rock aquifer underlying Coyote Spring Valley, the Muddy River Springs Area, and California Wash.<sup>275</sup> Additionally, it asserted that the alluvial aquifer system in Lower Meadow Valley Wash contributes to and is connected to both the Muddy River and the alluvial aquifer system in California Wash. The State Engineer finds that while carbonate rocks may underlie the Lower Meadow Valley Wash and be contiguous with carbonate rocks to the south and west, data are lacking to characterize the potential hydraulic connection that may exist. Regarding the hydraulic connection between the Lower Meadow Valley Wash alluvial aquifer and the LWRFS, the State Engineer agrees with USFWS that a connection exists, but finds that any impacts related to water development in the Lower Meadow Valley Wash alluvial aquifer are localized, and unrelated to the carbonate-rock aquifer, and can be appropriately managed outside the LWRFS joint management process.

**WHEREAS**, NCA advocated for the exclusion of the portion of the Black Mountains Area from the LWRFS that contains their individual production wells. NCA premise this primarily on testimony and analysis performed by SNWA with respect to the impact of pumping from this area

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<sup>272</sup> See CSI Ex. 14, Plate 2, Map and Plate 4, Cross section K-K', in Peter D. Rowley et. al., *Geology and Geophysics of White Pine and Lincoln Counties, Nevada and Adjacent Parts of Nevada and Utah: The Geologic Framework of Regional Groundwater Flow Systems*, Nevada Bureau of Mines and Geology Report 56.

<sup>273</sup> See, e.g., USFWS Ex. 5, p. 30.

<sup>274</sup> *Id.*, p. 17.

<sup>275</sup> *Id.*, pp. 19-24.

on discharge to the Warm Springs area.<sup>276</sup> It also used hydrogeologic and water level response information to conclude that strike-slip faulting and a weak statistical correlation between water levels at NCA well EBM-3 and EH-4 in the Warm Springs area support a boundary to the north of the NCA production wells. While the State Engineer finds logic in NCA's position, other testimony describing flaws in the SNWA analysis make for a compelling argument against relying on SNWA's statistically-based results.<sup>277</sup> The substantial similarity in observed water level elevation and water level response at EBM-3 compared to EH-4<sup>278</sup> and limitations in relying on poor resolution water level measurements for statistical or comparative analysis<sup>279</sup> requires a more inclusive approach that places the boundary to the south of the NCA production wells to a geological location that coincides with the projection of the Muddy Mountain Thrust. This more closely coincides with the measurable drop in water levels recognized to occur south of the NCA wells, between EBM-3 and BM-ONCO-1 and 2, that is indicative of a hydraulic barrier or zone of lower permeability.<sup>280</sup> It also better honors the State Engineer's criteria by acknowledging the uncertainty in the data while reflecting a recognized physical boundary in the carbonate-rock aquifer. Specifically, this shall be defined to include that portion of the Black Mountains Area lying within portions of Sections 29, 30, 31, 32, and 33, T.18S., R.64E., M.D.B.&M.; portions of Sections 1, 11, 12, 14, 22, 23, 27, 28, 33, and 34 and all of Sections 13, 24, 25, 26, 35, and 36, T.19S., R.63E., M.D.B.&M.; portions of Sections 4, 6, 9, 10, and 15 and all of Sections 5, 7, 8, 16, 17, 18, 19, 20, 21, 29, 30, and 31, T.19S., R.64E., M.D.B.&M.<sup>281</sup>

**WHEREAS**, numerous participants advocated to include Kane Springs Valley in the LWRFS basins.<sup>282</sup> Other participants advocated to exclude Kane Springs Valley.<sup>283</sup> Several expert witnesses recommended the exclusion of Kane Springs Valley based on their characterization of water level elevation data, temporal hydrographic response patterns, geochemistry, and/or the

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<sup>276</sup> See, Tr. 1622, 1624; NCA Closing.

<sup>277</sup> See, e.g., Tr. 1467–1469 CNLV presentation, slides 21–23; Tr. 1784–1786; NV Energy presentation, slides 32–33.

<sup>278</sup> NCA Closing, p. 18, Figure 3.

<sup>279</sup> NCA Closing, p. 8.

<sup>280</sup> See e.g., USFWS Ex. 5.

<sup>281</sup> See map of the LWRFS Hydrographic Basin as defined by this Order, Attachment A.

<sup>282</sup> See, e.g., NV Energy Closing, p. 2; NCA Closing, p. 10–14; MVWD Closing, p. 2–8.

<sup>283</sup> See e.g., *Written Closing Statement of Lincoln County Water District and Vidler Water Company, Inc.* (LC-V Closing), Hearing on Interim Order 1303, official records of the Division of Water Resources, p. 3–6; CSI Closing, p. 2.

geophysically-inferred presence of structures that may act as flow barriers. Others recommended inclusion based on the same or similar set of information. Water level elevations observed near the southern edge of Kane Springs Valley are approximately 60 feet higher than those observed in the majority of carbonate-rock aquifer wells within the LWRFS to the south; consistent with a zone of lower permeability.<sup>284</sup> Some experts suggested that the hydrographic response pattern exhibited in wells located in the southern edge of Kane Springs Valley is different compared to that exhibited in wells in the LWRFS, being muted, lagged, obscured by climate response, or compromised by low-resolution data.<sup>285</sup> In this regard, the State Engineer recognizes these differences. However, he finds that the evidence and testimony supporting a similarity in hydrographic patterns and response as provided by expert witnesses, like that of the NPS, to be persuasive.<sup>286</sup> Namely, that while attenuated, the general hydrographic pattern observed in southern Kane Springs Valley reflects a response to Order 1169 pumping, consistent with a close hydraulic connection with the LWRFS. The State Engineer also finds that occurrence of the carbonate-rock aquifer in the southern Kane Springs Valley indicates that there is no known geologic feature at or near the southern Kane Springs Valley border that serves to juxtapose the carbonate-rock aquifer within the LWRFS with low permeability rocks in Kane Springs Valley.<sup>287</sup> He also finds that while geologic mapping<sup>288</sup> indicates that the carbonate-rock aquifer does not extend across the northern portion of the Kane Springs Valley, there is insufficient information available to determine whether the non-carbonate bedrock interpreted to underlie the northern part of the Kane Springs Valley represents low-permeability bedrock that would define a hydraulic boundary to the carbonate-rock aquifer.<sup>289</sup> After weighing all of the testimony and evidence relative to his criteria

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<sup>284</sup> LC-V Closing, p. 7.

<sup>285</sup> See, e.g., LC-V Closing, pp. 5-6; LC-V Ex. 1, pp. 3-3-3-4; CSI Closing, pp. 5-6.

<sup>286</sup> See Tr. 524-55. See, e.g., NPS presentation, slides 23-27.

<sup>287</sup> Pursuant to the criteria requiring joint management of hydrographic basins and the sixth criteria establishing that the boundary should extend to the nearest mapped feature that juxtaposes the carbonate-rock aquifer with low-permeability bedrock, or where a mapped feature cannot be adequately identified, to the basin boundary, the State Engineer includes the entirety of Kane Springs Valley.

<sup>288</sup> See, e.g., NSE Ex. 12; Page, W.R., Dixon, G.L., Rowley, P.D., and Brickey, D.W., 2005, *Geologic Map of Parts of the Colorado, White River, and Death Valley Groundwater Flow Systems, Nevada, Utah, and Arizona*: Nevada Bureau of Mines and Geology Map 150, Plate plus text.

<sup>289</sup> See, e.g., SNWA Ex. 7, pp. 2-4, 2-5, 2-10, 2-11, and 4-1, that describe volcanic rocks as important aquifers, and calderas as both flow paths and barriers depending on structural controls

for inclusion into the LWRFS, the State Engineer finds that the available information requires that Kane Springs Valley be included within the geographic boundary of the LWRFS.

**WHEREAS**, limited evidence and testimony were provided by participants advocating to either include or exclude the northern portion of Coyote Spring Valley. The State Engineer finds that while information such as that provided by Bedroc is convincing and supports a finding that local, potentially discrete aquifers may exist in parts of the northern Coyote Springs Valley, his criteria for defining the LWRFS calls for the inclusion of the entirety of the basin in the LWRFS. However, the State Engineer also acknowledges that there may be circumstances, like in the northern Coyote Spring Valley, where case-by-case considerations for proper management are warranted.

**WHEREAS**, evidence and testimony from Georgia-Pacific and Republic, and MBOP advocated against creating a single LWRFS administrative unit. Their arguments were principally based on concerns that there was insufficient consensus on defining the LWRFS geographic boundaries and that there were inherent policy implications to establishing an LWRFS administrative unit. MBOP recommended continuing to collect data and focusing on areas of scientific consensus. Georgia-Pacific and Republic asserted that boundaries are premature without additional data and without a legally defensible policy and management tools in place. They expressed concern that creating an administrative unit at this time inherently directs policy without providing for due process. The State Engineer has considered these concerns and agrees that additional data and improved understanding of the hydrologic system is critical to the process. He also believes that the data currently available provide enough information to delineate LWRFS boundaries, and that an effective management scheme will provide for the flexibility to adjust boundaries based on additional information, retain the ability to address unique management issues on a sub-basin scale, and maintain partnership with water users who may be affected by management actions throughout the LWRFS.

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to flow, citing Peter D. Rowley, and Dixon, G.L., 2011, *Geology and Geophysics of Spring, Cave, Dry Lake, and Delamar Valleys, White Pine and Lincoln Counties, and Adjacent Areas, Nevada and Utah: The Geologic Framework of Regional Flow Systems*,

**WHEREAS**, evidence and testimony support the delineation of a single hydrographic basin as originally defined by the State Engineer in Interim Order 1303, with the adjustment of the Black Mountain Area boundary and the addition of Kane Springs Valley. The State Engineer acknowledges that special circumstances will exist with regard to both internal and external management. Water development both inside and outside of the perimeter of the LWRFS will continue to be evaluated on the best available data and may become subject to or excluded from the constraints or regulations of the LWRFS.

**WHEREAS**, the geographic extent of the LWRFS is intended to represent the area that shares both a unique and close hydrologic connection and virtually all of the same source and supply of water, and therefore will benefit from joint and conjunctive management. In that light, the State Engineer recognizes that different areas, jointly considered for inclusion into the LWRFS, have been advocated both to be included and to be excluded by the different hearing participants based on different perspectives, different data subsets, and different criteria. For the Muddy River Springs Area, California Wash, Garnet Valley, Hidden Valley, Coyote Spring Valley, and a portion of the Black Mountain Area, there is a persuasive case previously laid out in Rulings 6254–6261, and the consensus amongst the participants support their inclusion in the LWRFS. For other sub-basins such as Kane Springs Valley and the area around the NCA production wells in the Black Mountain Area, there is persuasive evidence to support their inclusion or exclusion; however, the State Engineer's criteria and available data mandate their inclusion. Their inclusion in the LWRFS provides the opportunity for conducting additional hydrologic studies in sub-basins such as these, to determine the degree to which water use would impact water resources in the LWRFS and to allow continued participation by holders of water rights in future management decisions. Thus, these sub-basins, and any other portions of the LWRFS that may benefit from additional hydrological study, can be managed more effectively and fairly within the LWRFS. For other basins whose inclusion was advocated, such as the northern portion of Las Vegas Valley and the Lower Meadow Valley Wash, the State Engineer finds that data do not exist to apply his criteria, and therefore they cannot be considered for inclusion into the LWRFS. These types of areas may require additional study and special consideration regarding the potential effects of water use in these areas on water resources within the LWRFS.



## VII. AQUIFER RECOVERY SINCE COMPLETION OF THE ORDER 1169 AQUIFER TEST

WHEREAS, during the Order 1169 aquifer test an average of 5,290 afa were pumped from the carbonate-rock aquifer wells in Coyote Spring Valley and a cumulative total of 14,535 afa were pumped throughout the Order 1169 study basins. A portion of this total, approximately 3,840 acre-feet per year, was pumped from the alluvial aquifer in the Muddy River Springs Area.<sup>290</sup> In the years since completion of the Order 1169 aquifer test, pumping from wells in the LWRFS has gradually declined.<sup>291</sup> Pumping in 2013-2014 averaged 12,635 afa; pumping in 2015-2017 averaged 9,318 afa.<sup>292</sup> Pumpage inventories for 2018 that were published after the completion of the hearing report a total of 8,300 afa.<sup>293</sup> Pumping from alluvial aquifer wells in the Muddy River Spring Area has consistently declined since closure of the Reid Gardner power plant beginning in 2014, while pumping from the carbonate-rock aquifer since the completion of the aquifer test has consistently ranged between approximately 7,000 and 8,000 afa.

WHEREAS, the information obtained from the Order 1169 aquifer test and in the years since the conclusion of the test demonstrates that while, following conclusion of the aquifer test, there was a recovery of groundwater levels, the carbonate-rock aquifer has not recovered to pre-Order 1169 test levels.<sup>294</sup> Evidence and testimony submitted during the 2019 hearing does not refute the conclusions made by the State Engineer in Rulings 6254–6261 regarding interpretations of the Order 1169 aquifer test results, which were based on observations and analysis by multiple technical experts. Groundwater level recovery reached completion approximately two to three years after the Order 1169 aquifer test pumping ended.<sup>295</sup>

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<sup>290</sup> NSE Ex. 1, p. 4.

<sup>291</sup> See, e.g. NSE Ex. 50, *Pumpage Report Coyote Spring Valley 2017*; NSE Ex. 67, *Pumpage Report Black Mountains Area 2017*; NSE Ex. 84, *Pumpage Report Garnet Valley Area 2017*; NSE Ex. 86, *Pumpage Report California Wash Area 2017*; Ex. 88, *Pumpage Report Muddy River Springs Area 2017*, Hearing on Interim Order 1303, official records of the Division of Water Resources.

<sup>292</sup> *Id.*

<sup>293</sup> *Id.*

<sup>294</sup> See, e.g., SNWA Ex. 7, pp. 5-17–5-18, 8-2; NPS Closing, p. 4; MVWD Closing, p. 8. See also Tr. 1807; NV Energy presentation, p. 11.

<sup>295</sup> SNWA Ex. 7, pp. 5-17–5-18; NVE Ex. 1, p. 2

**WHEREAS**, several participants testified about the effects of drought and climate on the recovery of groundwater levels and spring discharge after the Order 1169 aquifer test. Droughts, or periods of drier than normal conditions that last weeks, months, or years can lead to declines in groundwater levels.<sup>296</sup> The LWRFS is within National Oceanic and Atmospheric Administration's Nevada Climate Division 4 (Division 4). Precipitation records for Division 4 from 2006 to the 2019 season records indicate that 10 of those 14 seasons received lower than average precipitation.<sup>297</sup> Despite low precipitation, several participants submitted evidence that water levels continue to rise under current climate conditions in other areas with a relative lack of pumping that are tributary to the LWRFS, such as Dry Lake Valley, Delamar Valley, Garden Valley, Tule Desert, Dry Lake Valley, and other areas.<sup>298</sup> These rises have been attributed to efficient winter recharge that has occurred despite low cumulative precipitation.<sup>299</sup> Based on these observations, it was argued that the continued stress of pumping in the LWRFS carbonate-rock aquifer is limiting the recovery of water levels.<sup>300</sup> The State Engineer acknowledges that spring discharge is affected by both pumping and climate, and finds that groundwater levels remain a useful tool for monitoring the state of the aquifer system in the LWRFS regardless of the relative contribution of climate and drought to the measured groundwater levels. The State Engineer only has the authority to regulate pumping, not climate, in consideration of its potential to cause conflict or to be detrimental to the public interest and must do so regardless of the relative contributing effects of climate.

**WHEREAS**, evidence and testimony during the 2019 hearing was divided on whether water levels in the Warm Springs area and carbonate-rock aquifer indicate the system has reached or is approaching equilibrium,<sup>301</sup> or is still in a state of decline.<sup>302</sup> Hydrographs and evidence presented show that water levels at well EH-4 near the Warm Springs area have been relatively stable for several years following recovery from the Order 1169 aquifer test.<sup>303</sup> However, other

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<sup>296</sup> See USGS, 1993, *Drought*, US Geological Survey Open File Report 93-642, accessible at <https://bit.ly/93-642>, (last accessed June 6, 2020).

<sup>297</sup> SNWA Ex. 7, pp. 4-1-4-4.

<sup>298</sup> Tr. 577, 304-307.

<sup>299</sup> NPS Ex. 3, Appendix A.

<sup>300</sup> See, e.g., SNWA Closing, p. 11. NPS Closing, p. 4. See also Tr. 642, 644-45, 1545.

<sup>301</sup> MVWD Closing, pp. 8-9. See also NV Energy Closing, p. 3; CNLV Closing, pp. 5-7.

<sup>302</sup> SNWA Closing, pp. 11-12. NPS Closing, pp. 4-5.

<sup>303</sup> SNWA Ex. 7, pp. 5-7.

carbonate-rock aquifer wells located further away from the Warm Springs area such as CSVM-1, TH-2, GV-1, and BM-DL-2 appear to have reached peak recovery from the Order 1169 aquifer test in 2015-2016 and have exhibited downward trends for the past several years.<sup>304</sup> The State Engineer agrees that water levels in the Warm Springs area may be approaching steady state with current pumping conditions. However, the trend is of insufficient duration to make this determination with absolute assurance and continued monitoring is necessary to determine if this trend continues or if water levels are continuing to decline slowly.

### VIII. LONG-TERM ANNUAL QUANTITY OF WATER THAT CAN BE PUMPED

**WHEREAS**, the evidence and testimony presented at the 2019 hearing did not result in a consensus among experts of the long-term annual quantity of groundwater that can be pumped. Recommendations range from zero to over 30,000 afa, though most experts agreed that the amount must be equal to or less than the current rate of pumping. There is a near consensus that the exact amount that can be continually pumped for the long-term cannot be absolutely determined with the data available and that to make that determination will require more monitoring of spring flows, water levels, and pumping amounts over time.

**WHEREAS**, evidence and testimony were presented arguing that the regional water budget demonstrates that far more groundwater is available for development within the LWRFS than is currently being pumped. CSI argues that the total amount of groundwater available for extraction from the LWRFS may be up to 30,630,<sup>305</sup> which is an estimate of the entirety of natural discharge from the system that occurs through groundwater evapotranspiration and subsurface groundwater outflow. Nearly all other experts disagreed that pumping to that extent could occur without causing harm to the Moapa dace or conflict with senior Muddy River decreed rights. The disagreement is not about the amount of the water budget, but rather the importance of the water budget in determining the amount of groundwater in the LWRFS that can continually be pumped,<sup>306</sup> not the amount of inflow and outflow to the system. In addition, availability of groundwater for pumping based on water budget should consider whether the same water is appropriated for use in upgradient and downgradient basins, and CSI did not account for this.

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<sup>304</sup> *Id.*

<sup>305</sup> CSI Closing, p. 2.

<sup>306</sup> See e.g., SNWA Ex. 9, p. 24.; MVWD Ex. 3, p. 4; NPS Ex. 3, p. 23.

The State Engineer recognizes that the water budget is important to fully understand the hydrology of the regional flow system but also agrees with nearly all participants that the regional water budget is not the limiting measure to determine water available for development in the LWRFS. The potential for conflict with senior rights and impacts that are detrimental to the public interest in the LWRFS is controlled by aquifer hydraulics and the effect of pumping on discharge at the Warm Springs area rather than the regional water budget.

**WHEREAS**, evidence and testimony were presented arguing that the location of pumping within the LWRFS is an important variable in the determination of the amount that can be pumped. Participants representing groundwater users in Garnet Valley and the APEX area at the south end of the LWRFS testified that pumping within Garnet Valley does not have a discernable signal at wells near the Warm Springs area and that the hydraulic gradient from north-to-south within the LWRFS indicates that there is a component of groundwater flow in Garnet Valley that does not discharge to the Warm Springs area.<sup>307</sup> Several participants agreed that moving pumping to more distal locations within the LWRFS will lessen the effect of that pumping on spring flows. NV Energy testified that there would be a lesser effect because pumping areas around the periphery of the main carbonate-rock aquifer are less well-connected to the springs, and because of the likelihood that some amount of subsurface outflow occurs along and southern and southeastern boundary of the LWRFS and it is possible to capture some of that subsurface outflow without a drop-for-drop effect on discharge at the Warm Springs area.<sup>308</sup> Others drew the same conclusion based on their review of the data and characterization of a heterogeneous system<sup>309</sup> or on weak connectivity between peripheral locations and the Warm Springs area.<sup>310</sup>

CSI argues that more groundwater development can occur in the LWRFS because subsurface fault structures create compartmentalization and barriers to groundwater flow that reduce the effects of pumping on discharge at the Warm Springs area.<sup>311</sup> They rebut the contention by others that spring flow is affected homogeneously by pumping within the LWRFS.<sup>312</sup> CSI used geophysical data to map a north-south trending subsurface feature that bisects Coyote Spring

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<sup>307</sup> See CNLV Ex. 3, pp. 45-47; GP-REP Ex. 1, pp. 2-3.

<sup>308</sup> NVE Ex. 1, pp. 8-9.

<sup>309</sup> See e.g. MBOP Ex. 2, p. 23; GP-REP Ex. 2, pp. 4-5. See also Technichrome Response.

<sup>310</sup> See e.g. NCA Closing, pp. 2-10; LC-V Closing, pp. 4-6; Bedroc Closing, pp. 9-11.

<sup>311</sup> CSI Closing, pp. 2-5.

<sup>312</sup> CSI Ex. 2, pp. 40-41.

Valley. They hypothesize that this structure is an impermeable flow barrier that creates an isolated groundwater flow path on the west side of Coyote Spring Valley from which pumping would capture recharge from the Sheep Range without spring flow depletion at the Warm Springs area.<sup>313</sup> MBOP also contends that the system is far too complex to characterize it as a homogeneous “bathtub” and that preferential flow paths within the region mean that pumping stress will greatly differ within the LWRFS depending on where the pumping occurs.<sup>314</sup> Rebuttals to MBOP and CSI contend that an emphasis on complexities in geologic structure is a distraction from the question at hand, and that the hydraulic data collected during and after the Order 1169 aquifer test clearly demonstrate close connectivity and disproves CSI’s hypothesis.<sup>315</sup>

The State Engineer finds that the data support the conclusion that pumping from locations within the LWRFS that are distal from the Warm Springs area can have a lesser impact on spring flow than pumping from locations more proximal to the springs. The LWRFS system has structural complexity and heterogeneity, and some areas have more immediate and more complete connection than others. For instance, the Order 1169 aquifer test demonstrated that pumping 5,290 afa from carbonate-rock aquifer wells in Coyote Spring Valley caused a sharp decline in discharge at the springs, but distributed pumping since the completion of the aquifer test in excess of 8,000 afa has correlated with a stabilization of spring discharge. The data collected during and after the Order 1169 aquifer test provide substantial evidence that groundwater levels throughout the LWRFS rise and fall in common response to the combined effects of climate and pumping stress, which controls discharge at the Warm Springs area.<sup>316</sup> The State Engineer finds that the best available data do not support the hypotheses that variable groundwater flow paths and heterogeneous subsurface geology are demonstrated to exist that create hydraulically isolated compartments or subareas within the LWRFS carbonate-rock aquifer from which pumping can occur without effect on the Warm Springs area. However, there remains some uncertainty as to the extent that distance and location relative to other capturable sources of discharge either delay, attenuate, or reduce capture from the springs.

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<sup>313</sup> *Id.* See also CSI Ex. 1, pp. 31–40.

<sup>314</sup> MBOP Closing, p. 7.

<sup>315</sup> See e.g., SNWA Ex. 9, pp. 23–24.

<sup>316</sup> NSE Exs. 15–21.

**WHEREAS**, evidence and testimony were presented to argue that no amount of groundwater can be pumped from the carbonate-rock aquifer or from the LWRFS without conflicting with the Muddy River decree or causing harm to the Moapa dace habitat. This argument is predicated on the interpretation that lowering of groundwater level anywhere within the LWRFS, whether caused by climate or pumping, eventually has an effect on spring discharge, and that any reduction in spring discharge caused by pumping conflicts with senior decreed rights or harms the Moapa dace or both.<sup>317</sup> MVIC and SNWA agree that capturing discharge from the Warm Springs area springs and the Muddy River are a conflict with the Muddy River decree, which appropriates “all of the flow of the said stream, its sources of supply, headwaters and tributaries.”

The Muddy River Decree was finalized in 1920, decades before any significant amount of groundwater development within the Muddy River springs area or the LWRFS. The statement quoted above, or something similar to it, is a common conclusion in decrees to establish finality to the determination of relative priority of rights. By including this statement, the decreed right holders are afforded the assurance that no future claimants will interject a new priority right. However, it is also common on decreed systems for junior rights to be appropriated for floodwater or other excess flows, provided that no conflict occurs with the senior priorities. Similarly, groundwater development almost always exists in the tributary watersheds of decreed river systems, even though groundwater in a headwater or tributary basin is part of the same hydrologic system. There is no conflict as long as the senior water rights are served.

The State Engineer disagrees with SNWA and MVIC that the above quoted statement in the decree means that any amount of groundwater pumped within the headwaters that would reduce flow in the Muddy River conflicts with decreed rights. The State Engineer finds that capture or potential capture of the waters of a decreed system does not constitute a conflict with decreed right holders if the flow of the source is sufficient to serve decreed rights. Muddy River decreed rights were defined by acres irrigated and diversion rates for each user.<sup>318</sup> The sum of diversion rates greatly exceeds the full flow of the River, but all users are still served through a rotation schedule managed by the water master. The total amount of irrigated land in the decree is 5,614 acres.<sup>319</sup>

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<sup>317</sup> See, e.g., CBD Ex. 3, p. 23; SNWA Ex. 7, p. 8-4; MVIC Ex. 1, p. 3.

<sup>318</sup> NSE Ex. 333.

<sup>319</sup> *Id.*

Flow in the Muddy River at the Moapa Gage has averaged approximately 30,600 afa since 2015,<sup>320</sup> which is less than the predevelopment baseflow of about 33,900.<sup>321</sup> If all decreed acres were planted with a high-water use crop like alfalfa, the net irrigation water requirement would be 28,300 afa, based on a consumptive use rate of 4.7 afa.<sup>322</sup> Conveyance loss due to infiltration is an additional consideration to serve all decreed users; however, this is limited in the Muddy River because the alluvial corridor is narrow and well defined so water stays within the shallow groundwater or discharges back to the river. The State Engineer finds that the current flow in the Muddy River is sufficient to serve all decreed rights in conformance with the Muddy River Decree, and that reductions in flow that have occurred because of groundwater pumping in the headwaters basins is not conflicting with Decreed rights.

**WHEREAS**, the majority of experts agree that there is an intermediate amount of pumping approximated by recent pumping rates that can continue to occur in the LWRFS and still protect the Moapa dace and not conflict with decreed rights. USFWS and NCA endorsed the use of average pumping over the years 2015-2017 (9,318 afa as reported by State Engineer pumpage inventories) as a supportable amount that can continue to be pumped, because the system appears to have somewhat stabilized.<sup>323</sup> CSI also endorsed this approach as an initial phase, though they suggested 11,400 afa, which was the average pumping reported by State Engineer inventories over the years 2010-2015 that included the period of the Order 1169 aquifer test.<sup>324</sup> CNLV makes a rough estimate that no more than 10,000 afa can be supported throughout the entire region, based on their professional judgment and review of the data.<sup>325</sup> NV Energy concludes that 7,000–8,000 afa can continue to be pumped, based on the amount of pumping in recent years from carbonate-rock aquifer wells and the observation that steady-state conditions in Warm Springs area spring

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<sup>320</sup> NSE Ex. 211, *USGS 09416000 Muddy River Moapa 1914-2013*, Hearing on Interim Order 1303, official records of the Division of Water Resources.

<sup>321</sup> SNWA Ex. 7, p. 5-4.

<sup>322</sup> *See, e.g.*, Huntington, J.L. and R. Allen, (2010), *Evapotranspiration and Net Irrigation Water Requirements for Nevada*, Nevada State Engineer's Office Publication, accessible at <https://bit.ly/etniwr>, (last accessed June 7, 2020), official records of the Division of Water Resources.

<sup>323</sup> USFWS Ex. 5, p. 3; NCA Ex. 1, p. 19.

<sup>324</sup> CSI Closing, p. 2.

<sup>325</sup> CNLV Ex. 3, p. 2.

flow are being reached.<sup>326</sup> SNWA estimates that only 4,000–6,000 afa of carbonate-rock aquifer pumping can continually occur within the LWRFS.<sup>327</sup>

**WHEREAS**, the State Engineer finds that the evidence and testimony projecting continual future decline in spring flow at the current rate of pumping is compelling but not certain. Several participants pointed out rising trends in groundwater levels at many locations in Southern Nevada, outside of the LWRFS, that are distant from pumping<sup>328</sup> even though total precipitation has been below average and since 2006 has been described as a drought.<sup>329</sup> This suggests that climate and recharge efficiency may have actually buffered the full effect of pumping on discharge at the Warm Springs area, and that the system could not support the current amount of groundwater pumping during an extended dry period with lesser recharge. In addition, slight declining trends that are observed in Garnet Valley monitoring wells are not evident in wells close to the Warm Springs area.<sup>330</sup> If drawdown in Garnet Valley has not yet propagated to the Muddy Springs area, then the resilience of the apparent steady state of spring flow is in doubt. Projections of continued future decline in spring discharge suggests that the current amount of pumping in the LWRFS is a maximum amount that may need to be reduced in the future if the stabilizing trend in spring discharge does not continue.

**WHEREAS**, there is an almost unanimous agreement among experts that data collection is needed to further refine with certainty the extent of groundwater development that can be continually pumped over the long term. The State Engineer finds that the current data are adequate to establish an approximate limit on the amount of pumping that can occur within the system, but that continued monitoring of pumping, water levels, and spring flow is essential to refine and validate this limit.

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<sup>326</sup> NVE Ex. 1, p. 8.

<sup>327</sup> SNWA Ex. 7, p. 8-4.

<sup>328</sup> NPS Ex. 3, Appendix A. *See also* Tr. 304–307, 577.

<sup>329</sup> Tr. 1292–1300. *See, also* LC-V Ex. 11, *PowerPoint Presentation of Todd G. Umstot, entitled Drought and Groundwater*, Hearing on Interim Order 1303, official records of the Division of Water Resources, slides 3–10.

<sup>330</sup> CNLV Ex. 3, pp. 45–46.



**WHEREAS**, pumping from wells in the LWRFS has gradually declined since completion of the Order 1169 aquifer test and is approaching 8,000 afa. This coincides with the period of time when spring discharge may be approaching steady state. The State Engineer finds that the maximum amount of groundwater that can continue to be developed over the long term in the LWRFS is 8,000 afa. The best available data at this time indicate that continued groundwater pumping that consistently exceeds this amount will cause conditions that harm the Moapa dace and threaten to conflict with Muddy River decreed rights.

#### **IX. MOVEMENT OF WATER RIGHTS**

**WHEREAS**, the data and evidence are clear that location of pumping within the LWRFS relative to the Warm Springs area and the Muddy River can influence the relative impact to discharge to the Warm Springs area and/or senior decreed rights on the Muddy River. The transfer of groundwater pumping from the Muddy River Springs Area alluvial wells to carbonate-rock aquifer wells may change the timing of any impact to Muddy River flows and amplify the effect on discharge to the Warm Springs area, thus potentially adversely impacting habitat for the Moapa dace. And the transfer of groundwater withdrawals from the carbonate-rock aquifer into the Muddy River alluvial aquifer may reduce the impact to the Moapa dace habitat but increase the severity of impact to the senior decreed rights on the Muddy River. The State Engineer recognizes that the LWRFS is fundamentally defined by its uniquely close hydrologic interconnection and shared source and supply of water. However, the State Engineer also recognizes that there can be areas within the LWRFS that have a greater or lesser degree of hydraulic connection due to distance, local changes in aquifer properties, or proximity to other potential sources of capturable water.

**WHEREAS**, Rulings 6254–6261 acknowledge that one of the main goals of Order 1169 and the associated pumping test at well MX-5 was to observe the effects of increased pumping on groundwater levels and spring flows. Coyote Spring Valley carbonate-rock aquifer pumping during the Order 1169 aquifer test was the largest localized carbonate-rock aquifer pumping in the LWRFS. In addition, concurrent carbonate-rock aquifer and alluvial aquifer pumping in Garnet Valley, Muddy River Springs Area, California Wash, and the northwest portion of the Black Mountains Area occurred during the test period. Rulings 6254–6261 described the data and analysis used to determine that additional pumping at the MX-5 well contributed significantly to decreases in high elevation springs (Pederson Springs) and other springs that are the sources to the

Muddy River. Evidence and reports provided under Interim Order 1303 do not challenge the findings in Rulings 6254–6261 that pumping impacts were witnessed. There is a strong consensus among participants that pumping during the Order 1169 aquifer test along with concurrent pumping caused drawdowns of water levels throughout the LWRFS.<sup>331</sup> However, the effects of pumping from different locations within the LWRFS on discharge at the Warm Springs area is not homogeneous.<sup>332</sup> The State Engineer finds that movement of water rights that are relatively distal from the Warm Springs area into carbonate-rock aquifer wells that have a closer hydraulic connection to the Warm Springs area is not favorable.

**WHEREAS**, evidence and testimony provided by participants during the Interim Order 1303 hearing provides a strong consensus that alluvial aquifer pumping in the Muddy River Springs Area affects Muddy River discharge.<sup>333</sup> There is also strong evidence that carbonate-rock aquifer pumping throughout the LWRFS affects spring flow but can also be dependent on proximity of pumping to springs.<sup>334</sup> No participant is a proponent of moving additional water rights closer to the headwaters of the Muddy River within the Muddy River Springs Area, and most participants agree that carbonate-rock aquifer and alluvial aquifer pumping in the Muddy River Springs Area captures Muddy River flow. The State Engineer finds that any pumping within close proximity to the Muddy River could result in capture of the Muddy River. The State Engineer also finds that any movement of water rights into carbonate-rock aquifer and alluvial aquifer wells in the Muddy River Springs Area that may increase the impact to Muddy River decreed rights is disfavored.

**WHEREAS**, the Order 1169 aquifer test demonstrated that impacts from the test along with concurrent pumping was widespread within the LWRFS encompassing 1,100 square miles and supported the conclusion of a close hydrologic connection among the basins.<sup>335</sup> While the effects of movement of water rights between alluvial aquifer wells and carbonate-rock aquifer wells on deliveries of senior decreed rights to the Muddy River or impacts to the Moapa dace may not be uniform across the entirety of the LWRFS, the relative degree of hydrologic connectedness

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<sup>331</sup> See SNWA Closing, pp. 10, 16; MVIC Closing, p. 6.

<sup>332</sup> See, e.g., SNWA Closing, p. 10.

<sup>333</sup> CNLV Closing, p. 8; Tr. 1456–1457, 1458. See also SNWA Closing, p. 16; MVWD Closing, p. 11; MVIC Closing, p. 6.

<sup>334</sup> CNLV Closing, pp. 8–10; Tr. 1457, 1458; NV Energy Closing, p. 4; MVIC Closing, p. 6.

<sup>335</sup> NSE Ex. 256. See also NSE Ex. 14, pp. 20–21; NSE Ex. 17, p. 19; SNWA Closing pp. 2, 3.

in the LWRFS will be the principle factor in determining the impact of movement of water rights. The State Engineer recognizes that there may be discrete, local aquifers within the LWRFS with an uncertain hydrologic connection to the Warm Springs area. Determining the effect of moving water rights into these areas may require additional scientific data and analysis. Applications to move water rights under scenarios not addressed in this Order will be evaluated on their individual merits to determine potential impact to existing senior rights, potential impact to the Warm Springs area and Moapa dace habitat, and impacts to the Muddy River.

## **X. ORDER**

**NOW THEREFORE**, the State Engineer orders:

1. The Lower White River Flow System consisting of the Kane Springs Valley, Coyote Spring Valley, Muddy River Springs Area, California Wash, Hidden Valley, Garnet Valley, and the northwest portion of the Black Mountains Area as described in this Order, is hereby delineated as a single hydrographic basin. The Kane Springs Valley, Coyote Spring Valley, Muddy River Springs Area, California Wash, Hidden Valley, Garnet Valley and the northwest portion of the Black Mountains Area are hereby established as sub-basins within the Lower White River Flow System Hydrographic Basin.
2. The maximum quantity of groundwater that may be pumped from the Lower White River Flow System Hydrographic Basin on an average annual basis without causing further declines in Warm Springs area spring flow and flow in the Muddy River cannot exceed 8,000 afa and may be less.
3. The maximum quantity of water that may be pumped from the Lower White River Flow System Hydrographic Basin may be reduced if it is determined that pumping will adversely impact the endangered Moapa dace.
4. All applications for the movement of existing groundwater rights among sub-basins of the Lower White River Flow System Hydrographic Basin will be processed in accordance with NRS 533.370.

5. The temporary moratorium on the submission of final subdivision or other submission concerning development and construction submitted to the State Engineer for review established under Interim Order 1303 is hereby terminated.
6. All other matters set forth in Interim Order 1303 that are not specifically addressed herein are hereby rescinded.



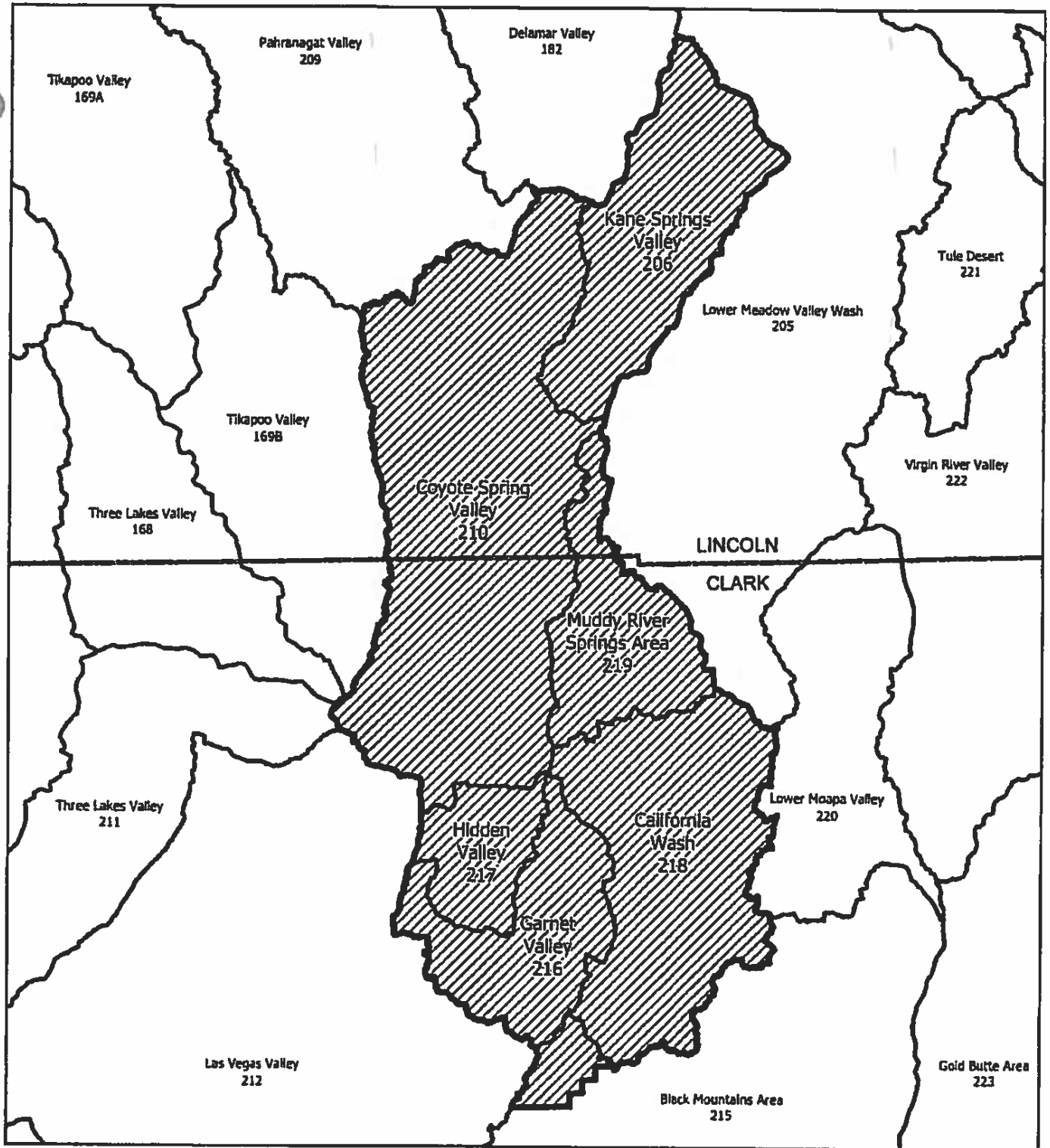
TIM WILSON, P.E.

State Engineer

Dated at Carson City, Nevada this

15th day of June, 2020.

# ATTACHMENT A






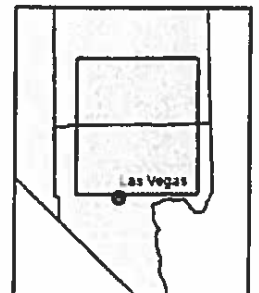
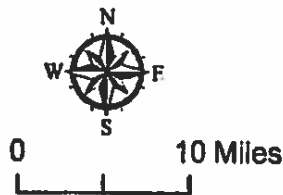
Location and Extent of LWRFS Hydrographic Basin,  
Clark and Lincoln Counties, Nevada

State of Nevada  
Department of Conservation and  
Natural Resources  
Office of the State Engineer  
Division of Water Resources

Tim Wilson, PE  
State Engineer

June 2020

-  LWRFS Boundary
-  Hydrographic Basin Boundary
-  County Boundary



IN THE OFFICE OF THE STATE ENGINEER  
OF THE STATE OF NEVADA

INTERIM ORDER

#1303

**DESIGNATING THE ADMINISTRATION OF ALL WATER RIGHTS WITHIN COYOTE SPRING VALLEY HYDROGRAPHIC BASIN (210), A PORTION OF BLACK MOUNTAINS AREA BASIN (215), GARNET VALLEY BASIN (216), HIDDEN VALLEY BASIN (217), CALIFORNIA WASH BASIN (218), AND MUDDY RIVER SPRINGS AREA (AKA UPPER MOAPA VALLEY) BASIN (219) AS A JOINT ADMINISTRATIVE UNIT, HOLDING IN ABEYANCE APPLICATIONS TO CHANGE EXISTING GROUNDWATER RIGHTS, AND ESTABLISHING A TEMPORARY MORATORIUM ON THE REVIEW OF FINAL SUBDIVISION MAPS**

**I. PURPOSE**

**WHEREAS**, the purpose of this Interim Order is to designate a multi-basin area known to share a close hydrologic connection as a joint administrative unit, which shall be known as the Lower White River Flow System (LWRFS).

**WHEREAS**, an adequate and predictable supply of groundwater within the LWRFS supports the health, safety and welfare of the area, and this Interim Order aims to protect existing senior rights and the public interest in an endangered species, recognize existing beneficial use, and limit development actions that are dependent on a supply of water that may not be available in the future.

**WHEREAS**, during the interim period that this Order is in effect, holders of existing rights and other interested parties are encouraged to submit reports to the Nevada Division of Water Resources (NDWR) analyzing the data available regarding sustainable groundwater development in the LWRFS, the geographic extent of the LWRFS, and considerations relating to groundwater pumping within the LWRFS and its effects on the fully decreed Muddy River. This collected and analyzed data is an essential step to optimize the beneficial use of the available water supply in the LWRFS.

**WHEREAS**, concurrent with this interim order, holders of existing rights and other interested parties are encouraged to participate in the public process to develop a conjunctive management plan.

**I. BASIN DESIGNATIONS PURSUANT TO NRS § 534.030**

**WHEREAS**, the Coyote Spring Valley Hydrographic Basin was designated pursuant to Nevada Revised Statute (NRS) § 534.030 by Order 905 dated August 21, 1985, which also declared municipal, power, industrial and domestic uses as preferred uses of the groundwater resource pursuant to NRS § 534.120.

**WHEREAS**, the Black Mountains Area Hydrographic Basin was designated pursuant to NRS § 534.030 by Order 1018 dated November 22, 1989, which also declared municipal, industrial, commercial and power generation purposes as preferred uses of the groundwater resource pursuant to NRS § 534.120, declared irrigation of land using groundwater to be a non-preferred use, and ordered that applications to appropriate groundwater for irrigation purposes would be denied.

**WHEREAS**, the Garnet Valley Hydrographic Basin was designated pursuant to NRS § 534.030 by Order 1025 dated April 24, 1990, which also declared municipal, quasi-municipal, industrial, commercial, mining, stockwater and wildlife purposes as preferred uses pursuant to NRS § 534.120, and declared irrigation of land using groundwater to be a non-preferred use, and ordered that applications to appropriate groundwater for irrigation purposes would be denied.

**WHEREAS**, the California Wash Hydrographic Basin was designated pursuant to NRS § 534.030 by Order 1026 dated April 24, 1990, which also declared municipal, quasi-municipal, industrial, commercial, mining, stockwater and wildlife purposes as preferred uses pursuant to NRS § 534.120, and declared irrigation of land using groundwater to be a non-preferred use, and ordered that applications to appropriate groundwater for irrigation purposes would be denied.

**WHEREAS**, the Hidden Valley Hydrographic Basin was designated pursuant to NRS § 534.030 by Order 1024 dated April 24, 1990, which also declared municipal, quasi-municipal, industrial, commercial, mining, stockwater and wildlife purposes as preferred uses pursuant to NRS § 534.120, and declared irrigation of land using groundwater to be a non-preferred use, and ordered that applications to appropriate groundwater for irrigation purposes would be denied.



**WHEREAS**, the Muddy River Springs Area was partially designated pursuant to NRS § 534.030 by Order 392 dated July 14, 1971, and was fully designated by Order 1023 dated April 24, 1990, which also declared municipal, quasi-municipal, industrial, commercial, mining, stockwater and wildlife purposes as preferred uses pursuant to NRS § 534.120, and declared irrigation of land using groundwater to be a non-preferred use, and ordered that applications to appropriate groundwater for irrigation purposes would be denied.

## **II. ORDERS 1169 AND 1169A**

**WHEREAS**, on March 8, 2002, the State Engineer issued Order 1169 holding in abeyance carbonate-rock aquifer system groundwater applications either pending or to be filed in Coyote Spring Valley (Basin 210), Black Mountains Area (Basin 215), Garnet Valley (Basin 216), Hidden Valley (Basin 217), Muddy River Springs Area (Basin 219), and Lower Moapa Valley (Basin 220) and ordering an aquifer test of the carbonate-rock aquifer system, which was not well understood, to determine whether additional appropriations could be developed from the carbonate-rock aquifer system. The Order required that at least 50%, or 8,050 acre-feet annually (afa), of the water rights then currently permitted in Coyote Spring Valley be pumped for at least two consecutive years.

**WHEREAS**, on April 18, 2002, in Ruling 5115, the State Engineer added the California Wash (Basin 218) to the Order 1169 aquifer test basins.

**WHEREAS**, prior to the Order 1169 aquifer test beginning, there were significant concerns that pumping 8,050 afa from the Coyote Spring Valley as part of the aquifer test would adversely impact the water resources at the Muddy River Springs, and consequently the Muddy River. Ultimately, the Order 1169 study participants agreed that even if the minimum 8,050 afa was not pumped, sufficient information would be obtained to inform future decisions relating to the study basins.

**WHEREAS**, on November 15, 2010, the Order 1169 aquifer test began, whereby the study participants began reporting to NDWR on a quarterly basis the amounts of water being pumped from wells in the carbonate and alluvial aquifer during the pendency of the aquifer test.

**WHEREAS**, on December 21, 2012, the State Engineer issued Order 1169A declaring the completion of the aquifer test to be December 31, 2012, after a period of 25½ months. The

State Engineer provided the study participants the opportunity to file reports with NDWR until June 28, 2013, addressing the information gained from the aquifer test and the water available to support applications in the aquifer test basins.

**WHEREAS**, during the Order 1169 aquifer test, an average of 5,290 acre-feet per year was pumped from carbonate wells in Coyote Spring Valley, and a cumulative total of approximately 14,535 acre-feet per year of water was pumped throughout the LWRFS. Of this total, approximately 3,840 acre-feet per year was pumped from the Muddy River Springs Area alluvial aquifer.<sup>1</sup>

**WHEREAS**, during the aquifer test, pumpage was measured and reported from 30 other wells in the Muddy River Springs Area, Garnet Valley, California Wash, Black Mountains Area, and Lower Meadow Valley Wash. Stream diversions from the Muddy River were reported, and measurements of the natural discharge of the Muddy River and several of the Muddy River's headwater springs were collected daily. Water-level data were collected from a total of 79 monitoring and pumping wells within the LWRFS. All of the data collected during the aquifer test was made available to each of the study participants and the public.

**WHEREAS**, during the Order 1169 aquifer test, the resulting water-level decline encompassed 1,100 square miles and extended from northern Coyote Spring Valley through the Muddy River Springs Area, Hidden Valley, Garnet Valley, California Wash, and the northwestern part of the Black Mountains Area.<sup>2,3</sup> The water-level decline was estimated to be 1 to 1.6 feet in this area with minor drawdowns of 0.5 feet or less in the northern part of Coyote Spring Valley north of the Kane Springs Wash fault zone.

**WHEREAS**, results of the two-year test demonstrated that pumping 5,290 acre-feet annually from the carbonate aquifer in Coyote Spring Valley, in addition to the other carbonate pumping in Garnet Valley, Muddy River Springs Area, California Wash and the northwest part

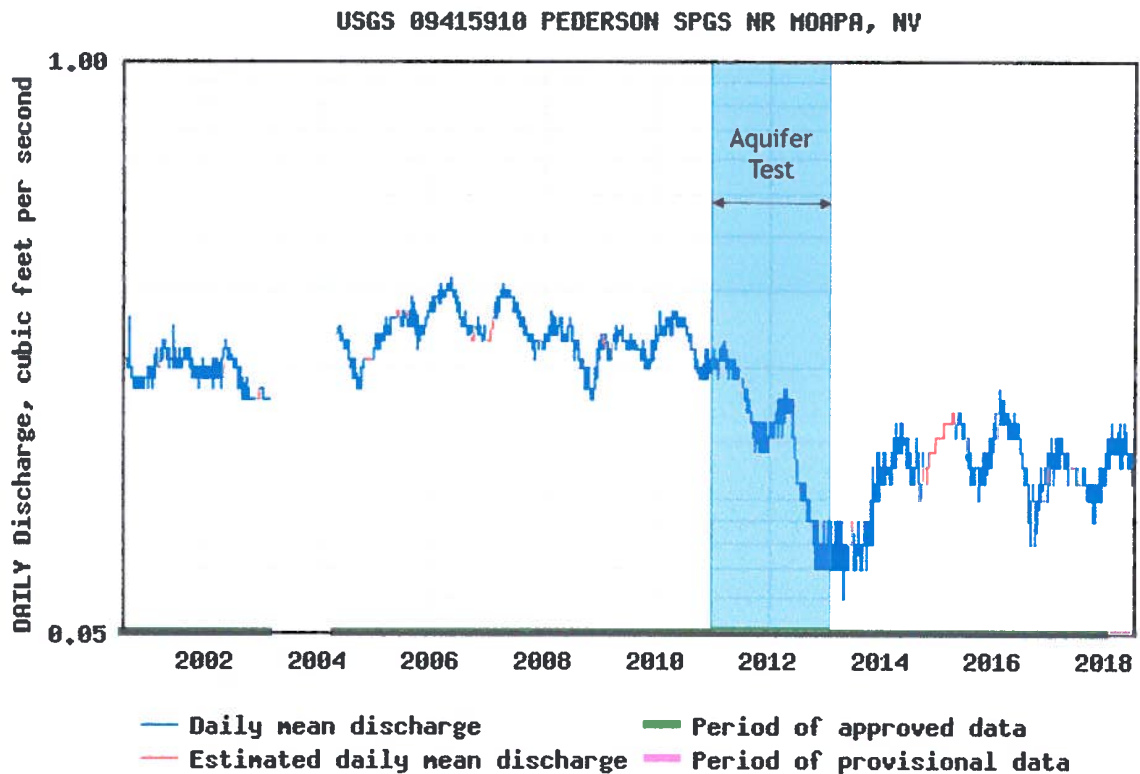
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<sup>1</sup> See, e.g., Ruling 6254, p. 17; Appendix B.

<sup>2</sup> See, e.g., Ruling 6254. See also U.S. Fish and Wildlife Service, U.S. Bureau of Land Management and U.S. National Park Service Order 1169A Report, *Test Impacts and Availability of Water Pursuant to Applications Pending Under Order 1169*, June 28, 2013, official records in the Office of the State Engineer.

<sup>3</sup> There was no groundwater pumping in Hidden Valley but effects were still observed in the Hidden Valley monitor well.

of the Black Mountains Area, caused sharp declines in groundwater levels and flows in the Pederson and Pederson East springs. These two springs are considered to be sentinel springs for the overall condition of the Muddy River because they are at a higher altitude than other Muddy River source springs, and therefore are proportionally more affected by a decline in groundwater level in the carbonate aquifer.<sup>4</sup> The Pederson spring flow decreased from 0.22 cubic feet per second (cfs) to 0.08 cfs and the Pederson East spring flow decreased from 0.12 cfs to 0.08 cfs. The following hydrograph at Pederson spring illustrates the decline in discharge during the aquifer test and also demonstrates that in the five years since the end of the aquifer test, spring flow has not recovered to pre-test flow rates.



<sup>4</sup> See the 2006 Memorandum of Agreement among the Southern Nevada Water Authority, United States Fish and Wildlife Service, Coyote Springs Investments, Moapa Band of Paiutes, and the Moapa Valley Water District.

Additional headwater springs at lower altitude, the Baldwin and Jones springs, declined approximately 4% during the test.<sup>5</sup> All of the headwater springs contribute to the decreed and fully appropriated Muddy River and are the predominant source of water that supplies the habitat of the endangered Moapa dace, a fish federally listed as an endangered species since 1967.

**WHEREAS**, based upon the analysis of the carbonate aquifer test, it was asserted that pumping at the Order 1169 rate at well MX-5 in Coyote Spring Valley could result in both of the high-altitude Pederson and Pederson East springs going dry in 3 years or less.<sup>6</sup>

**WHEREAS**, based upon the findings of the aquifer test, the carbonate aquifer underlying Coyote Spring Valley, Garnet Valley, Hidden Valley, Muddy River Springs Area, California Wash and the northwest part of the Black Mountains Area<sup>7</sup> (the LWRFS as depicted in Appendix A) was acknowledged to have a unique hydrologic connection and share the same supply of water.<sup>8</sup>

### **III. RULINGS 6254, 6255, 6256, 6257, 6258, 6259, 6260, AND 6261**

**WHEREAS**, on January 29, 2014, the State Engineer issued Ruling 6254 on pending applications of the Las Vegas Valley Water District (LVVWD) and Coyote Springs Investment, LLC (CSI) in the Coyote Spring Valley; Ruling 6255 on pending applications of Dry Lake Water, LLC (Dry Lake), and CSI in Coyote Spring Valley; Ruling 6256 on pending applications of Bonneville Nevada Corporation, Nevada Power Company (Nevada Power), Dry Lake, and the Southern Nevada Water Authority (SNWA) in the Garnet Valley; Ruling 6257 on pending applications of Nevada Power, Dry Lake, and SNWA in the Hidden Valley; Ruling 6258 on

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<sup>5</sup> U.S. Fish and Wildlife Service, U.S. Bureau of Land Management and U.S. National Park Service Order 1169A Report, *Test Impacts and Availability of Water Pursuant to Applications Pending Under Order 1169*, pp. 43-46, 50-51, June 28, 2013, official records in the Office of the State Engineer. *See also*, <http://waterdata.usgs.gov/nv/nwis/>.

<sup>6</sup> *See, e.g.*, Ruling 6254. *See also* U.S. Fish and Wildlife Service, U.S. Bureau of Land Management and U.S. National Park Service Order 1169A Report, *Test Impacts and Availability of Water Pursuant to Applications Pending Under Order 1169*, p. 85, June 28, 2013, official records in the Office of the State Engineer.

<sup>7</sup> That portion of the Black Mountains Area lying within the Lower White River Flow System is defined as those portions of Sections 29, 30, 31, 32, and 33, T.18S., R.64E., M.D.B.&M.; Section 13 and those portions of Sections 1, 11, 12, and 14, T.19S., R.63E., M.D.B.&M.; Sections 5, 7, 8, 16, 17, and 18 and those portions of Sections 4, 6, 9, 10, and 15, T.19S., R.64E., M.D.B.&M.

<sup>8</sup> *See, e.g.*, State Engineer Ruling 6254, p. 24, official records in the Office of the State Engineer.

pending applications by LVVWD, Nevada Power, Dry Lake, and the Moapa Band of Paiute Indians in the California Wash; Ruling 6259 on pending applications by the Moapa Valley Water District in the Muddy River Springs Area; and Ruling 6260 on pending applications by Nevada Cogeneration Associates #1, Nevada Cogeneration Associates #2, and Dry Lake, in the Black Mountains Area, upholding in part the protests to said applications and denying the applications on the grounds that there was no unappropriated groundwater at the source of supply, the proposed use would conflict with existing rights, and the proposed use of the water would threaten to prove detrimental to the public interest because it would threaten the water resources upon which the endangered Moapa dace are dependent.

#### IV. LOWER WHITE RIVER FLOW SYSTEM

**WHEREAS**, the total long-term average water supply to the LWRFS, from subsurface groundwater inflow and local precipitation recharge, is not more than 50,000 acre-feet annually.<sup>9</sup>

**WHEREAS**, the Muddy River, a fully appropriated surface water source, has its headwaters in the Muddy River Springs Area and has the most senior rights in the LWRFS. Spring discharge in the Muddy River Springs Area is produced from the regional carbonate aquifer. Prior to groundwater development, the Muddy River flows at the Moapa gage were approximately 34,000 acre-feet annually.<sup>10</sup>

**WHEREAS**, the alluvial aquifer surrounding the Muddy River ultimately derives virtually all of its water supply from the carbonates, either through spring discharge that infiltrates into the alluvium or through subsurface hydraulic connectivity between the carbonate rocks and the alluvium.<sup>11</sup>

**WHEREAS**, the State Engineer has determined that pumping of groundwater within the LWRFS has a direct interrelationship with the flow of the decreed and fully appropriated Muddy River, which has the most-senior rights.<sup>12</sup>

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<sup>9</sup> *Id.*

<sup>10</sup> United States Geological Survey Surface-Water Annual Statistics for the Nation, USGS 09416000 MUDDY RV NR MOAPA, NV, accessed at [https://waterdata.usgs.gov/nwis/annual/?search\\_site\\_no=09416000&agency\\_cd=USGS&referred\\_module=sw&format=sites\\_selection\\_links](https://waterdata.usgs.gov/nwis/annual/?search_site_no=09416000&agency_cd=USGS&referred_module=sw&format=sites_selection_links).

<sup>11</sup> *See, e.g.*, State Engineer Ruling 6254, p. 24, official records in the Office of the State Engineer.

<sup>12</sup> *Id.*

**WHEREAS**, since the conclusion of the Order 1169 aquifer test, the State Engineer has jointly managed the groundwater rights within LWRFS.

**WHEREAS**, the State Engineer, under the joint management of the LWRFS, has not distinguished pumping from wells in the Muddy River Springs Area alluvium from pumping carbonate wells within the LWRFS.

**WHEREAS**, within the LWRFS, there exist more than 38,000 acre-feet of groundwater appropriations. Groundwater pumping from 2007 forward is included in Appendix B and is significantly less than the total appropriations.

**WHEREAS**, groundwater levels within the LWRFS have been relatively flat in the five years since the end of the Order 1169 aquifer test, but groundwater levels have not recovered to pre-test levels.<sup>13</sup>

#### **IV. PUMPAGE INVENTORIES**

**WHEREAS**, annual groundwater pumpage inventories in the Coyote Spring Valley have been published by the State Engineer since 2005. In the years 2005 through 2017 pumping has ranged from 665 acre-feet to 5,606 acre-feet, averaging 2,605 acre-feet. The average pumping in Coyote Spring Valley, excluding the years 2011 and 2012 when the aquifer test was being conducted, is 2,068 acre-feet.<sup>14</sup>

**WHEREAS**, annual groundwater pumpage inventories in the Black Mountains Area have been published by the State Engineer since 2001. In the years 2001 through 2017 pumping in the northwest portion of the basin has ranged from 1,137 acre-feet to 1,591 acre-feet, with an average of 1,476 acre-feet.<sup>15</sup>

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<sup>13</sup> See, e.g., USGS water level data for Site 364650114432001 219 S13 E65 28BDBA1 USGS CSV-2. [waterdata.usgs.gov/nwis](http://waterdata.usgs.gov/nwis).

<sup>14</sup> See, e.g., Nevada Division of Water Resources, *Coyote Spring Valley Hydrographic Basin 13-210 Groundwater Pumpage Inventory*, 2017.

<sup>15</sup> See, e.g., Nevada Division of Water Resources, *Black Mountains Area Hydrographic Basin 13-215 Groundwater Pumpage Inventory*, 2017.

**WHEREAS**, annual groundwater pumpage inventories in the Garnet Valley have been published by the State Engineer since 2001. In the years 2001 through 2017 pumping has ranged from 797 acre-feet to 2,181 acre-feet, averaging 1,358 acre-feet.<sup>16</sup>

**WHEREAS**, the State Engineer does not conduct annual groundwater pumpage inventories in the Hidden Valley basin because there is no groundwater pumping in the basin.

**WHEREAS**, annual groundwater pumpage inventories in the California Wash have been published by the State Engineer since 2016. In the years 2016 and 2017 pumping has ranged from 88 acre-feet to 252 acre-feet, averaging 170 acre-feet.<sup>17</sup> Groundwater pumpage data have been reported by water right holders since 2009.

**WHEREAS**, annual groundwater pumpage inventories in the Muddy River Springs Area have been published by the State Engineer since 2016. In the years 2016 and 2017 pumping has ranged from 3,553 acre-feet to 4,048 acre-feet, with an average of 3,801 acre-feet.<sup>18</sup> Groundwater pumpage data have been reported by water right holders since 1976.

**WHEREAS**, total groundwater pumpage in Coyote Spring Valley, Muddy River Springs Area (MRSA), California Wash, Hidden Valley, Garnet Valley, and the northwest portion of the Black Mountains Area in calendar years 2007 through 2017, ranged from 9,090 acre-feet to 14,766 acre-feet. Pumpage in years 2011-2012 during the aquifer test averaged 14,535 afa. Pumpage in years 2015 through 2017, when alluvial pumping in the MRSA was greatly reduced because of the Reid Gardner Generating Station closure, ranged from 9,090 afa to 9,637 afa.

#### **V. AUTHORITY AND NECESSITY**

**WHEREAS**, NRS § 533.024(1)(c) directs the State Engineer “to consider the best available science in rendering decisions concerning the availability of surface and underground sources of water in Nevada.”

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<sup>16</sup> See, e.g., *Nevada Division of Water Resources, Garnet Valley Hydrographic Basin 13-216 Groundwater Pumpage Inventory*, 2017.

<sup>17</sup> See, e.g., *Nevada Division of Water Resources, California Wash Hydrographic Basin 13-218 Groundwater Pumpage Inventory*, 2017.

<sup>18</sup> See, e.g., *Nevada Division of Water Resources, Muddy River Springs Area (AKA Upper Moapa Valley) Hydrographic Basin 13-219 Groundwater Pumpage Inventory*, 2017.

**WHEREAS**, NRS § 533.024(1)(e) was added in 2017 to declare the policy of the State to “manage conjunctively the appropriation, use and administration of all waters of this State regardless of the source of the water.”

**WHEREAS**, given that the State Engineer must use the best available science and manage conjunctively the water resources in the LWRFS, consideration of any development of long-term, permanent, uses that could ultimately be curtailed due to water availability will be examined with great caution.

**WHEREAS**, as demonstrated by the results of the aquifer test, Coyote Spring Valley, Muddy River Springs Area, Hidden Valley, Garnet Valley, California Wash, and the northwestern part of the Black Mountains Area have a direct hydraulic connection, and as a result must be administered as a joint administrative unit, including the administration of all water rights based upon the date of priority of such rights in relation to the priority of rights in the other basins.<sup>19</sup>

**WHEREAS**, the pre-development discharge of 34,000 acre-feet of the Muddy River system, which is fully appropriated, plus the more than 38,000 acre-feet of groundwater appropriations within the LWRFS greatly exceed the total water budget within the flow system.

**WHEREAS**, the results from the aquifer test, the data from groundwater level recovery and spring flow, and climate data indicate to the State Engineer that the quantity of water that may be pumped within the LWRFS without conflicting with senior rights on the Muddy River or adversely affecting the habitat of the Moapa dace is less than the quantity pumped during the aquifer test.

**WHEREAS**, the current amount of pumping corresponds to a period of time in which spring flows have remained relatively stable and have not demonstrated a continuing decline.

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<sup>19</sup> See, e.g., Southern Nevada Water Authority, *Nevada State Engineer Order 1169 and 1169A Study Report*, June 2013; Tom Meyers, Ph.D., *Technical Memorandum Comments on Carbonate Order 1169 Pump Test Data and Groundwater Flow System in Coyote Springs and Muddy River Springs Valley, Nevada*, June 25, 2013; U.S. Fish and Wildlife Service, U.S. Bureau of Land Management and U.S. National Park Service Order 1169A Report, *Test Impacts and Availability of Water Pursuant to Applications Pending Under Order 1169*, June 28, 2013; Johnson and Mifflin, *Summary of Order 1169 Testing Impacts, per Order 1169A*, June 28, 2013; Tetra Tech, *Comparison of Simulated and Observed Effects of Pumping from MX-5 Using Data Collected to the End of the Order 1169 Test, and Prediction of Recovery from the Test*, June 10, 2013, official records in the Office of the State Engineer.



**WHEREAS**, the precise extent of the development of existing appropriations of groundwater within the LWRFS that may occur without conflicting with the senior rights of the fully decreed Muddy River has not been determined.

**WHEREAS**, recognizing that there exists a need for further analysis of the historic and ongoing groundwater pumping data, the relationship of groundwater pumping within the LWRFS to spring discharge and flow of the fully decreed Muddy River, the extent of impact of climate conditions on groundwater levels and spring discharge, and the ultimate determination of the sustainable yield of the LWRFS, the State Engineer finds that input by means of reports by the stakeholders in the interpretation of the data from the aquifer test and from the years since the conclusion of the aquifer test is important to fully inform the State Engineer prior to setting a limit on the quantity of groundwater that may be developed in the LWRFS or to developing a long-term Conjunctive Management Plan for the LWRFS and Muddy River.

**WHEREAS**, the State Engineer finds that it is necessary to carefully monitor the effects of groundwater development within the LWRFS under current conditions, toward the goal of collaboratively (with stakeholders) evaluating the amount of groundwater that may ultimately be developed within the LWRFS without conflicting with senior decreed rights on the Muddy River or adversely affecting the public interest in maintaining the habitat of the endangered Moapa dace. The evaluation process will include public meetings, meetings of a stakeholder representative working group, and coordination with the Hydrologic Review Team (HRT) developed under the 2006 Memorandum of Agreement among the Southern Nevada Water Authority, United States Fish and Wildlife Service, Coyote Springs Investments, Moapa Band of Paiutes, and the Moapa Valley Water District. The process will provide the opportunity for the stakeholders to engage in the development of a conjunctive management plan that will be informed by the determination of the total quantity of groundwater that may be developed within the LWRFS and that will facilitate the continued use of groundwater by junior priority groundwater rights holders whom have perfected their water rights while protecting the senior decreed rights on the Muddy River.

**WHEREAS**, recognizing that an amount less than the full quantity of the appropriated groundwater rights within the LWRFS may be developed in a manner that will provide for a reasonably certain supply of water for future permanent uses without jeopardizing the economies of the communities reliant on the water supply within the LWRFS, the health and safety of those

whom are either presently reliant the water, existing public interests, or those who may in the future become reliant on a reliable and sustainable source of supply, the State Engineer, with the following exception, finds that it is necessary to issue a temporary moratorium on the review and decision by the Division of Water Resources regarding any final subdivision map or other construction or development submission requiring a finding that adequate water is available to support the proposed development. During the pendency of this Interim Order, the State Engineer may review and grant approval of a subdivision or other submission if a showing of an adequate and sustainable supply of water to meet the anticipated life of the subdivision, other construction or development can be made to the State Engineer's satisfaction.

**WHEREAS**, through continued monitoring of the LWRFS during the effective period of this Interim Order, the State Engineer seeks to maintain recent groundwater pumping amounts, while providing time for the submission of additional scientific data and analysis regarding the total quantity of water that may be sustainably withdrawn from the LWRFS over the long-term without conflicting with senior Muddy River decreed rights or jeopardizing the communities, water users, or public interests identified above.

**WHEREAS**, the State Engineer is empowered to make such reasonable rules and regulations as may be necessary for the proper and orderly execution of the powers conferred by law.<sup>20</sup>

**WHEREAS**, within an area that has been designated by the State Engineer, as provided for in NRS Chapter 534, where, in the judgment of the State Engineer, the groundwater basin is being depleted, the State Engineer in his or her administrative capacity may make such rules, regulations and orders as are deemed essential for the welfare of the area involved.<sup>21</sup>

**WHEREAS**, the State Engineer finds that additional data relating to the impacts of groundwater pumping from the LWRFS coupled with the public process will allow his office to make a determination as to the appropriate long-term management of groundwater pumping that may occur in the LWRFS by existing holders of water rights without conflicting with existing senior decreed rights or adversely affecting the endangered Moapa dace.

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<sup>20</sup> NRS § 532.120.

<sup>21</sup> *Id.*

## VI. ORDER

**NOW THEREFORE**, the State Engineer orders:

1. The Lower White River Flow System consisting of the Coyote Spring Valley, Muddy River Springs Area, California Wash, Hidden Valley, Garnet Valley, and the portion of the Black Mountains Area as described in this Order, is herewith designated as a joint administrative unit for purposes of administration of water rights. All water rights within the Lower White River Flow System will be administered based upon their respective date of priorities in relation to other rights within the regional groundwater unit.
2. Any stakeholder with interests that may be affected by water right development within the Lower White River Flow System may file a report in the Office of the State Engineer in Carson City, Nevada, no later than the close of business on Monday, June 3, 2019.<sup>22</sup> Reports filed with the Office of the State Engineer should address the following matters:
  - a. The geographic boundary of the hydrologically connected groundwater and surface water systems comprising the Lower White River Flow System;
  - b. The information obtained from the Order 1169 aquifer test and subsequent to the aquifer test and Muddy River headwater spring flow as it relates to aquifer recovery since the completion of the aquifer test;
  - c. The long-term annual quantity of groundwater that may be pumped from the Lower White River Flow System, including the relationships between the location of pumping on discharge to the Muddy River Springs, and the capture of Muddy River flow;

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<sup>22</sup> For any stakeholder affected by the shut-down of the United States government beginning in December 2018, upon a request and showing of good cause to the satisfaction of the State Engineer, an extension of time may be granted to those affected parties.

- d. The effects of movement of water rights between alluvial wells and carbonate wells on deliveries of senior decreed rights to the Muddy River; and,
    - e. Any other matter believed to be relevant to the State Engineer's analysis.
3. Any stakeholder with interests that may be affected by water right development within the Lower White River Flow System may file with the Office of the State Engineer no later than the close of business on Thursday July 18, 2019, a rebuttal to the Reports filed on June 3, 2019.
4. The State Engineer will schedule an administrative hearing within the month of September 2019 to take comment on the submitted reports.
5. During the pendency of this Interim Order:
  - a. Permanent applications to change existing groundwater rights shall be held in abeyance pending the submission of the reports as required by Paragraph 2 of this Order and as authorized by NRS §§ 532.165(1), 533.368 and 533.370(4)(d). Temporary applications to change existing groundwater rights will be processed pursuant to NRS § 533.345.
  - b. A temporary moratorium is issued regarding any final subdivision or other submission concerning development and construction submitted to the State Engineer for review, and such submissions shall be held in abeyance pending the conclusion of the public process to determine the total quantity of groundwater that may be developed within the Lower White River Flow System. The State Engineer may review and grant approval of a subdivision or other submission if a showing of an adequate and sustainable supply of water to meet the anticipated life of the subdivision, other construction or development can be made to the State Engineer's satisfaction.

- c. Holders of water rights who maintain their water rights in good standing by filing all required applications for extension of time in conformity with the requirements of NRS §§ 533.390, 533.395 and 533.410 may cite this order in support of their applications for extension of time.
- d. Holders of water rights who file all required applications for extension of time in conformity with the requirements of NRS § 534.090 may cite this order in support of their applications for extension of time to prevent the working of a forfeiture.



 P.E.  
\_\_\_\_\_  
JASON KING, P.E.  
State Engineer

Dated at Carson City, Nevada this

11<sup>TH</sup> day of JANUARY, 2019.

# Order 1303, Appendix A : LOWER WHITE RIVER FLOW SYSTEM

Coyote Spring Valley, Muddy River Springs Area, Hidden Valley, Garnet Valley, California Wash, and a portion of Black Mountains Area



Summer 2017 imagery from the National Agriculture Imagery Program

Nevada Division of Water Resources  
Office of the State Engineer  
Jason King, P.E.  
State Engineer

**Order 1303, APPENDIX B: Groundwater Pumping in the Lower White River Flow System, 2007–2017**

Basin No.	219				215		210	216	218	217	Total pumping in the LWRFs
Basin Name	Muddy River Springs Area				Black Mountains Area		Coyote Spring Valley	Garnet Valley	California Wash	Hidden Valley	
Year	Carbonate pumping (reported by MVWD)	Alluvial pumping (reported by NV Energy)	All other Alluvial Pumping <sup>1</sup>	Total Pumping in Basin 219 <sup>1</sup>	Carbonate pumping in the Northwest Portion of Basin 215	Total Pumping in Basin 215					
2007	2,079	4,744	253	7,076	1,585	1,732	3,147	1,412	27 <sup>2</sup>	0	<b>13,247</b>
2008	2,272	4,286	253	6,811	1,591	1,759	2,000	1,552	27 <sup>2</sup>	0	<b>11,981</b>
2009	2,034	4,092	253	6,379	1,137	1,159	1,792	1,427	21 <sup>3</sup>	0	<b>10,756</b>
2010	1,826	4,088	253	6,167	1,561	1,572	2,923	1,373	26 <sup>3</sup>	0	<b>12,050</b>
2011	1,837	4,212	253	6,302	1,398	1,409	5,606	1,427	33 <sup>3</sup>	0	<b>14,766</b>
2012	2,638	2,961	253	5,852	1,556	1,564	5,516	1,351	28 <sup>3</sup>	0	<b>14,303</b>
2013	2,496	3,963	253	6,712	1,585	1,776	3,407	1,484	66 <sup>3</sup>	0	<b>13,254</b>
2014	1,442	4,825	253	6,520	1,429	1,624	2,258	1,568	241 <sup>3</sup>	0	<b>12,016</b>
2015	2,396	1,249	253	3,898	1,448	1,708	2,064	1,520	460	0	<b>9,390</b>
2016	2,795	941	312	4,048	1,434	1,641	1,722	2,181	252	0	<b>9,637</b>
2017	2,824	535	194	3,553	1,507	1,634	1,961	1,981	88	0	<b>9,090</b>

The LWRFs includes basins 210, 216, 217, 218, 219 and the northwest portion of 215.

All values in this table are from State Engineer basin pumpage inventory reports except as noted in the footnotes below:

1. Alluvial Pumping not reported by NV Energy for years 2007–2015 estimated as the average of inventoried years 2016–2017.
2. Estimated as the average of groundwater pumping in years 2009–2012.
3. Reported to the State Engineer but not published in a basin inventory report.

**IN THE OFFICE OF THE STATE ENGINEER  
OF THE STATE OF NEVADA**

**ADDENDUM TO INTERIM ORDER #1303**

**DESIGNATING THE ADMINISTRATION OF ALL WATER RIGHTS WITHIN  
COYOTE SPRING VALLEY HYDROGRAPHIC BASIN (210), A PORTION OF BLACK  
MOUNTAINS AREA (BASIN 215), GARNET VALLEY (BASIN 216), HIDDEN VALLEY  
(BASIN 217), CALIFORNIA WASH (BASIN 218), AND MUDDY RIVER SPRINGS  
AREA (AKA UPPER MOAPA VALLEY) (BASIN 219) AS A JOINT ADMINISTRATIVE  
UNIT, HOLDING IN ABEYANCE APPLICATIONS TO CHANGE EXISTING  
GROUNDWATER RIGHTS, AND ESTABLISHING A TEMPORARY MORATORIUM  
ON THE REVIEW OF FINAL SUBDIVISION MAPS**

**WHEREAS**, the purpose of this Addendum is to modify the schedule for the submission of reports and rebuttal reports of interested stakeholders analyzing the data available regarding sustainable groundwater development in the Lower White River Flow System (LWRFS), the geographic extent of the LWRFS, and considerations relating to the movement of groundwater pumping between the alluvial wells and carbonate wells and its effects on the fully decreed Muddy River.

**WHEREAS**, NRS § 533.024(1)(c) directs the State Engineer “to consider the best available science in rendering decisions concerning the availability of surface and underground sources of water in Nevada.”

**WHEREAS**, NRS § 533.024(1)(e) was added in 2017 to declare the policy of the State to “manage conjunctively the appropriation, use and administration of all waters of this State regardless of the source of the water.”

**WHEREAS**, based upon the recognition that a need exists for further analysis of the groundwater pumping data, the relationship of groundwater pumping within the LWRFS to spring discharge and flow of the fully decreed Muddy River, the extent of impact of climate conditions on groundwater levels and spring discharge, and the ultimate determination of the sustainable yield of the LWRFS, and the interest in the stakeholders having sufficient time to prepare reports, the State Engineer finds that it is reasonable and appropriate to modify the schedule originally established in Interim Order 1303.



WHEREAS, the State Engineer is empowered to make such reasonable rules and regulations as may be necessary for the proper and orderly execution of the powers conferred by law.<sup>1</sup>

WHEREAS, within an area that has been designated by the State Engineer, as provided for in NRS Chapter 534, where, in the judgment of the State Engineer, the groundwater basin is being depleted, the State Engineer in his or her administrative capacity may make such rules, regulations and orders as are deemed essential for the welfare of the area involved.<sup>2</sup>

**ORDER**

NOW THEREFORE, the State Engineer orders:

1. The deadline for any stakeholder with interests that may be affected by water right development within the Lower White River Flow System to file a report in the Office of the State Engineer in Carson City, Nevada, is extended to no later than the close of business on Wednesday, July 3, 2019. The substance of the reports should include the same elements as established originally in Interim Order 1303.
2. Any rebuttal report to the Reports filed on July 3, 2019, to be submitted by a stakeholder with interests that may be affected by water right development within the Lower White River Flow System shall be submitted to the Office of the State Engineer no later than the close of business on Friday August 16, 2019.
3. All other matters contained in Interim Order 1303 remain unaltered.

  
TIM WILSON, P.E.  
State Engineer

Dated at Carson City, Nevada this 13<sup>th</sup> day of May, 2019.

<sup>1</sup> NRS § 532.120.

<sup>2</sup> *Id.*

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1 STATE OF NEVADA  
 2 DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES  
 3 DIVISION OF WATER RESOURCES  
 4 BEFORE MICHELINE N. FAIRBANK, HEARING OFFICER  
 5  
 6  
 7 IN THE MATTER OF THE ADMINISTRATION  
 8 AND MANAGEMENT OF THE LOWER  
 9 WHITE RIVER FLOW SYSTEM WITHIN  
 10 COYOTE SPRING VALLEY HYDROGRAPHIC  
 11 BASIN (210), A PORTION OF BLACK  
 12 MOUNTAINS AREA HYDROGRAPHIC  
 13 BASIN (215), GARNET VALLEY  
 14 HYDROGRAPHIC BASIN (216), HIDDEN  
 15 VALLEY HYDROGRAPHIC BASIN (217),  
 16 CALIFORNIA WASH HYDROGRAPHIC BASIN  
 17 (218), AND MUDDY RIVER SPRINGS AREA  
 18 (AKA UPPER MOAPA VALLEY HYDROGRAPHIC  
 19 BASIN (219)).  
 20  
 21  
 22  
 23  
 24

TRANSCRIPT OF PROCEEDINGS  
 PUBLIC HEARING  
 PRE-HEARING CONFERENCE  
 THURSDAY, AUGUST 8, 2019

Reported by: Michel Loomis, RPR

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1 APPEARANCES:  
 2 Micheline N. Fairbank, Hearing Officer  
 3 Melissa Flatley, Chief of the Hearing Officer Section  
 4  
 5 For SNWA: Taggart & Taggart, Ltd.  
 6 By: Paul G. Taggart, Esq.  
 7 Carson City, Nevada  
 8 For CSI: Robison, Belaustegui, Sharp  
 9 & Low  
 10 By: Kent R. Robison, Esq.  
 11 Reno, Nevada  
 12 For NV Energy: Justina Caviglia, Esq.  
 13  
 14 For the City of North Las Vegas: Andy Moore, Esq.  
 15 For Lincoln County Water District: Dylan Frehner, Esq.  
 16  
 17 For NCA: Alex Flangas, Esq.  
 18 For the Corporation of the Presiding Bishop of the Church of Jesus Christ of Latter-Day-Saints: Kaempfer Crowell  
 19 By: Severin Carlson, Esq.  
 20 For Moapa Band of Paiutes: Beth Baldwin, Esq.  
 21 Also Present: Jeff Henkelman  
 22 Sarah Peterson  
 23 Peter Fehmy  
 24 Karen Glasgow  
 Patrick Donnelly

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1 APPEARANCES:  
 2 Also Present: Kathryn Brinton  
 3 Gary Karst  
 4 Levi Kryder  
 5 Carl Savely  
 6 Glen Knaves  
 7 Sue Braumiller  
 8 Mark Stock  
 9 Steve King  
 10 Steven Anderson  
 11 Colby Pellegrino  
 12 Scott Millington  
 13 Greg Morrison  
 14 Joseph Davis  
 15 Tim O'Connor  
 16 Rick Felling  
 17 Greg Bushner  
 18 Emilia Cargill  
 19 Lonnie Roy  
 20 Wade Poulson  
 21 Dwight Smith  
 22 James Bolotin  
 23 Brad Herrera  
 24

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1 CARSON CITY, NEVADA, THURSDAY, AUGUST 8, 2019, A.M. SESSION  
 2 -o0o-  
 3  
 4 HEARING OFFICER FAIRBANK: Okay. Good morning.  
 5 This is Micheline Fairbank, and I'm going to go ahead and get  
 6 the hearing started, or the prehearing conference proceeding  
 7 for the Lower White River Flow System Order 1303 hearing on  
 8 the solicited reports.  
 9 I'm Micheline Fairbank and I'll be operating as  
 10 the hearing officer for today's purposes. With me is Melissa  
 11 Flatley, and she's the chief of our hearing section, and --  
 12 and so we'll go ahead and be conducting the hearing.  
 13 We do have a sign-in sheet, and so if all the  
 14 people that are here present in Carson City, if you have not  
 15 signed in on the sign-in sheet, if you'll make sure you do so  
 16 before the -- before you leave today.  
 17 And for those individuals who are appearing on  
 18 the phone conference, I think I have most everybody who  
 19 accepted the calendar invite and so we'll go ahead and put you  
 20 on the sign-in sheet via those calendar invites.  
 21 However, if you are calling in and you did not  
 22 accept a calendar invite, if you'll please send an email so we  
 23 can make sure we have your participation and attendance noted  
 24 for the record.

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1 So this is the time set for the hearing, the  
2 prehearing conference for the Order 1303 reports that have  
3 been solicited by the State Engineer's office.  
4 And as we've spoken at the last public workshop,  
5 the hearing on the Order 1303 reports is going to commence on  
6 September 23rd, but prior to issuing a scheduling order,  
7 there's obviously a bunch of logics we need to work out and  
8 want to make sure we have a clear playing field which will be  
9 outlined also in that scheduling order for all the parties and  
10 participants to this proceeding.  
11 As we've kind of noted all a long, this is a  
12 different format than most of our protested hearings. There's  
13 not necessarily -- there's not an Applicant and a Protestant.  
14 But what this is is really an opportunity for the  
15 participants and those stakeholders in the Lower White River  
16 Flow System to come forth and have an opportunity to present  
17 their reports that they've submitted or rebuttal reports that  
18 have been submitted to allow the State Engineer to go ahead  
19 and take that under advisement in making further  
20 determinations with respect to the issues.  
21 So, just to go ahead and get started, I'm just  
22 going to state we're a little bit limited in time this  
23 morning, so we have to complete this by the noon hour because  
24 this room is actually being occupied this afternoon as well.

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1 So we're not going to extend past the lunch hour.  
2 And so I'm going to go ahead and give us a quick road map of  
3 what we are intending to accomplish during this meeting this  
4 morning, or this hearing this morning.  
5 So the purpose of this conference is to go over  
6 the purpose of the Order 1303 hearing. So what are our  
7 expectations and what our goals for the State Engineer's  
8 office for having that hearing?  
9 To address the timing and length of the hearing.  
10 To discuss the sequence of presentation by the different  
11 participants.  
12 To go over procedures and other administrative  
13 matters relating to the Order 1303 hearing and to determine  
14 the time for disclosures of witnesses and evidence anticipated  
15 to be filed and relied upon during the hearing. And then to  
16 address any other questions.  
17 So, just to kind of provide a summary for the  
18 purpose of the hearing. The purpose of the hearing is to  
19 consider the reports solicited pursuant to Order 1303.  
20 And so the State Engineer views the purpose of  
21 Order 1303 and the report submitted in response to the  
22 solicitation as an opportunity for the participants who have  
23 or will have filed reports, rebuttal reports an opportunity to  
24 explain their positions and conclusions and to respond to any

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1 criticism of those positions and conclusions presented by  
2 other parties through rebuttal reports.  
3 The participants are the stakeholders who have  
4 submitted either a report or rebuttal report or both a report  
5 and rebuttal report.  
6 Individuals who do not submit a report will be  
7 allowed to provide public comment, but they're not  
8 participants for the purpose of presenting testimony, evidence  
9 or cross-examining.  
10 And just because a participant has submitted a  
11 report or rebuttal report does not require to party to  
12 something evidence beyond their reports.  
13 So the State Engineer will consider all reports  
14 and opinions submitted, regardless of whether there's --  
15 actual parties proffer witnesses or testimony.  
16 Participants will be limited to offering  
17 testimony and evidence relating to the most salient  
18 conclusions, including data, evidence and other information  
19 supporting those conclusions.  
20 So, the idea is that participants who have  
21 submitted reports, the State Engineer and staff, we will have  
22 reviewed those reports prior to the commencement of the  
23 hearing and the State Engineer staff within the Division of  
24 Water Resources, we are well qualified to review, consider,

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1 analyze reports, including the data and evidence relied upon  
2 in preparing opinions and rendering those -- and rendering the  
3 conclusions within the reports.  
4 And the State Engineer's expectation and  
5 intention for this hearing is that the parties who have  
6 submitted either a report or rebuttal reports will be  
7 permitted an opportunity to provide limited testimony and to  
8 submit evidence identifying those salient conclusions and  
9 findings contained in those reports.  
10 And really the purpose is to direct the State  
11 Engineer and our staff to the data, information and relevant  
12 evidence within the State Engineer's administrative record or  
13 to provide that evidence in support of those conclusions.  
14 So, this isn't -- the hearing is not intended to  
15 have everybody and every participant to go through each and  
16 every sub detail of their reports.  
17 The idea is that we want you to go ahead and hit  
18 the high points, point us to those conclusions, point us in  
19 the direction what do you think is substantive and important  
20 for our office to really consider, but the intent is that  
21 we're trying to go ahead and keep this relatively limited and  
22 focused. We have the capability to go ahead and examine all  
23 the detail and such.  
24 So the hearing is not and the State Engineer will

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1 not permit participants to address each and every detail. And  
2 the purpose is to afford participants the opportunity to  
3 highlight the points and to direct staff components which are  
4 the most significant matters as is addressed in the Order 1303  
5 solicitation which are the geographic boundary of  
6 hydrologically connected groundwater and surface water systems  
7 comprising the Lower White Water River Flow System.  
8 The information obtained from the Order 1169  
9 aquifer test, and subsequent to the aquifer test, the Muddy  
10 River Headwater Spring Flow as it relates to aquifer recovery  
11 since the completion of the aquifer test.  
12 The long term annual quantity of groundwater that  
13 maybe pumped from the Lower White River Flow System, including  
14 relationships between location of pumping on discharge to the  
15 Muddy River Springs and the capture of Muddy River flow.  
16 The effects of movement on water rights between  
17 alluvial wells and carbonate wells on deliveries of senior  
18 decreed rights in the Muddy River and other matters  
19 participants have included in their reports that they believe  
20 to be relevant in the State Engineer's analysis.  
21 MR. FLANGAS: A question?  
22 HEARING OFFICER FAIRBANK: Yes.  
23 MR. FLANGAS: When you say "other matters  
24 relevant", are you limiting to that to the hydrology, other

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1 matters relevant to the hydrology or any other matter relevant  
2 period?  
3 HEARING OFFICER FAIRBANK: So it's not -- it's  
4 not any other matter relevant period. It's relevant to these  
5 particular issues and questions that we're asking.  
6 And so, and I'm going to talk about this and  
7 we've spoken about this before, is that really this is a  
8 threshold reporting aspect, that this is part of a  
9 multi-tiered process in terms of determining the appropriate  
10 management strategy to the Lower River Flow System.  
11 And in order for the office to go ahead and start  
12 to engage in working with the -- with the community, working  
13 with water right holders and determining what an appropriate  
14 management strategy is, there's threshold matters that have to  
15 be decided and determined.  
16 And that is those particular, those four  
17 components that we've solicited in the Order 1303 report.  
18 This larger substantive policy determinations is not part of  
19 this particular proceeding.  
20 That's part of later proceedings, but this is  
21 what has to occur in order to inform those future policy  
22 determinations and decisions.  
23 And while some people have addressed some policy  
24 interplays, because there are some policy interplays into some

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1 of these findings and determinations, really this is more  
2 about a scientific analysis and data analysis.  
3 MR. FLANGAS: Thank you for that clarification.  
4 HEARING OFFICER FAIRBANK: So second, the purpose  
5 of the hearing is limited to those issues I've outlined and  
6 these particular issues must be addressed to decide the  
7 threshold matter.  
8 So, kind of to follow up on Alex's question, to  
9 the extent participants intend or desire to spend time  
10 addressing future policy considerations which are not  
11 encompassed within the issues specifically identified in the  
12 solicitation of the reports, those matters will not be  
13 considered during these proceedings.  
14 The State Engineer anticipates that any future  
15 decision will address -- that the future decision coming out  
16 of this Order 1303 hearing will address the following issues.  
17 The geographic boundary of the hydrologically  
18 connected water system comprising the Lower White River Flow  
19 System. To whether or not that's a singular basin, whether or  
20 not it's encompassing multiple basins, that's going to be a  
21 decision that is ultimately determined by the State Engineer  
22 following this hearing.  
23 The quantity of water that may be sustainably  
24 developed within the Lower White River Flow System without

Page 12

1 conflicting with senior rights, and whether there should be  
2 any restrictions or limitations on the movement of points of  
3 diversion within the LWRFS and other issues which will provide  
4 the framework for making future management decisions within  
5 the LWRFS.  
6 And the purpose of the hearing is not to resolve  
7 or address allegations of conflict between groundwater pumping  
8 within the LWRFS and Muddy River decreed rights. That is not  
9 the purpose of this hearing and that's not what we are going  
10 to be deciding at this point in time.  
11 The purpose of the hearing is to determine what  
12 the sustainability is, what the impact is on decreed rights,  
13 and then addressing and resolving allegations of conflict  
14 should that be a determination that will be addressed in, at a  
15 future point in time.  
16 Also, I want to provide a little bit of kind of a  
17 framework for parties to understand what our office is looking  
18 at when we're reviewing the reports received in response to  
19 our solicitation.  
20 Our office is looking for the following, and this  
21 is not a comprehensive list, but this is just kind of a  
22 framework.  
23 We're looking for how conclusions are supported  
24 by the available data.

IN THE OFFICE OF THE STATE ENGINEER

STATE OF NEVADA

1169A

ORDER

**WHEREAS**, on March 8, 2002, the State Engineer issued State Engineer's Order No. 1169.

**WHEREAS**, Order No. 1169 was issued after an administrative hearing was held before the Nevada State Engineer regarding protested Applications 54055 through 54059 held by the Las Vegas Valley Water District, and protested Applications 63272 through 63276 and 63867 through 63876 held by Coyote Springs Investment, LLC.

**WHEREAS**, Order No. 1169 indicated that there was insufficient information to determine if additional water was available for appropriation under the applications and additional study was needed in order to make that determination.

**WHEREAS**, pursuant to Order No. 1169, the State Engineer ordered that all applications pending and any new filings for the appropriation of water from the carbonate-rock aquifer system within Coyote Spring Valley (Basin 210), Black Mountains Area (Basin 215), Garnet Valley (Basin 216), Hidden Valley (North) (Basin 217), Muddy River Springs Area a.k.a. Upper Moapa Valley (Basin 219), and Lower Moapa Valley (Basin 220) would be held in abeyance until further information was obtained by stressing the aquifer by pumping water under those water right permits already issued to appropriate water from the system.

**WHEREAS**, Order No. 1169 ordered that a study covering a minimum five-year period of time during which at least 50% of the water rights then currently permitted in Coyote Spring Valley be pumped for at least two consecutive years. The amount of water to be pumped was 8,050 acre-feet annually for two consecutive years.

**WHEREAS**, Order No. 1169 included as study participants those certain entities identified as having applications for additional water rights or as currently holding water rights in the referenced basins, specifically, the Las Vegas Valley Water District, Southern Nevada Water Authority, Coyote Springs Investment, LLC, Nevada Power Company and Moapa Valley Water District.

**WHEREAS**, on April 18, 2002, the State Engineer issued State Engineer's Ruling No. 5115 that addressed Applications 54075 and 54076 then held by the Las Vegas Valley Water District in California Wash (Basin 218). Pursuant to Ruling No. 5115, the State Engineer indicated that additional information was necessary before large quantities of groundwater could be appropriated from California Wash. Application 54075 was approved subject to a monitoring program to be prepared in conjunction with the study ordered under Order No. 1169 and Application 54076 was held in abeyance until the Order No. 1169 study was completed.

**WHEREAS**, by letter dated April 16, 2010, the State Engineer granted the Moapa Band of Paiute Indians' request to participate in the Order No. 1169 study. The Moapa Band of Paiute Indians' reservation is located within California Wash. The letter noted that the intent of Ruling No. 5115 was to include California Wash within the study area as the current evidence strongly supports a hydrologic connection between California Wash and the other hydrographic basins included in Order No. 1169.

**WHEREAS**, by letter dated May 26, 2010, the Moapa Band of Paiute Indians indicated their concern that the pumping test itself was likely to impact resources at the Muddy River Springs. On June 22, 2010, the State Engineer held a meeting to discuss the pumping test and the Tribe's concerns.

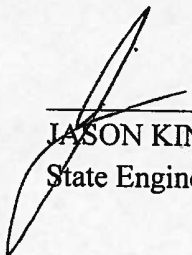
**WHEREAS**, by letter dated July 1, 2010, the State Engineer expressed his concern that it had been eight years since the pumping test was ordered and the pumping requirements of the Order No. 1169 study had not even begun. The State Engineer noted that the final reports ordered under Section 7 of Order No. 1169 and updating the groundwater model under Section 8 of the Order were only required after completion of the pumping test. However, the State Engineer indicated that decisions regarding future appropriations in the basins subject to Order No. 1169 could not be deferred indefinitely. Therefore, regardless of whether the 8,050 acre-foot minimum requirement was met or not, the study participants were ordered to comply with Sections 7 and 8 of Order No. 1169. The two-year pumping period was to commence when pumping and water export from well MX-5 commenced and the Section 7 report(s) were to be filed in the Office of the State Engineer within 180 days of completion of the first two years of pumping. The pumping test was expected to begin in August or September 2010 and actually began on November 15, 2010. The Southern Nevada Water Authority was also ordered to submit model simulation results showing the predicted effects of pumping both existing rights and current applications in Lower Meadow Valley Wash (Basin 205), Kane Springs Valley (Basin 206), Coyote Spring Valley (Basin 210), Black Mountains Area (Basin 215), Garnet Valley (Basin 216), Hidden Valley (North) (Basin 217), California Wash (Basin 218), Muddy River Springs Area a.k.a. Upper Moapa Valley (Basin 219), and Lower Moapa Valley (Basin 220). The State Engineer notified all study participants that monitoring activities were to be in place no later than August 1, 2010.

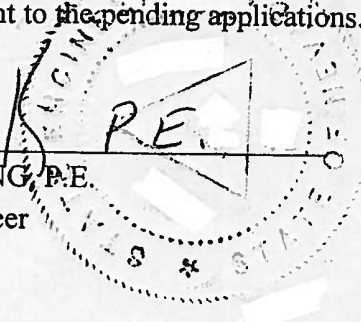
**WHEREAS**, the State Engineer has maintained information related to the pumping test on the Nevada Division of Water Resources website <http://water.nv.gov/mapping/order1169/> and can be viewed by any member of the public.

**WHEREAS**, the State Engineer believes that sufficient information has been obtained through the pumping test and related monitoring in order to make a determination on the applications pending in these basins.

**NOW THEREFORE**, the State Engineer orders:

1. The pumping test is declared completed as of December 31, 2012.
2. In recognition of the information that has already been provided pursuant to the pumping test, the provisions of Section 8 of Order No. 1169 that required an update of Exhibit No. 54 from the July 2001 hearing is hereby rescinded.
3. Any study participant, which includes the Las Vegas Valley Water District, Southern Nevada Water Authority, Coyote Springs Investment, LLC, Nevada Power Company, Moapa Valley Water District and Moapa Band of Paiute Indians, may file a report in the Office of the State Engineer in Carson City, Nevada, by June 28, 2013, addressing the information obtained from the study/pumping test, impacts of pumping under the pumping test and the availability of water pursuant to the pending applications.

  
JASON KING, P.E.  
State Engineer



Dated at Carson City, Nevada

this 21<sup>st</sup> day of December, 2012

**CERTIFICATE OF SERVICE**

I hereby certify that a copy of Amended Order No. 1169 was served:

By U.S. certified mail, postage prepaid, on December 21, 2012, on the following:

Coyote Springs Investment, LLC  
Attn.: Carl Savely  
6600 N. Wingfield Pkwy.  
Sparks, NV 89436  
Certified Mail  
#7106 7808 0630 0051 4231

Las Vegas Valley Water District  
Attn.: John Entsminger  
1001 S. Valley View Blvd., MS #485  
Las Vegas, NV 89153  
Certified Mail  
#7106 7808 0630 0051 4378

Las Vegas Valley Water District  
1001 S. Valley View Blvd., MS #485  
Las Vegas, NV 89153  
Certified Mail  
#7106 7808 0630 0051 4262

Las Vegas Valley Water District  
Attn.: Dana Walsh  
1001 S. Valley View Blvd., MS #485  
Las Vegas, NV 89153  
Certified Mail  
#7106 7808 0630 0051 4385

By U.S. regular mail, postage prepaid, on December 21, 2012, on the following:

Law Office of George N. Benesch  
Attn.: George Benesch  
190 W. Huffaker Lane, Ste. 408  
Reno, NV 89511-2092

Dyer, Lawrence, Penrose,  
Flaherty and Donaldson  
Attn.: Frank Flaherty  
2805 Mountain St.  
Carson City, NV 89703

Christopher A. Brown  
2014 Crawford Street, Apt. 1  
North Las Vegas, NV 89030

James H. Fincher  
2410 Bonita Lane  
Henderson, NV 89014

Chemical Lime Company of Arizona  
P.O. Box 363068  
North Las Vegas, Nevada 89036

Ely Shoshone Tribe  
#16 Shoshone Circle  
Ely NV 89301

City of Caliente  
Attn: Mayor  
P.O. Box 1006  
Caliente, NV 89008-1006

Charles F. Hilfenhaus, Jr.  
4465 Denia Circle  
Las Vegas, NV 89108

Dry Lake Water, LLC  
2701 N. Tenaya Way, Suite 200  
Las Vegas, NV 89102

High Country News  
Attn.: Matt Jenkins  
2832 Regent Street  
Berkeley, CA 81428

INMC Mortgage Holdings, Inc.  
Construction Lending Division  
155 N. Lake Ave. CLCA-B 11th Floor  
Pasadena, CA 91101

Las Vegas Fly Fishing Club  
2728 Tidewater Ct.  
Las Vegas, NV 89117

Lionel Sawyer & Collins  
Attn.: Brian H. Schusterman  
50 W. Liberty Street, Suite 1100  
Reno, NV 89501

Moapa Band of Paiute Indians  
Attn.: William Anderson, Chairman  
P.O. Box 340  
Moapa, NV 89025

Moapa Valley Water District  
Attn.: Joe Davis  
P. O. Box 257  
Logandale, NV 89021

Carolyn Morrison  
895 Ripple Way  
Las Vegas, NV 89110

Nevada Cogeneration Associates  
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Las Vegas, NV 89110

Nevada Cogeneration Associates  
Attn.: Executive Director  
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Bakersfield, CA 93380

Nevada Power Company  
Craig York  
P.O. Box 230  
Las Vegas, NV 89151

Republic Environmental Technologies, Inc.  
770 East Sahara Ave.  
Las Vegas, NV 89104

Debra Richardson  
3601 Cambridge St. #151  
Las Vegas, NV 89109

Southern Nevada Water Authority  
Attn.: Bill Rinne  
1001 South Valley View Blvd.,  
Mail Stop #485  
Las Vegas, NV 89153

Southern Nevada Water Authority  
Attn.: Jeff Johnson  
1001 South Valley View Blvd.,  
Mail Stop #485  
Las Vegas, NV 89153

Stewart Title of Nevada  
Attn.: Linda Jones  
3800 Howard Hughes Pkwy, Ste. 500  
Las Vegas, NV 89109-0913

Taggart & Taggart, Ltd.  
Attn.: Paul Taggart  
108 N. Minnesota Street  
Carson City, NV 89703

U.S. Bureau of Indian Affairs  
Western Regional  
Attn.: Barry Welch  
2600 N. Central Avenue, 4th floor  
Phoenix, AZ 85004

U.S. Bureau of Land Management  
4701 N. Torrey Pines Drive  
Las Vegas, NV 89130

U.S. Fish and Wildlife Service  
Attn.: Tim Mayer  
911 NE 11th Ave.  
Portland, OR 97232-4181

U.S. Fish and Wildlife Service  
Attn.: Michael Eberle  
911 NE 11th Ave.  
Portland, OR 97232-4181



United States of America  
National Park Service  
Attn.: Bill Hansen  
1201 Oakridge Dr., Suite 250  
Fort Collins, CO 80525

U.S. National Park Service  
Attn.: Gary Karst  
601 Nevada Way  
Boulder City, NV 89005

U.S. Department of the Interior  
Office of the Solicitor  
Attn.: Peter Fahmy  
755 Parfet St., Suite 151  
Lakewood, CO 80215

U.S. Department of the Interior  
Office of the Solicitor  
Attn.: Steven Palmer  
2800 Cottage Way, Room E-1712  
Sacramento, CA 95825-1890

Ziontz, Chestnut, Varnell, Berley & Slonim  
Attn.: Richard Berley  
2101 Fourth Ave., Suite 1230  
Seattle, WA 98121



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Juanita Mordhorst, AAI  
Division of Water Resources  
Hearings Section

IN THE OFFICE OF THE STATE ENGINEER  
OF THE STATE OF NEVADA

1169

ORDER

HOLDING IN ABEYANCE CARBONATE-ROCK AQUIFER SYSTEM GROUNDWATER APPLICATIONS PENDING OR TO BE FILED IN COYOTE SPRINGS VALLEY (BASIN 210), BLACK MOUNTAINS AREA (BASIN 215), GARNET VALLEY (BASIN 216), HIDDEN VALLEY (BASIN 217), MUDDY RIVER SPRINGS aka UPPER MOAPA VALLEY (BASIN 219), LOWER MOAPA VALLEY (BASIN 220), AND FOR FURTHER STUDY OF THE APPROPRIATION OF WATER FROM THE CARBONATE-ROCK AQUIFER SYSTEM, LINCOLN AND CLARK COUNTIES, NEVADA.

**WHEREAS**, the Nevada State Engineer is designated by the Nevada Legislature to perform the duties related to the management of the water resources belonging to the people of the State of Nevada.<sup>1</sup>

**WHEREAS**, the State Engineer is empowered to make such reasonable rules and regulations as may be necessary for the proper and orderly execution of the powers conferred by law.<sup>2</sup>

**WHEREAS**, the State Engineer is empowered to conduct such studies as are necessary.<sup>3</sup>

**WHEREAS**, a large portion of the State of Nevada consisting of approximately 50,000 square miles of sparsely populated land is underlain by significant carbonate-rock sequences.<sup>4</sup>

**WHEREAS**, the carbonate-rock sequences contain groundwater aquifers, which are believed to contain significant, but undetermined, quantities of ground water.

**WHEREAS**, many persons or entities have filed water right applications requesting permission to appropriate substantial quantities of underground water from the carbonate-rock aquifer system.

**WHEREAS**, in 1984, the Water Resources Division of the United States Department of Interior, Geological Survey proposed a 10-year investigation of the entire Carbonate Terrane, which includes the carbonate-rock aquifers of the areas referenced above. This study was proposed because the water resources of the Carbonate Terrane were not well defined, the hydrology and geology of the area are complex, and data was sparse.<sup>5</sup>

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<sup>1</sup> See, Nevada Revised Statutes chapters 532, 533, 534, 535 and 536.

<sup>2</sup> NRS § 532.120.

<sup>3</sup> NRS § 532.165(1), 533.368 and 533.370(2).

<sup>4</sup> Michael D. Dettinger, Distribution of Carbonate-Rock Aquifers in Southern Nevada and the Potential for their Development, Summary of Findings, 1985-1988, Summary Report No. 1, United States Geological Survey, Department of Interior and Desert Research Institute, University of Nevada System, p. 3, 1989. See also, Memorandum dated August 3, 1984, from Terry Katzer, Nevada Office Chief, Water Resources Division, United States Department of Interior Geologic Survey, Carson City, Nevada, to Members of the Carbonate Terrane Study, Attachment p. 8, which indicates that the area underlain by significant carbonate-rock sequences in Nevada is over 40,000 square miles of sparsely populated land, and includes 106 hydrographic areas and basins.

<sup>5</sup> Memorandum dated August 3, 1984, from Terry Katzer, Nevada Office Chief, Water Resources Division, United States Department of Interior Geologic Survey, Carson City, Nevada, to

**WHEREAS**, it has been known since 1984 that to arrive at some reasonable understanding of the carbonate-rock aquifer system, substantial amounts of money would be required to develop the science, a significant period of study would be required, and that "unless this understanding is reached, the development of carbonate water is risky and the resultant effects may be disastrous for the developers and current users."<sup>6</sup>

**WHEREAS**, the United States Geological Survey has indicated that given the multiple possible avenues of hydrologic connection between the various aquifers and flow systems, and the uncertainties of recharge and discharge mechanisms and processes, an investigation of the hydrology of the carbonate-rock aquifer system in Nevada is undoubtedly a difficult undertaking.

**WHEREAS**, an investigation of the carbonate-rock aquifer system is additionally complicated by factors including:<sup>7</sup>

- basic hydrologic data such as groundwater levels in the basin-fill aquifers and the carbonate-rock aquifers, and reliable flow measurements for important springs and major streams are scarce or infrequently obtained in much of the area;
- secondary hydrologic and other data, such as hydraulic parameters, geophysical and geochemical, are lacking in many areas;
- the geometry, properties, and boundaries of the carbonate-rock and basin-fill reservoirs are generally unknown, and definition of these properties can be expensive and difficult;
- climatic conditions today are inadequately defined (particularly at higher altitudes) and conditions during the development of the flow paths within the deep-rock aquifers and flow paths within the carbonate-rock aquifer are even more uncertain;
- uncertainties and inaccuracies exist in current methods of estimating precipitation;
- uncertainties and inaccuracies exist in current methods of estimating groundwater inflow and recharge;
- uncertainties and inaccuracies exist in current methods of estimating groundwater outflow and evaporative discharge;
- only a small number of wells tap the deep carbonate-rock aquifer system;
- because there has been no significant historical pumping of ground water from the carbonate-rock aquifer system, groundwater models can only be used as a limited predictive tool for estimating the principle location and magnitude of the impacts of pumping ground water from the system;
- limited stresses on the water resources of the area under current development conditions allow hydrologists information only on the narrow band of system responses to natural conditions; and
- the relationship between geothermal systems and the deep carbonate-rock aquifers and groundwater flow systems is not well understood.

**WHEREAS**, in 1985, the Nevada Legislature authorized a program for the study and testing of the carbonate-rock aquifer system of eastern and southern Nevada. The program was a cooperative effort between the State of Nevada and the Federal Government. The overall plan for the program was to study the carbonate-rock aquifers of southern, east-central, and northeastern Nevada as separate phases of work, with a summary of findings to be prepared at the end of each

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Members of the Carbonate Terrane Study.

<sup>6</sup> Ibid.

<sup>7</sup> Id., Attachment p. 7.

phase. A report, Distribution of Carbonate-Rock Aquifers in Southern Nevada and the Potential for their Development, Summary of Findings, 1985-1988,<sup>8</sup> summarized the findings of the first phase of the study, which assessed the resources of the carbonate-rock aquifers of southern Nevada. The summary brought together results from more than 20 technical reports produced during the study. The summary indicated that:

The rocks that compose the carbonate-rock aquifers are layers of limestone and dolomite that were deposited hundreds of millions of years ago in much of the eastern Great Basin. Subsequently, the carbonate rocks were much deformed; as a result, they no longer exist as continuous layers beneath the region. Instead, they have been pulled apart to form a few large areas of thick and relatively continuous carbonate rocks. Separating these areas are noncarbonate rocks, within which are isolated mountain-sized blocks of carbonate rock.

Beneath southern Nevada, the thick carbonate-rock layers are continuous enough to transmit ground water at regional scales only beneath a north-south "corridor" 60-90 miles wide that extends southward from east-central Nevada to and beyond the Spring Mountains area west of Las Vegas. Within this corridor are the two major regional flow systems of southern Nevada: the Ash Meadows-Death Valley system and the White River-Muddy River Springs system. These flow systems link the ground water beneath dozens of valleys and over distances exceeding 200 miles. Flow in these systems probably is concentrated along highly transmissive zones associated with (1) recently active faults and (2) confluences of flow near major warm-water springs. Outside of the corridor, the carbonate rocks are present primarily as isolated blocks that form aquifers of limited extent, recharged mostly by local precipitation.

\* \* \*

Large-scale development (sustained withdrawals) of water from the carbonate-rock aquifers would result in water-level declines and cause the depletion of large quantities of stored water. Ultimately, these declines would cause reductions in the flow of warm-water springs that discharge from the regional aquifers. Storage in other nearby aquifers also might be depleted, and water levels in those other aquifers could decline. In contrast, isolated smaller ground-water developments, or developments that withdraw ground water for only a short time, may result in water-level declines and springflow reductions of manageable or acceptable magnitude.

Confidence in predictions of the effects of development, however, is low; and it will remain low until observations of the initial hydrologic results of development are analyzed. A strategy of staging developments gradually and adequately monitoring the resulting hydrologic conditions would provide information that eventually could be used to improve confidence in the predictions.<sup>9</sup>

**WHEREAS**, because assurances that the adverse effects of development will not overshadow the benefits cannot be made with a high degree of confidence, development of the carbonate-rock aquifer system must be undertaken in gradual stages together with adequate

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<sup>8</sup> Michael D. Dettinger, Distribution of Carbonate-Rock Aquifers in Southern Nevada and the Potential for their Development, Summary of Findings, 1985-1988, Summary Report No. 1, United States Geological Survey, Department of Interior and Desert Research Institute, University of Nevada System, Forward, 1989.

<sup>9</sup> *Id.*, pp. 1-2.

monitoring in order to predict, through the use of a calibrated model, the effects of continued or increased development with a higher degree of confidence.

**WHEREAS**, staging development gradually means not developing the resources in one large step, but rather starting with small projects that are possibly augmented gradually if conditions and confidence warrant. This approach allows the effects of development to be observed and analyzed continually, so that the benefits and adverse effects of development can be judged and the effects reversed or mitigated if they prove to be detrimental to existing rights and the environment. This approach would hopefully avoid the havoc that could be created by the curtailment of water use by those who have come to rely on it if impacts occur requiring curtailment of the water use.

**WHEREAS**, the 1995 Water-Resources Investigations Report 91-4146<sup>10</sup> estimates the total water budget of all southern Nevada aquifers from the natural recharge to the mountains and subsurface inflow to the study area<sup>11</sup> to be about 160,000 acre-feet annually, and discharges from major discharge areas to be about 77,000 acre-feet annually.<sup>12</sup>

**WHEREAS**, it is believed that all of the recharge and subsurface inflow cannot be captured for use.

**WHEREAS**, in July and August of 2001 nearly four weeks of public administrative hearings were conducted on applications filed by the Las Vegas Valley Water District (Applications 54055 - 54059, inclusive) and Coyote Springs Investment, LLC (Applications 63272 - 63276, inclusive, and 63867 -63876, inclusive), which together request to appropriate approximately 135,000 acre-feet of water annually from the carbonate-rock aquifer system within the Coyote Springs Valley Hydrographic Basin.<sup>13</sup>

**WHEREAS**, testimony and evidence from the administrative hearing on the Las Vegas Valley Water District's applications indicates that using the standard Maxey-Eakin technique for estimation of groundwater recharge from precipitation, the recharge for the Coyote Springs Valley, Muddy River Springs, Hidden Valley, Garnet Valley, Black Mountains and Lower Moapa Valley

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<sup>10</sup> Michael D. Dettinger, et al., Distribution of Carbonate-Rock Aquifers and the Potential for Their Development, Southern Nevada and Adjacent Parts of California, Arizona and Utah, U.S. Geological Survey, Water-Resources Investigations Report 91-4146, p. 50, 1995.

<sup>11</sup> The study area is defined on p. 5 of Water-Resources Investigations Report 91-4146 to be most of southern Nevada south of Tonopah and Pioche.

<sup>12</sup> Discharge areas are identified as Muddy River Springs 36,000 acre-feet annually (afa) of spring flow, Blue Point Spring 240 afa of spring flow, Rogers Spring 920 afa of spring flow, Frenchman Mountain 2,100 afa of underflow toward Colorado River, Pahrump Valley 18,000 afa of underflow to California, Ash Meadows 17,000 afa of spring flow and evapotranspiration, Amargosa Desert 3,000 afa of underflow to Death Valley, and Grapevine Canyon 400 afa of underflow to Death Valley. Water-Resources Investigations Report 91-4146 at 53.

<sup>13</sup> It is noted that at the administrative hearing on Coyote Springs Investment, LLC Applications 63272 - 63276, inclusive, and 63867 -63876, inclusive, the applicant indicated they are requesting the State Engineer "to issue the permits as requested but limit their full use until the monitoring and mitigation program is in effect." Transcript, public administrative hearing before the State Engineer, August 20, 2001, p. 58. However, the applicant further indicated that it requested that a minimum of four permits be issued, two in each county, with the second permit in each county to be used to stress the aquifer. Two permits for a total amount of 14,478 afa would be for development, two permits for a total amount of 14,478 afa would be to stress the aquifer under some temporary development. Transcript, public administrative hearing before the State Engineer, August 20, 2001, pp. 91-96. This is after the 27,504 afa requested by the Las Vegas Valley Water District.

areas combined is approximately 3,550 acre-feet annually. Using the modified Maxey-Eakin technique introduced at the administrative hearing (known as the Donovan-Katzer 2000 technique), the recharge is estimated at approximately 6,761 acre-feet annually for the combined areas.<sup>14</sup>

**WHEREAS**, testimony and evidence from the administrative hearing on the Las Vegas Valley Water District's applications indicates that approximately 50,000 acre-feet of groundwater inflow comes into the Coyote Springs Valley from northern groundwater basins and approximately 53,000 acre-feet annually outflows<sup>15</sup> from Coyote Springs Valley of which a portion may be available for capture from that groundwater underflow. While testimony presented indicated a belief that significant quantities of water may be available for capture from storage, it is unknown what quantity that would be and if any underground water could be appropriated without unreasonable and irreversible impacts.<sup>16</sup>

**WHEREAS**, testimony and evidence from the administrative hearing on the Las Vegas Valley Water District's applications indicates that a portion of the ground water outflow from Coyote Springs Valley is believed to discharge at a rate of approximately 37,000 acre-feet annually at the Muddy River Springs area and approximately 16,000 to 17,000 acre-feet annually flows to groundwater basins further south.<sup>17</sup> This 37,000 acre-feet is counted as part of the 53,000 acre-feet outflow from Coyote Springs Valley resulting in 16,000-17,000 acre-feet annual flow that bypasses the Muddy River Springs area.

**WHEREAS**, these referenced large springs located near the central part of the Upper Moapa Valley, which that collectively discharge approximately 37,000 acre-feet annually of underground water, are fully appropriated pursuant to the Muddy River Decree.<sup>18</sup> It is believed that the source of water discharged originates mainly from the carbonate-rock aquifer system, but it is unknown if the discharge originates solely from the White River Flow System or is also influenced by discharge from the Meadow Valley Flow System or if there is influence from the alluvial aquifer.

**WHEREAS**, listed endangered and/or potential threatened species exist in the Muddy Springs/Muddy River area.

**WHEREAS**, testimony and evidence from the administrative hearing on the Las Vegas Valley Water District's applications indicates that their own expert witnesses are unable to make a suggestion to the State Engineer as to what part of the water budget could be captured without a great deal of uncertainty, and that the question cannot be resolved without stressing the system.<sup>19</sup>

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<sup>14</sup> See, testimony of Terry Katzer and David Donovan; Exhibit 54, p. 4-25, public administrative hearing before the State Engineer, July 16-24, 2001.

<sup>15</sup> Taking into account for 4,000 afa of in-basin recharge and 1,000 afa of evapotranspiration.

<sup>16</sup> See, testimony of Terry Katzer and David Donovan, public administrative hearing before the State Engineer, July 16-24, 2001.

<sup>17</sup> See, testimony of Terry Katzer and David Donovan, public administrative hearing before the State Engineer, July 16-24, 2001.

<sup>18</sup> Judgment and Decree, In the Matter of the Determination of the Relative Rights In and To the Waters of the Muddy River and Its Tributaries in Clark County, State of Nevada, March 12, 1920, Tenth Judicial District Court of the State of Nevada, In and For the County of Clark.

<sup>19</sup> See, testimony of Terry Katzer and David Donovan, public administrative hearing before the State Engineer, June 16-24, 2001.

**WHEREAS**, testimony and evidence from the administrative hearing on the Las Vegas Valley Water District's applications indicates that the State Engineer's ability to determine if development of the carbonate-rock aquifer system will impact existing rights is dependent on how the water rights are brought "on-line" and monitored.<sup>20</sup>

**WHEREAS**, testimony and evidence from the administrative hearing on the Las Vegas Valley Water District's applications indicates that little is known about the hydrologic connectivity between the groundwater basins, that virtually nothing is known about the mountain blocks, estimates of recharge to the area can vary by a factor of two, there is probably some connectivity between the water in the carbonate-rock aquifers and the alluvial groundwater basins,<sup>21</sup> there is still little data available and not much has changed from the information known in 1984.

**WHEREAS**, the State Engineer has been provided several different models, which though based on little pumping data, all provide the State Engineer with different analyses, and which all indicate that the pumping of substantial amounts of carbonate-rock aquifer water will likely impact the sources of the Muddy River.

**WHEREAS**, the State Engineer has previously granted groundwater permits, which authorize use of underground water in the area underlain by the carbonate-rock aquifer system or directly from the carbonate-rock aquifer system in the following quantities:

Coyote Springs Valley (Basin 210)	16,300 acre-feet
Black Mountain (Basin 215)	10,216 acre-feet
Garnet Valley (Basin 216)	3,380 acre-feet
Hidden Valley (Basin 217)	2,200 acre-feet <sup>22</sup>
Muddy River Springs aka Upper Moapa Valley (Basin 219)	14,756 acre-feet
Lower Moapa Valley (Basin 220)	<del>5,813</del> acre-feet 50,465 acre-feet

**WHEREAS**, of all the water rights issued from the carbonate-rock aquifer system, to date very few have actually been pumped.

**WHEREAS**, if 16,000 to 17,000 acre-feet is believed to by-pass the Muddy River Springs area, the water right permits already issued in Coyote Springs Valley alone equal the estimate of the amount of carbonate flow that by-passes the region and is not part of the flow discharged from the Muddy River Springs area.

**WHEREAS**, Nevada Revised Statute § 533.370(2)(b) provides that the State Engineer may postpone action on an application in areas where studies of water supplies are necessary.

**WHEREAS**, Nevada Revised Statute § 533.368 provides that if the State Engineer determines that a hydrological study, an environmental study or any other study is necessary before he makes a final determination on an application, and the applicant, a governmental agency or other person has not conducted such a study or the required study is not available, the State Engineer shall advise the applicant of the need for the study and the type of study required.

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<sup>20</sup> *Ibid.*

<sup>21</sup> *Ibid.*

<sup>22</sup> This 2,200 acre-feet is combined with 2,200 acre-feet issued in Garnet Valley for a total of 2,200 afa between the two basins.

**WHEREAS**, Nevada Revised Statute § 533.368(4) provides that the State Engineer shall consult with the applicant and the governing body of the county or counties in which the point of diversion and place of use are located concerning the scope and progress of the study.

**WHEREAS**, the State Engineer believes it is prudent to work with a model, and the appropriate model will be determined in conjunction with the parties identified below who are responsible for participating in the study.

**WHEREAS**, the State Engineer does not believe it is prudent to issue any additional water rights to be pumped from the identified portions of the carbonate-rock aquifer until a significant portion of the water rights which have already been issued are pumped for a substantial period of time in order to determine if the pumping of those water rights will have any detrimental impacts on existing water rights or the environment.

**NOW THEREFORE**, the State Engineer orders:

1. All applications pending and any new filings for the appropriation of water from the carbonate-rock aquifer system in Coyote Springs Valley (Basin 210), Black Mountains Area (Basin 215), Garnet Valley (Basin 216), Hidden Valley (Basin 217), Muddy River Springs aka as Upper Moapa Valley (Basin 219), and Lower Moapa Valley (Basin 220) will be held in abeyance until further information is obtained by stressing the aquifer by those water right permits already issued to appropriate water from the carbonate-rock aquifer system.

2. While the studies proposed in 1985 were a beginning, those studies indicated that large-scale developments with sustained withdrawals of water from the carbonate-rock aquifers would result in water-level declines and depletion of stored water, but that isolated smaller groundwater developments or developments of limited duration may result in water-level declines and springflow reductions of manageable and acceptable magnitudes. However, very little additional information based on hard science has been produced since that time. Nevada Revised Statute § 533.368 provides the State Engineer with the authority to withhold action on pending applications and to advise the applicant of the need for additional study. The State Engineer finds that further hydrological study is needed before a final determination can be made on carbonate-rock aquifer system water right applications in the referenced basins.

3. The State Engineer, in conjunction with those identified below as applying for additional water rights and already having an interest in water rights permitted from the carbonate-rock aquifer system, or their successors in interest, will conduct a study to provide information on the effect of pumpage of those water rights which have already been issued from the carbonate-rock aquifer.

The entities that shall participate in the study must at a minimum include:

Las Vegas Valley Water District  
Southern Nevada Water Authority  
Coyote Springs Investment, LLC  
Nevada Power Company  
Moapa Valley Water District.

The study must cover a 5-year minimum period during which at least 50% of the water rights currently permitted in the Coyote Springs Valley groundwater basin are pumped for at least 2 consecutive years.

4. These referenced applicants or permittees shall bear the cost of the study, and a cash deposit divided pro rata among them will be required as set forth in NRS § 533.368(3) after a determination of the estimate of cost to complete the study.

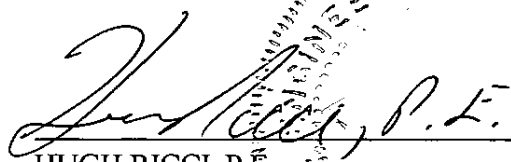


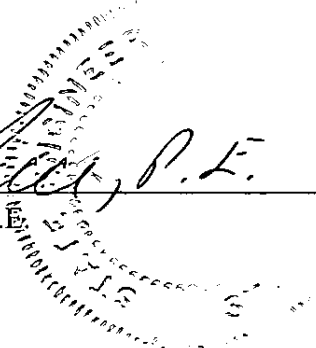
5. The State Engineer will arrange meetings between the State Engineer and the Las Vegas Valley Water District, Southern Nevada Water Authority, Coyote Springs Investment, LLC, Nevada Power Company, and Moapa Valley Water District, or their successors, and the governing bodies of the counties in which there are proposed points of diversion and places of use under their pending applications concerning the scope of the study.

6. The State Engineer orders the Las Vegas Valley Water District, Southern Nevada Water Authority, Coyote Springs Investment, LLC, Nevada Power Company, Moapa Valley Water District, Dry Lake Water Company, LLC, Republic Environmental Technologies, Inc., Chemical Lime Co., Nevada Cogeneration Associates, or their successors, who presently hold water rights authorized for appropriation from the carbonate-rock aquifer, to provide the other parties to the study and the State Engineer with data on a quarterly basis as to the rate at which water was diverted under the specific water right permits issued, total acre-feet diverted per month, and monthly water level measurements

7. After the study period, the Las Vegas Valley Water District; Southern Nevada Water Authority; Coyote Springs Investment, LLC; Nevada Power Company; and Moapa Valley Water District are ordered to file with the State Engineer, within 180 days of the end of the fifth consecutive year, a report as to the information obtained and any impacts seen to the groundwater or surfacewater resources of the carbonate-rock aquifer or alluvial aquifer systems from the pumping of those rights presently permitted.

8. At the end of the study period, the Las Vegas Valley Water District/Southern Nevada Water Authority will update Exhibit 54 from the July 2001 hearings in order to show the State Engineer the effects, if any, of the water it requested for appropriation under Applications 54055 - 54059, inclusive, as they are filed. The State Engineer will then make a determination if he has sufficient information to proceed with ruling on those applications for which hearings have already been conducted, i.e., Las Vegas Valley Water District (Applications 54055 - 54059, inclusive) and Coyote Springs Investment, LLC (Applications 63272 - 63276, inclusive, and 63867 -63876, inclusive), and other applications pending for the appropriation of water from the carbonate-rock aquifer system.

  
HUGH RICCI, P.E.  
State Engineer



Dated at Carson City, Nevada,

this 8<sup>th</sup> day of March, 2002

CERTIFICATE OF SERVICE

I, the undersigned, declare under penalty of perjury, that I am an employee of the Nevada Division of Water Resources, that I am over the age of eighteen (18) years, and that I am not a party to, nor interested in, this action. On this date, I mailed a true and correct copy of Nevada Division of Water Resources' Order No. 1169, addressed to the following:

Las Vegas Valley Water District  
Attn: Kay Brothers  
1001 S. Valley View  
Las Vegas, NV 89153  
Cert. Mail #7000 0520 0023 8555 9034

Coyote Springs Investment, L.L.C.  
7755 Spanish Springs Road  
Sparks, NV 89436  
Cert. Mail #7000 0520 0023 8555 9041

C.S. Inc.  
Judy Kuban  
1625 Wendy Way  
Reno, NV 89509  
Cert. Mail #7000 0520 0023 8555 9058

Dry Lake Water, LLC  
2701 North Tenaya Way, Suite 200  
Las Vegas, NV 89128  
Cert. Mail #7000 0520 0023 8555 9065

Bonneville Nevada Corp.  
257 East 200 South, Suite 800  
Salt Lake City, UT 84111  
Cert. Mail #7000 0520 0023 8555 9072

C.O. Myers, Exec. Dir.  
Nevada Cogeneration Ass.  
P.O. Box 81378  
Bakersfield, CA 93380  
Cert. Mail #7000 0520 0023 8555 9089

Nevada Power Co.  
Attn: Craig York  
P.O. Box 230  
Las Vegas, NV 89151-0001  
Cert. Mail #7000 0520 0023 8555 9096

Oxford Energy of Nevada, Inc.  
3510 Unocal Place  
Santa Rosa, CA 95403  
Cert. Mail #7000 0520 0023 8555 9102

James W. Adams  
7439 La Palma Ave., Suite 234  
Buena Park, CA 90620  
Cert. Mail #7000 0520 0023 8555 9119

Stallion Sand & Gravel, LLC  
624 Casa del Norte  
North Las Vegas, NV 89031  
Cert. Mail #7000 0520 0023 8555 9126

Moapa Band of Paiute Indians  
P.O. Box 340  
Moapa, NV 89025  
Cert. Mail #7000 0520 0023 8558 4562

Moapa Valley Water District  
P.O. Box 257  
Logandale, NV 89021  
Cert. Mail #7000 0520 0023 8558 4579

Three Kids Enterprises  
4055 S. Spencer St., Suite 106  
Las Vegas, NV 89119  
Cert. Mail #7000 0520 0023 8558 4586

Sandia Construction Inc.  
c/o Cameron Adams  
Box 1297  
Susanville, CA 96103  
Cert. Mail #7000 0520 0023 8558 4593

Nevada Cogeneration Associates  
420 N. Nellis Blvd., #A3-148  
Las Vegas, NV 89110  
Cert. Mail #7000 0520 0023 8558 4609

N. Burgess  
420 N. Nellis Blvd., #A3-117  
Las Vegas, NV 89110  
Cert. Mail #7000 0520 0023 8558 4616

North Valley Holdings  
500 Damonte Ranch Parkway, Suite 1056  
Reno, NV 89511  
Cert. Mail #7000 0520 0023 8558 4623

Michael Buschelman  
P.O. Box 51371  
Sparks, NV 89435  
Cert. Mail #7000 0520 0023 8558 4630

William Penn  
CMS Generation Co.  
330 Town Center Drive, Ste. 1100  
Dearborn, MI 48126  
Cert. Mail #7000 0520 0023 8558 4647

Thomas Shelton  
CMS Generation Co.  
2154 Hastings Ct.  
Santa Rosa, CA 95495-8577  
Cert. Mail #7000 0520 0023 8558 4654

Wyman Engineering Consultants  
P.O. Box 60473  
Boulder City, NV 89006-0473  
Cert. Mail #7000 0520 0023 8558 4661

John E. Hiatt  
8180 Placid St.  
Las Vegas, NV 89123  
Cert. Mail #7000 0520 0023 8558 4678

City of Caliente  
Attn: George T. Rowe, Mayor  
P.O. Box 158  
Caliente, NV 89008  
Cert. Mail #7000 0520 0023 8558 4685

County of Nye  
P.O. Box 1767  
Tonopah, NV 89049  
Cert. Mail #7000 0520 0023 8558 4692

Ely Shoshone Tribe  
16 Shoshone Circle  
Ely, NV 89301  
Cert. Mail #7000 0520 0023 8558 4708

Lincoln County, Board of Commissioners  
P.O. Box 90  
Pioche, NV 89043  
Cert. Mail #7000 0520 0023 8558 4715

Clark County Commissioners  
500 S. Grand Central Parkway  
Las Vegas, NV 89106-4506  
Cert. Mail #7000 0520 0023 8558 4807

Muddy Valley Irrigation District  
P.O. Box 160  
Logandale, NV 89021  
Cert. Mail #7000 0520 0023 8558 4722

U.S. Bureau of Indian Affairs  
Attn: Barry Welch  
P.O. Box 10  
Phoenix, Az. 85001  
Cert. Mail #7000 0520 0023 8558 4739

U.S.D.I., B.L.M.  
Attn: Ben F. Collins, District Manager  
P.O. Box 26569  
Las Vegas, NV 89126  
Cert. Mail #7000 0520 0023 8558 4746

U.S. Fish and Wildlife Service  
911 NE 11th Ave.  
Portland, OR 97232-4184  
Cert. Mail #7000 0520 0023 8558 4753

U.S. National Park Service  
Dan McGlothlin  
1201 Oak Ridge Drive, Suite 250  
Fort Collins, CO 80525  
Cert. Mail #7000 0520 0023 8558 4760

Republic Environmental Technologies, Inc.  
770 E. Sahara Ave.  
Las Vegas, NV 89104  
Cert. Mail #7000 0520 0023 8558 4777

Chemical Lime Co.  
P.O. Box 3609  
North Las Vegas, NV 89036  
Cert. Mail #7000 0520 0023 8558 4784

Nevada Cogeneration Associates  
420 N. Nellis Blvd., A3-148 and 117  
Las Vegas, NV 89110  
Cert. Mail #7000 0520 0023 8558 4791

Richard Berley/Mark Slonim  
Ziontz, Chestnut, Varnell, Berley and Slonim  
2101 4th Ave., Suite 1230  
Seattle, WA 98121

Robert Johnston  
Kilpatrick, Johnston & Adler  
412 North Division St.  
Carson City, NV 89703

Ross de Lipkau  
Marshall Hill Cassas & de Lipkau  
P.O. Box 2790  
Reno, NV 89505

Peter Fahmy  
U.S. Dept. of Interior  
755 Parfet St., Suite 151  
Lakewood, CO 80215

Robert Marshall  
Marshall Hill Cassas & deLipkau  
P.O. Box 2790  
Reno, NV 89505

Byron Mills  
732 S. 6th St.  
Las Vegas, NV 89101

Steve Palmer  
Office of the Regional Solicitor  
U.S. Dept. of Interior  
2800 Cottage Way, Room E-2753  
Sacramento, CA 95825-1890

Karen Peterson  
Allison, MacKenzie, Hartman, et. al.  
P.O. Box 646  
Carson City, NV 89702

Peggy Twedt  
Frank Flaherty  
Dyer, Lawrence, Cooney & Penrose  
2805 N. Mountain St.  
Carson City, NV 89703

Harvey Whittemore  
Carl Savely  
Lionel, Sawyer & Collins  
50 West Liberty St. Suite 1100  
Reno, NV 89501

Don Winter  
Agent C.S. Inc.  
P.O. Box 35136  
Las Vegas, NV 89133

Charles Cave  
2325 W. Charleston Blvd.  
Las Vegas, NV 89102

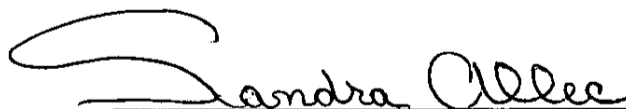
Dale Ferguson  
Woodburn & Wedge  
6100 Neil Road, Ste. 500  
Reno, NV 89511

Mark Stock  
Global Hydrologic Services, Inc.  
561 Keystone Ave. #200  
Reno, NV 89503

Linda Bowman  
540 Hammil Lane  
Reno, NV 89511

George Benesch  
P.O. Box 3498  
Reno, NV 89505

Dated this 8 day of March, 2002.

  
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**IN THE OFFICE OF THE STATE ENGINEER  
OF THE STATE OF NEVADA**

IN THE MATTER OF APPLICATIONS )  
72218, 72219, 72220 AND 72221 FILED TO )  
APPROPRIATE THE UNDERGROUND )  
WATERS OF THE KANE SPRINGS )  
VALLEY HYDROGRAPHIC BASIN (206) )  
LINCOLN COUNTY, NEVADA. )

**RULING  
# 5712**

**GENERAL**

**I.**

Application 72218 was filed on February 14, 2005, by Lincoln County Water District and Vidler Water Company, Inc., to appropriate 6.0 cubic feet per second (cfs) of the underground water of the Kane Springs Valley Hydrographic Basin for municipal purposes within Coyote Spring Valley Hydrographic Basin more specifically described as portions of T.8S., R.62E., T.8S., R.63E., T.8S., R.64E., T.9S., R.61E., T.9S., R.62E., T.9S., R.63E., T.9S., R.64E., T.10S., R.61E., all of T.10S., R.62E., portions of T.10S., R.63E., T.10S., R.64E., T.11S., R.61E., all of T.11S., R.62E., portions of T.11S., R.63E., T.11S., R.64E., T.12S., R.61E., all of T.12S., R.62E., all of T.12S., R.63E., portions of T.12S., R.64E., T.12.5S., R.61E., T.12.5S., R.62E., T.13S., R.61E., all of T.13S., R.62E., portions of T.13S., R.63E., T.13S., R.64E., T.13.5S., R.63E., T.14S., R.61E., all of T.14S., R.62E., portions of T.14S., R.63E., T.15S., R.61E., T.15S., R.62E., T.15S., R.63E., T.16S., R.62E., M.D.B. & M. The proposed point of diversion is described as being located within the SW $\frac{1}{4}$  SE $\frac{1}{4}$  of Section 25, T.8S., R.65E., M.D.B.&M.<sup>1</sup>

**II.**

Application 72219 was filed on February 14, 2005, by Lincoln County Water District and Vidler Water Company, Inc., to appropriate 6.0 cfs of the underground water of the Kane Springs Valley Hydrographic Basin for municipal purposes within Coyote Spring Valley Hydrographic Basin more specifically as described above. The proposed point of diversion is described as being located within the SE $\frac{1}{4}$  SW $\frac{1}{4}$  of Section 31, T.9S., R.65E., M.D.B.&M.<sup>2</sup>

<sup>1</sup> File No. 72218, official records of the Office of the State Engineer. Exhibit No. 2, public administrative hearing before the State Engineer, April 4-6, 2006. Hereinafter the exhibits and transcript will be referred to solely by exhibit number or transcript page.

<sup>2</sup> Exhibit No. 3.

### III.

Application 72220 was filed on February 14, 2005, by Lincoln County Water District and Vidler Water Company, Inc., to appropriate 6.0 cfs of the underground water of the Kane Springs Valley Hydrographic Basin for municipal purposes within Coyote Spring Valley Hydrographic Basin more specifically as described above. The proposed point of diversion is described as being located within the SE¼ SW¼ of Section 6, T.11S., R.64E., M.D.B.&M.<sup>3</sup>

### IV.

Application 72221 was filed on February 14, 2005, by Lincoln County Water District and Vidler Water Company, Inc., to appropriate 6.0 cfs of the underground water of the Kane Springs Valley Hydrographic Basin for municipal purposes within Coyote Spring Valley Hydrographic Basin more specifically as described above. The proposed point of diversion is described as being located in the SE¼ SW¼ of Section 11, T.9S., R.65E., M.D.B.&M.<sup>4</sup>

### V.

Applications 72218 and 72219 were timely protested by White Pine County; however, said protests were withdrawn prior to the administrative hearing.<sup>5</sup>

### VI.

Applications 72218 and 72219 were timely protested by Wayne Lister, Ruby Lister and Bevan Lister on the grounds that:

1. Lincoln County Water District has no written adopted plan for the use of the water applied for under this permit. There is no city or town within the area of this permit.
2. We have long argued that moving water from one basin to another is detrimental to the originating basin.
3. Lincoln County Water District is supposed to be a local government entity protecting and planning for the benefit of the citizens of Lincoln County but in teaming up with Vidler they become merely speculative with the sole objective to make a profit.<sup>6</sup>

### VII.

Applications 72218, 72219, 72220 and 72221 were timely protested by the United States Department of Interior, National Park Service ("NPS") on the grounds that:

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<sup>3</sup> Exhibit No. 4.

<sup>4</sup> Exhibit No. 5.

<sup>5</sup> Exhibit No. 6.

<sup>6</sup> Exhibit No. 7.

1. There is no water available for appropriation because committed water resources exceed ground-water recharge.
2. The approval and development of the appropriation proposed by this application will impair the water rights of the United States, because:
  - A. The appropriation, in combination with other appropriations and withdrawals in Coyote Spring Valley will further reduce the discharge of the Muddy River. The United States' senior water right and other existing rights to the Muddy River would be impaired, if the appropriation is approved and developed.
  - B. The proposed appropriation, in combination with existing appropriations and pending applications in the White River ground-water flow system, if approved and developed, would reduce the discharge of Lake Mead NRA [National Recreation Area] springs, because of the large potential withdrawal rate. The drawdown caused by such large withdrawals would extend to capture ground water that naturally discharges through the springs.
  - C. The effects of the appropriation proposed by this application, when combined with other existing and proposed appropriations, could impair the senior water rights of the Lake Mead NRA more quickly and/or to a degree greater than the withdrawal proposed under this application alone.
3. The public interest would not be served, by granting a permit to this application, because:
  - A. The public interest would not be served by granting this application, because the water and water-related resources in the nationally important Lake Mead NRA would be diminished or impaired, as a result of the appropriation proposed by this application.
  - B. The land which the applicant proposes to withdraw the water is not owned by the applicant. [This protest claim only goes to Applications 72218 and 72219.]<sup>7</sup>

### VIII.

Applications 72220 and 72221 were protested by the United States Department of Interior, Fish and Wildlife Service ("FWS") on the grounds that:

The proposed groundwater development threatens the biological and water resources under the jurisdiction of the US Fish and Wildlife Service in the White River Groundwater Flow System. Kane Springs Valley is located upgradient of Coyote Spring Valley and the Muddy River Area. Pumping of groundwater from the basin could reduce the groundwater influx to springs at Moapa Valley National Wildlife Refuge in the Muddy River Area. The combined perennial yield for Coyote Spring valley [sic] and Kane Springs Valley may be on the order of 2,600 acre-feet/yr as estimated in ground-water Resources Reconnaissance Series Report 25. Although there are no permits in Kane Springs Valley, there are at least 200,000

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<sup>7</sup> Exhibit No. 8.

acre-feet/yr of permitted and pending applications in Coyote Spring Valley, directly downgradient. An additional withdrawal would only add to the current exceedance of the perennial yield for the combined basins. Such a withdrawal of groundwater in excess of the perennial yield could result in reduced groundwater flow from Coyote Spring Valley to the Muddy River Area, or result in a reversed gradient causing groundwater outflow from Coyote Spring Valley to Kane Springs Valley. Senior water rights held by the Fish and Wildlife Service in the Moapa Valley National Wildlife refuge [sic] could be adversely impacted. Such an impact to the water rights and resources of the Moapa Valley National Wildlife refuge [sic] and environs could adversely impact threatened and endangered species including Moapa dace and Southwestern Willow Flycatcher; which depend on these water resources for survival. Water-dependent resources in Lower Meadow Valley Wash may be threatened by the proposed development too. The combined volume from all of these pending applications and permitted water rights exceeds all current estimates of the available water for appropriation in the White River Groundwater Flow System. Lacking more information to demonstrate that water is available for appropriation without adversely impacting existing water rights and water-related resources, these applications should be denied.<sup>8</sup>

#### IX.

By letter dated February 6, 2006, the NPS and FWS requested the State Engineer amend State Engineer's Order No. 1169 to include the Kane Springs Valley Hydrographic Basin within the provisions of the Order and included a request to hold these applications in abeyance until the pumping ordered in Coyote Spring Valley was completed and analyzed.<sup>9</sup> The reasoning behind the request is that these agencies believe Kane Springs Valley and Coyote Spring Valley, while administratively classified as separate hydrographic basins, are actually a single distinct hydrologic drainage basin and should be managed as such. At the public administrative hearing on these applications, the Applicant and Protestant FWS presented a stipulation to resolve the FWS's protests.<sup>10</sup> The resolution was also in lieu of statements made on behalf of the FWS in the February 6, 2006, letter that requested Kane Springs Valley be included in State Engineer's Order No. 1169.<sup>11</sup> Pursuant to the Stipulation, the FWS withdrew its protests and the parties requested that Exhibit A to the Stipulation be included as part of the terms and conditions of any applications that are granted. However, the NPS's request to include Kane Springs Valley Hydrographic Basin within the provisions of Order No. 1169 remains to be resolved.

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<sup>8</sup> Exhibit No. 9.

<sup>9</sup> Exhibit No. 10.

<sup>10</sup> Exhibit No. 116.

<sup>11</sup> Transcript, p. 12.



**X.**

After all parties of interest were duly noticed by certified mail, an administrative hearing was held with regard to the protested applications on April 4-6, 2006, at Carson City, Nevada, before representatives of the Office of the State Engineer.<sup>12</sup>

**FINDINGS OF FACT**

**I.**

The Listers protested the applications on the grounds that Lincoln County Water District has no written plan for the use of the water applied for and there is no city or town within the area of the applications. The State Engineer finds there is no requirement in Nevada water law for a written plan to be provided in furtherance of a water right application. The State Engineer finds water right applications are almost always filed for proposed projects that are planned, but not in existence, and the water cannot be used until the State Engineer grants a permit that authorizes the use of the water. As discussed in Section III below, the Nevada Legislature has provided the Lincoln County Water District with the authority to serve water to all real property located within the boundaries of Lincoln County. Nevada water law requires that an applicant provide evidence of an actual beneficial use for the water applied for<sup>13</sup> and proof satisfactory to the State Engineer of his intention in good faith to construct any work necessary to apply the water to the intended beneficial use with reasonable diligence and his financial ability and reasonable expectation to actually construct the work and apply the water to the intended beneficial use with reasonable diligence.<sup>14</sup> The State Engineer finds, as discussed below, that the Applicant provided substantial evidence of a project where the water applied for would be used and proof satisfactory of construction of the work to apply the water to the intended beneficial use with reasonable diligence and the financial ability and reasonable expectation to actually construct the work and apply the water to the intended beneficial use with reasonable diligence.

**II.**

The Listers' protests allege that they have long argued that moving water from one basin to another is detrimental to the originating basin. The State Engineer finds that Nevada water law specifically provides for the interbasin transfer of water provided the applicant meets all of the

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<sup>12</sup> Exhibit No. 1.

<sup>13</sup> NRS § 533.035.

<sup>14</sup> NRS § 533.370.

necessary criteria found in the Nevada Revised Statutes, including but not limited to NRS §§ 533.370(5) and (6). Nevada Revised Statute § 533.370(6)(c) and (d) require the State Engineer to take into consideration whether the proposed action is environmentally sound as it relates to the basin from which the water is exported and whether the proposed action is an appropriate long-term use which will not unduly limit the future growth and development in the basin from which the water is exported. The State Engineer finds Nevada water law requires the State Engineer to consider factors relevant to the originating basin, but specifically provides for the interbasin transfer of water.

### III.

The Listers' protests allege that the Lincoln County Water District is supposed to be a local government entity protecting and planning for the benefit of the citizens of Lincoln County but, that in teaming up with Vidler Water Company, the Lincoln County Water District has become merely speculative with the sole objective to make a profit. In 2003, the Nevada Legislature enacted legislation that provided for the creation of the Lincoln County Water District.<sup>15</sup> The special legislative act that created the Lincoln County Water District provided that its jurisdiction and service area are all the real property located within the boundaries of Lincoln County and authorized the Lincoln County Water District to sell water and water rights and to enter into agreements with a private entity or corporation for the transfer or delivery of any water right or water appropriated.<sup>16</sup>

The State Engineer finds the Nevada Legislature gave the Lincoln County Water District its authority. The State Engineer finds the Lincoln County Water District like any other applicant has to demonstrate a beneficial use for the water applied for under these applications and has to satisfy the other statutory requirements. The State Engineer finds if the Protestant Listers have an issue with the operation of the Lincoln County Water District that is a matter outside of the State Engineer's jurisdiction.

### IV.

Through testimony and evidence, the Applicants' expert witnesses presented their interpretation of the geology and hydrogeology of the Kane Springs Valley and vicinity. They conclude that the northern portion of the valley is underlain by a volcanic caldera complex and,

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<sup>15</sup> Chapter 474, Statutes of Nevada 2003.

<sup>16</sup> *Id.* at Sections 11(7), 11(11), and 11(12).

therefore, has low potential for regional ground-water flow. However, they interpreted the evidence as indicating that the southwestern portion of the basin is underlain by a significant thickness of carbonate rocks.<sup>17</sup> The Applicants conducted a pumping test at their well KPW-1 and, based on the results of the test and their interpretation of the geology, concluded that there is the potential for considerable ground-water movement through the Paleozoic carbonate rocks in Kane Springs Valley.<sup>18</sup> The Kane Springs Wash fault zone is oriented in a northeasterly direction, and is thought to both channel ground-water flow along its length from northeast to southwest, and to act as a barrier to ground-water flow across it from north to south. The witnesses also presented testimony supporting ground-water inflow into the Kane Springs Valley from the north.<sup>19</sup>

The State Engineer finds that the Applicants' interpretation of ground-water movement in the Kane Springs Valley from northeast to southwest and into Coyote Spring Valley, preferentially along the Kane Springs Wash fault zone, is generally consistent with the available data. The State Engineer further finds that the Applicants' pumping test supports the conclusion that there is considerable potential for ground-water flow in the carbonate rocks in the vicinity of well KPW-1. The State Engineer also finds that there was not sufficient evidence presented to support a determination of the potential for ground-water inflow into the Kane Springs Valley.

#### V.

The Applicants presented evidence to quantify subsurface inflow and outflow across the Kane Springs Valley Hydrographic Basin boundaries. The Applicants propose that ground water enters Kane Springs Valley from northern Coyote Spring Valley, passing through its western tip, and exits southwesterly back into Coyote Spring Valley. Local recharge is thought to combine with the inflow and exit the basin to the southwest. Since the water table is relatively deep in Kane Springs Valley and ET of ground water is negligible, virtually all ground-water discharge from the basin must occur via subsurface outflow.

Mr. Lewis applied Darcy's law to estimate the magnitude of the ground-water inflow into Kane Springs Valley Hydrographic Basin via a three-mile corridor on the western edge of Kane Springs Valley.<sup>20</sup> Darcy's law states the volume of flow is equal to aquifer transmissivity multiplied by aquifer width multiplied by the hydraulic gradient. He estimated transmissivity for

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<sup>17</sup> Transcript, pp. 43-47, 57; Exhibit No. 15, pp. 13-14; Exhibit No. 20, pp. 3-4.

<sup>18</sup> Transcript, pp. 58-59, 62-63.

<sup>19</sup> Exhibit No. 20, pp. 6-13.

<sup>20</sup> Exhibit No. 20, pp. 6-13.

the "bulk aquifer" from the pumping test performed at the well identified as KPW-1. He then multiplied that value by three on the assumption that the aquifer is three times thicker than penetrated by the test well. For a value of hydraulic gradient, Mr. Lewis used water levels in wells CSVM-3 and CE-VF-2, which are located near the center of Coyote Spring Valley.

The State Engineer finds the Applicants' inflow analysis is overly interpretive and without sufficient supporting evidence. Inflow into the basin is proposed to occur through a three-mile wide zone on the western basin boundary. Flow direction is assumed to be from the north to south even though there are no local hydraulic head data to support the hypothesis of hydraulic gradient or flow direction. The Applicants' witness used hydraulic data from the KPW-1 pumping test, which is located approximately six miles from the proposed inflow area. The hydraulic gradient is assumed to be equal to that between wells CSVM-3 and CE-VF-2 even though these wells are located six and 15 miles away, respectively, from the proposed inflow zone. Inflow through the three-mile wide corridor is proposed by the Applicants to be 13,000 acre-feet per year. This amount is approximately one-third of the total amount of regional flow from Pahrnagat and Delamar Valleys to Coyote Spring Valley of approximately 37,000 acre-feet per year.<sup>21</sup> However, the proposed flow corridor into Kane Springs Valley is a relatively narrow zone at the corner of the basin. Geologic structures in the area of the proposed inflow corridor strike north northeasterly, and may have the effect of channeling flow along them parallel to the basin boundary, similar to the conceptual model of the Applicants along the Kane Spring and Willow Spring fault zones. Geologic cross-section B-B' shows a thrust block of low-permeability basement rocks that would act to block potential inflow.<sup>22</sup> The State Engineer finds that sufficient data does not exist to substantiate or reliably estimate subsurface flows into the Kane Springs Valley Hydrographic Basin and the Applicants' inflow estimates are hereby discounted and not accepted.

The Applicants' outflow analysis utilized two estimates of transmissivity from the KPW-1 pumping test. This analysis used a measured transmissivity of 50,000 gallons per day/foot (gpd/ft), which is thought to be representative of the regional carbonate aquifer and a transmissivity of 300,000 gpd/ft, which is thought to be representative of the local Willow Spring fault zone. The Applicants "scaled-up" the pumping test transmissivities to a basin scale by

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<sup>21</sup> State Engineer's Office, *Water for Nevada, State of Nevada Water Planning Report No. 3*, Oct. 1971.

<sup>22</sup> Exhibit No. 15.

multiplying the values by three. Outflow is thought to occur in a southwesterly direction parallel to the axis of the Kane Springs Valley. The outflow corridor is estimated to be four-miles wide by 3,000 feet thick. They attribute one-half mile of the four-mile width to the fault zone and the remaining three and one-half miles to regional conditions, each having separate hydraulic gradients for their flow calculations. For the regional flow they used a gradient of 0.005, and for the structural zone they used a gradient of 0.0005. Total basin outflow was calculated to be 16,000 acre-feet per year.<sup>23</sup>

The State Engineer finds several irregularities and inconsistencies with the Applicants' analysis. The Applicants' hydrologist used a hydraulic gradient of 0.005 for the regional component of flow based on the water levels in wells CSVM-3 and CE-VF-2, which are located near the center of Coyote Spring Valley, rather than using a hydraulic gradient of 0.0004 for the regional component of flow based on water levels in wells KPW-1 and CSVM-4, which are located at the outflow of Kane Springs Valley Hydrographic Basin and better situated to measure the applicable gradient.<sup>24</sup> The Applicant calculated the regional component of outflow to be 15,000 acre-feet per year using the hydraulic gradient of 0.005 as opposed to an outflow calculation of 1,250 acre-feet per year using the lower hydraulic gradient of 0.0004. The State Engineer finds that using the higher hydraulic gradient of 0.005 to compute outflow from Kane Springs Valley Hydrographic Basin rather than using the lower gradient of 0.0004 between KPW-1 and CSVM-4 is in error and inconsistent with the Applicants' documented conceptual view of the flow system.<sup>25</sup>

The Applicants' estimate of outflow along the structural zone was computed separately using a transmissivity of 900,000 gpd/ft and a hydraulic gradient of 0.0005. The State Engineer finds the Applicant incorrectly approximated the hydraulic gradient to be 0.0005, and should have used a hydraulic gradient of 0.0004.<sup>26</sup> Based on the actual hydraulic gradient of 0.0004 the resulting basin outflow along the structural zone would then be 1,000 acre-feet per year. Adding the estimated outflow along the structural zone of 1,000 acre-feet per year to the regional flow of 1,250 acre-feet per year results in an estimated basin outflow of 2,250 acre-feet annually rather than the Applicants' calculation of 16,000 acre-feet annually.

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<sup>23</sup> Exhibit No. 16.

<sup>24</sup> *Ibid.*, pp. 20 and 31.

<sup>25</sup> Exhibit No. 17, p 21.

<sup>26</sup> Exhibit No. 20, p. 11.

The State Engineer finds the Applicants' inflow and outflow analyses lack sufficient data to provide a reliable estimate of basin boundary flows. Furthermore, he finds the Applicants' conceptual analyses were overly interpretive and, in part, were inconsistent with their conceptual model of regional flow. The State Engineer finds that sufficient data were not collected or presented to substantiate the Applicants' estimate of subsurface flow into or out of the Kane Springs Valley Hydrographic Basin.

## VI.

The Applicant presented a witness to address the geochemical framework of the Kane Springs Valley Hydrographic Basin and the White River flow system south of the Pahrangat shear zone. The witness presented evidence on stable isotopes, major ion chemistry, and carbon-14 analyses.<sup>27</sup> In summary, the geochemical evidence supports the ground-water gradient data that indicates Kane Springs Valley ground water flows into Coyote Spring Valley and that, in general, water in the White River flow system flows from north to south and mixes with local recharge en route to discharge areas. The witness presented deuterium data collected from springs in Kane Springs Valley believed to represent local recharge water, springs in Pahrangat Valley believed to represent regional carbonate water, and ground water from KPW-1 believed to represent a mix of local recharge water and regional carbonate water. Using a mixing equation the witness computed the percent of regional carbonate ground water from the KPW-1 deuterium sample to equal 77 percent.<sup>28</sup> If the same analysis is repeated using oxygen-18 instead of deuterium, the percent of regional carbonate ground water from the KPW-1 oxygen-18 sample equals 87 percent.<sup>29</sup> As previously discussed, the reinterpretation of the Applicants' subsurface outflow analysis resulted in approximately 2,250 acre-feet per year of basin outflow from the Kane Springs Valley Hydrographic Basin. The State Engineer finds applying the percentages of regional carbonate ground water from KPW-1 for both the deuterium and oxygen-18 samples, the local ground-water recharge component of the outflow would therefore be approximately 518 acre-feet per year and 293 acre-feet per year, respectively. These values appear to support the reconnaissance estimate of 500 acre-feet per year of recharge, however, it is recognized that the re-interpreted outflow is only an estimate, and its value is limited due to uncertain hydraulic parameters.<sup>30</sup>

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<sup>27</sup> Testimony of R. Glanzman; Exhibit No. 32.

<sup>28</sup> Exhibit No. 117, p. 10.

<sup>29</sup> Exhibit No. 34, Table 1, p. 2.

<sup>30</sup> State Engineer's Office, *Water for Nevada, State of Nevada Water Planning Report No. 3*, Oct. 1971.

## VII.

Testimony and evidence was presented in an attempt to support a determination that significantly more water is locally recharged in the Kane Springs Valley Hydrographic Basin than previously reported. The Applicants presented Mr. Walker, who possesses a background in range management, as a witness who used plant communities as a method to estimate precipitation. However, Mr. Walker also testified that the use of plant communities as a method to calculate recharge does not exist, and his methodology for calculating recharge is not used anywhere else in the United States.<sup>31</sup> The Applicants then presented Mr. Lewis for the purpose of using Mr. Walker's estimation of precipitation for the establishment of new recharge estimates in the Kane Springs Valley Hydrographic Basin.<sup>32</sup>

Reconnaissance investigations by the U.S.G.S. estimate the combined recharge for Kane Springs Valley, Coyote Spring Valley and the Muddy River Springs Area to be 2,600 acre-feet annually.<sup>33</sup> Recharge for Kane Springs Valley was further delineated in 1971 and was estimated to be 500 acre-feet per year.<sup>34</sup> The methods and estimates presented by the Applicants in Exhibit Nos. 29 and 30 used four estimates of precipitation. With each of the four estimates of precipitation, ground-water recharge was then estimated using two methods: a version of the well-known Maxey-Eakin technique and a water budget method. In total, the Applicants computed eight recharge estimates ranging from 5,300 to 14,155 acre-feet per year<sup>35</sup>

One method for estimating precipitation tied plant communities to precipitation and elevation, and then used elevation zones to distribute precipitation throughout the basin. The second method used a spatial distribution of vegetative zones and their respective precipitation based on a United States Department of Agriculture, Natural Resource Conservation Service technical guide for ecological site descriptions.<sup>36</sup> A third precipitation method used PRISM<sup>37</sup>

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<sup>31</sup> Transcript, pp. 244, 264.

<sup>32</sup> Transcript, pp. 245-246.

<sup>33</sup> T.E. Eakin, *Ground-water Resources – Reconnaissance Series Report 25, Ground-water Appraisal of Coyote Spring and Kane Spring Valleys and Muddy River Springs Area, Lincoln and Clark Counties, Nevada, State of Nevada, Department of Conservation and Natural Resources, United States Department of Interior, Geologic Survey, February 1964.*

<sup>34</sup> Transcript, p. 253.

<sup>35</sup> Exhibit No. 16, p. 5.

<sup>36</sup> Exhibit No. 29, pp. 6, 15-17.

<sup>37</sup> PRISM – Parameter-elevation Regressions on Independent Slopes Model and is a method of spatially distributing precipitation.

modeled precipitation.<sup>38</sup> The last precipitation estimate was based on a local altitude-precipitation method developed by the Las Vegas Valley Water District.<sup>39</sup> For each of these precipitation estimates, Mr. Lewis applied both a numerical form of the Maxey-Eakin technique and water budget approach for estimating recharge.

However, Mr. Halford, as expert witness for the Protestant National Park Service, testified that the use of the Maxey-Eakin technique in each of these cases was in error,<sup>40</sup> because using the Maxey-Eakin recharge coefficients with any precipitation estimates other than the Hardman precipitation map is inappropriate. The Maxey-Eakin recharge coefficients are married to the Hardman map and cannot be used otherwise.<sup>41</sup> Mr. Halford testified that if one is going to develop a new method of estimating recharge they must have the precipitation maps for the area of interest and controls on ground-water discharge, and then they can develop new recharge coefficients based on that information.<sup>42</sup>

The Applicants also used a water-budget approach with each of the precipitation estimates to arrive at an estimate of recharge. In the approach for Kane Springs Valley Hydrographic Basin, it was estimated that recharge is equal to precipitation less the sum of evapotranspiration (ET), surface runoff and spring discharge. Surface runoff and spring discharge were each estimated to average a few hundred acre-feet annually; therefore, recharge was estimated to be approximately equal to precipitation minus ET. Due to the lack of ET measurements or estimates of ET in Kane Springs Valley, the Applicants used data from a United States Geologic Survey report on evapotranspiration in Ruby Valley, over 200 miles to the north.<sup>43</sup> Their evidence provides that a report prepared by Berger in 2001 reports an estimate of ET using the Bowen-ratio method for an upland-shrub non-phreatophytic plant community of 12 inches per year where annual precipitation was estimated to be 13 to 15 inches.<sup>44</sup> On that basis, the Applicants assume 12 inches per year of ET for areas receiving 13 to 15 inches of precipitation in Kane Springs Valley and 13 inches per year of ET for areas receiving greater than 15 inches per year of precipitation.

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<sup>38</sup> Exhibit No. 29, p. 9.

<sup>39</sup> Exhibit No. 54, public administrative hearing before the State Engineer, July 16-20, 23-27, 2001, official records in the Office of the State Engineer.

<sup>40</sup> Transcript, pp. 489-520.

<sup>41</sup> Transcript, p. 493.

<sup>42</sup> Transcript, p. 495.

<sup>43</sup> Exhibit No. 29, p. 13.

<sup>44</sup> *Ibid.*



However, the State Engineer believes the Applicants misinterpreted and/or misapplied the data from the Berger 2001 report, which states that precipitation at the Ruby Lake National Wildlife Refuge site for the 2000 water year was only 7.74 inches, or 58 percent of the 1961 to 1990 30-year average of 13.3 inches.<sup>45</sup> During this same time period, ET at the upland-shrub site was 11.96 inches.<sup>46</sup> The report does not indicate what ET rates might be in the upland-shrub community during average precipitation years, although the data does support higher daily ET rates in the summer months when there was an increase in available soil moisture from precipitation.<sup>47</sup> In addition, the Applicants did not provide evidence suggesting that the ET rates in areas that receive greater than 15 inches per year would remain constant at 13 inches. The Applicants also did not address other factors that differ between Kane Springs Valley and Ruby Valley that could have an effect on ET rates such as differences in temperature, solar radiation, time and type of precipitation, and variable plant species distinct from those in Kane Springs Valley.

The State Engineer recognizes the difficulty in accurately estimating recharge and even the Applicants admit that estimates of recharge are extremely problematic as it is a parameter that cannot be measured directly.<sup>48</sup> The State Engineer agrees that recharge is a very difficult parameter to measure, and if it is used to determine perennial yield, the uncertainty in the estimates must be recognized and a conservative approach taken. Given the uncertainties inherent in estimating recharge and the validity in the testimony of the Protestant's expert stating that the recharge technique applied was in error and inappropriate, the State Engineer finds that the Applicants' evidence and testimony lack the scientific and practical basis to substantiate the proffered recharge of 5,000 to 14,000 acre-feet annually and are hereby discounted and not accepted. However, the State Engineer also recognizes that the current reconnaissance estimate of average annual recharge is probably low.

The Death Valley flow system area lies west and southwest of Kane Springs Valley. Because the Kane Springs Valley climate, latitude, geology and soil types are similar to the Death Valley flow system basins, it is reasonable to expect that similar precipitation amounts will result in

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<sup>45</sup> D.L. Berger, M.J. Johnson, M.L. Tumbusch, *Estimates of Evapotranspiration from the Ruby Lake National Wildlife Refuge Area, Ruby Valley, Northeastern Nevada, May 1999-October 2000*, Water-Resources Investigations Report 01-4234, United States Department of Interior, Geological Survey, Nevada Division of Water Resources and the United States Department of Interior, Fish and Wildlife Service, 2001.

<sup>46</sup> *Id.* at 25.

<sup>47</sup> *Id.* at 20.

<sup>48</sup> Transcript, p. 267.

similar amounts of ground-water recharge. Recharge within the Death Valley regional flow system has been calibrated to measured discharge, and therefore provides a greater level of certainty than recharge estimates made without a comparative discharge.<sup>49</sup> Several basins within the Death Valley regional flow system have similar amounts of precipitation as Kane Springs Valley with the ground-water recharge in those basins ranging from 1% to 2% of total precipitation.<sup>50</sup> Recent estimates of precipitation in the Kane Springs Valley range from 120,000 to 140,000 acre-feet per year as opposed to the Hardman estimate of 80,000 acre-feet per year.<sup>51</sup> Using a recharge to precipitation ratio of 1% to 2% as found in the Death Valley regional flow model for basins with similar amounts of precipitation, the recharge in Kane Springs Valley would be 1,200 to 2,800 acre-feet per year, which is substantially less than the Applicants' estimate of recharge of 5,000 to 14,000 acre-feet annually. This is a qualitative comparison, and is not proposed by the State Engineer to definitively estimate recharge in Kane Springs Valley, but serves as a barometer, for comparative purposes only, of recharge estimates in this area. The State Engineer finds recharge in Kane Springs Valley is uncertain, but is likely greater than the reconnaissance estimate of 500 acre-feet per year and less than the Applicant's estimates of 5,000 to 14,000 acre-feet per year.

### VIII.

The perennial yield of a ground-water reservoir may be defined as the maximum amount of ground water that can be salvaged each year over the long term without depleting the ground-water reservoir. The perennial yield cannot be more than the natural recharge to a ground water basin and in some cases is less. In determining the amount of water available for appropriation in basins where outflow from one basin is part of the inflow to another basin, the State Engineer must take into consideration the amount of water appropriated in the upgradient basin and discount the amount from inflow into the downgradient basin. If the water appropriated in an upgradient basin is not deducted from the amount which discharges to the downgradient basin, it creates the potential for double accounting and regional over appropriation. Thus, the State Engineer is still able to manage the ground-water basins as they have been historically managed administratively, but also take into consideration the concerns that arise for ground-water basins that are hydrologically connected.

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<sup>49</sup> Belcher, W., ed., 2004 Death Valley Regional Ground-Water Flow System, Nevada and California – Hydrogeologic Framework and Transient Ground-Water Flow Model, USGS SIR 2004-4205.

<sup>50</sup> Belcher, W., ed., 2004, Death Valley Regional Flow Model, USGS SIR 2004-4205.

<sup>51</sup> Exhibit 16, p. 5.

The Applicants propose that ground water flows from upgradient basins through Kane Springs Valley into downgradient basins. In the case of the Kane Springs Valley Hydrographic Basin, the upgradient basin and the downgradient basin is the Coyote Spring Valley Hydrographic Basin. That is, ground water is proposed to flow from northern Coyote Spring Valley into Kane Springs Valley then back into Coyote Spring Valley. The Protestant NPS argues that the State Engineer should consider any inflow into Kane Springs Valley from the Coyote Spring Valley as previously allocated in Coyote Spring Valley and the subsequent outflow from Kane Springs Valley should be permitted to flow into Coyote Spring Valley in its entirety to meet the approximate 16,000 acre-feet per year of senior appropriated rights there. The majority of those senior water rights were issued with the intent to develop ground water from the White River regional carbonate-rock aquifer system. Given the unique hydrologic connection between the Kane Springs Valley Hydrographic Basin and the Coyote Spring Valley Hydrographic Basin, the development of ground water within Kane Springs Valley will ultimately affect water levels and flows in the White River regional carbonate-rock aquifer system. However, the State Engineer believes a small amount of water can be developed in the Kane Springs Valley and not unreasonably impact existing rights in the discharge areas of the White River carbonate-rock aquifer system, which are already fully appropriated. Well KPW-1 lies within 1,000 feet of Coyote Spring Valley and pumping simulations by the Applicant show a cone of depression extending well into Coyote Spring Valley. To further minimize potential effects on existing rights in the discharge areas of the White River carbonate-rock aquifer system, the State Engineer will limit the amount of ground water that can be pumped from wells in Kane Springs Valley near the boundary with Coyote Spring Valley. After careful consideration of the uncertainties regarding the ranges of ground-water recharge, quantification of subsurface inflows and outflows, the demonstrated connection of Kane Springs Valley with the White River Regional flow system, and senior appropriated rights in the down-gradient basins, the State Engineer finds that 1,000 acre-feet is a reasonable amount to allow for appropriation from Kane Springs Valley.

#### IX.

Nevada Revised Statute § 533.370(5) provides that an applicant provide proof satisfactory to the State Engineer of his intention in good faith to construct any work necessary to apply the water to the intended beneficial use with reasonable diligence and his financial ability and

reasonable expectation to actually construct the work and apply the water to the intended beneficial use with reasonable diligence. Nevada Revised Statute § 533.375 provides that in the case of an application or multiple applications proposing to divert more than 10 cubic feet per second (such as the applications under consideration here) the State Engineer may require in the case of an incorporated company the submission of articles of incorporation, the names and places of residence of directors and officers and the amount of its authorized and paid-up capital. If the applicant is not an incorporated company, he may require a statement as to the name of the person proposing to construct the work, and a showing of facts necessary to enable him to determine whether the applicant has the financial ability to carry out the proposed work and whether the application has been made in good faith.

The Applicants presented the Chairwoman for the Lincoln County Water District, Rhonda Hornbeck, as a witness who testified that the Lincoln County Water District through its partner Vidler Water Company has an agreement with Coyote Springs Investment (CSI) to provide wholesale water to CSI's development. Additionally, the witness indicated they are working with the United States Department of Interior, Bureau of Land Management to gain a right of way to bring water from the wellhead down to the CSI property. The testimony indicated that a general improvement district is in place, as is a planned unit development.<sup>52</sup> The Applicants provided evidence on the plan of development, which is a report that was submitted to the United States Department of Interior, Bureau of Land Management, that identifies how the ground water will be withdrawn, how the pipes will be installed, what equipment is needed to complete the well and addresses the pipeline project to deliver the water to the place where it will be used, and pipeline permitting is underway.<sup>53</sup>

When questioned whether the Lincoln County Water District had the financial resources to place the water to beneficial use, the witness for the Lincoln County Water District provided several scenarios as to how those financial resources might be obtained, but did not provide any specific evidence of having the financial resources in place. The testimony indicated that the possibilities include: (1) floating a bond with its partner Vidler Water Company; (2) asking the State of Nevada

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<sup>52</sup> Transcript, pp. 388-389; Exhibit No. 41; Exhibit No. 122 (Agreement dated Oct. 17, 2005, between Coyote Springs Investment, LLC and Lincoln County Water District and Vidler Water Company - marked as an exhibit after the hearing when document was filed upon request of the State Engineer.)

<sup>53</sup> Transcript, p. 95; Exhibit No. 26.

for a low-interest loan; or (3) a development agreement with CSI, where CSI would pay for the infrastructure to place the water to beneficial use; however the witness then testified there is already an agreement in place with CSI paying the cost of infrastructure.<sup>54</sup>

Dorothy-Timian Palmer, as a witness for the Applicants, testified that Vidler Water Company has already drilled a production well and a monitoring well and has spent a considerable amount of money on field work and analyses of that field work and has the financial ability to construct the work necessary to put the water to beneficial use.<sup>55</sup> The Agreement between CSI, the Lincoln County Water District and Vidler Water Company provides that CSI will purchase “all water available within the Kane Springs Basin.” “Upon payment in full of the purchase price of Kane Water, the DISTRICT and VIDLER will convey the Kane Water by Water Rights Deed to CSI and will partially assign to CSI certain rights and delegate to CSI certain obligations related to the underlying water rights permit(s).”<sup>56</sup> The Applicants only intend to develop the water to the wellhead and CSI will develop the infrastructure to deliver the water from the wellhead to the development.<sup>57</sup>

Harvey Whittemore, as a witness for the Applicants, testified that within the CSI project there would be two separate general improvement districts. The one in Lincoln County has already been formed; however, the one in Clark County was to be formed in June 2006. The testimony indicated that the water rights already held by CSI will be assigned for the benefit of the general improvement districts and the Clark and Lincoln County Commissions will act as trustees for the general improvement districts. Mr. Whittemore indicated that the development is at a stage where all of the approvals necessary for the first phase of construction have been acquired with respect to Clark County. As to the Lincoln County portion of the project, it is still subject to the completion of a multi-species habitat conservation plan, as well as a number of additional approvals from federal agencies. The water rights at issue here would ultimately be owned by the developer CSI and then transferred to the Lincoln County General Improvement District.<sup>58</sup> CSI has already received approval in the form of parcel maps, zoning entitlement and development agreements for 49,000 units in Clark County and 110,000 units in Lincoln County.<sup>59</sup>

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<sup>54</sup> Transcript, pp. 392-393.

<sup>55</sup> Transcript, pp. 458-461.

<sup>56</sup> Exhibit No. 122.

<sup>57</sup> Transcript, pp. 412-415.

<sup>58</sup> Transcript, pp. 419-420.

<sup>59</sup> Transcript, pp. 427, 439; Exhibit Nos. 43, 44, 45.

The State Engineer finds the Applicants provided proof satisfactory to the State Engineer of an intention in good faith to construct any work necessary to apply the water to the intended beneficial use with reasonable diligence and a reasonable expectation to actually construct the work and apply the water to the intended beneficial use with reasonable diligence.

**X.**

Testimony and evidence indicate there are no permitted or certificated groundwater rights in Kane Springs Valley Hydrographic Basin.<sup>60</sup> However, the witness for the NPS testified that Kane Springs Valley Hydrographic Basin and Coyote Spring Valley are hydrographically and hydrologically one and the same basin. Approximately 16,100 acre-feet have been appropriated in Coyote Spring Valley and applications are pending for another 200,000 acre-feet annually. Therefore, there is no water available for appropriation.<sup>61</sup> The State Engineer finds no water has been appropriated in Kane Springs Valley Hydrographic Basin and by limiting the quantity of water authorized for appropriation, the potential impacts to existing rights in down-gradient hydrographic basins will be minimized.

**XI.**

Nevada Revised Statute § 533.370(6) provides that in determining whether an application for an interbasin transfer of ground water must be rejected the State Engineer shall consider: (a) whether the applicant has justified the need to import water from another basin; (b) if the State Engineer determines that a plan for conservation of water is advisable for the basin into which the water is to be imported, whether the applicant has demonstrated that such a plan has been adopted and is effectively being carried out; (c) whether the proposed action is environmentally sound as it relates to the basin from which the water is exported; (d) whether the proposed action is an appropriate long-term use which will not unduly limit the future growth and development in the basin from which the water is exported; and (e) any other factor the State Engineer determines is relevant.

Testimony was provided as to the extent of the project proposed in Coyote Spring Valley and estimates of the quantity of water necessary to carry out the project. That testimony satisfactorily addresses the provision of whether the applicant has justified the need to import water

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<sup>60</sup> Transcript, pp. 208-209.

<sup>61</sup> Transcript, pp. 589-594.

from another basin.<sup>62</sup> Testimony was provided that indicated conservation measures are in place for the planned development similar to traditional development measures associated with development in southern Nevada that have been adopted and imposed,<sup>63</sup> and there is no evidence that the appropriation of water from Kane Springs Valley Hydrographic Basin will damage the environment of the valley.

Testimony was provided that indicated there is no private land within Kane Springs Valley Hydrographic Basin, rather all land within the valley is owned by the federal government; therefore, the use of the water will not unduly limit future growth and development in Kane Springs Valley Hydrographic Basin.<sup>64</sup>

The State Engineer finds the evidence does not support rejection of the application for an interbasin transfer of water.

## XII.

Witnesses for both the Applicants (Glanzman)<sup>65</sup> and the Protestant NPS (Van Liew)<sup>66</sup> agree that the discharge at Rogers and Blue Point Springs in the Lake Mead National Recreation Area is not entirely carbonate-rock aquifer discharge, but is composed of some local precipitation that infiltrates and mixes with the carbonate-rock aquifer water that is flowing toward land surface along fault structures. Mr. Glanzman testified that in general when water in the White River flow system flows from north to south it mixes with local recharge en route to discharge areas at the Muddy River Springs Area and Rogers Springs and Blue Point Springs.<sup>67</sup> Using isotopic data, Mr. Glanzman estimated that approximately 25% of the discharge at Rogers Springs and Blue Point Springs could be characterized as regional carbonate water. For purposes of his analysis, Mr. Glanzman considered water in the carbonate aquifer of Pahrangat Valley to be 100% carbonate water.<sup>68,69</sup> Mr. Van Liew testified that discharge from the White River flow system appears to be predominantly at the Muddy River Springs, Rogers Springs and Blue Point Springs and raised the

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<sup>62</sup> Transcript, pp. 427-445.

<sup>63</sup> Transcript, pp. 428-429.

<sup>64</sup> Transcript, pp. 207-208.

<sup>65</sup> Transcript, pp. 115-203, 221-236.

<sup>66</sup> Transcript, pp. 523-621.

<sup>67</sup> Exhibit No. 34; Transcript, pp. 115 -203, 221-236.

<sup>68</sup> Transcript, pp. 137-138.

<sup>69</sup> Exhibit No. 117.

argument that there does not seem to be anywhere else for the ground water to flow. In addition, he doubted much water moved out to the Lake Mead area and testified that the ground-water gradient supports that conclusion.

The State Engineer finds there is not substantial evidence that the appropriation of the limited quantity being granted under this ruling will likely impair the flow at Muddy River Springs, Rogers Springs or Blue Point Springs.

### XIII.

By letter dated February 6, 2006, the NPS and FWS requested the State Engineer amend State Engineer's Order No. 1169 to include the Kane Springs Valley Hydrographic Area.<sup>70</sup> The reasoning behind the request is that these agencies believe Kane Springs Valley and Coyote Spring Valley, while administratively classified as separate hydrographic basins, are actually a single distinct hydrologic drainage basin and should be managed as such. However, during the public administrative hearing, the FWS indicated that the resolution of its protests pursuant to the Stipulation also goes to its statements in the February 6, 2006, letter. Thus, the Stipulation was presented in place of the FWS request to include Kane Springs Valley within the provisions of Order No. 1169.<sup>71</sup> However, the request by the NPS to include the Kane Springs Valley Hydrographic Basin within the provisions of Order No. 1169 still remains. Thus, two separate agencies within the United States Department of Interior take different positions with regard to the request to include Kane Springs within the provisions of Order No. 1169.

The witness for the Protestant NPS testified as to various reports and information that all conclude that the discharge from the Muddy River Springs is regional in nature, that a sufficient quantity does not come from local recharge to support the discharge and that a substantial portion of the discharge of the region is concentrated in the Muddy River Springs Area.<sup>72</sup> Citing to Exhibit No. 91, the witness noted that the writer of that report found that the "Coyote Springs Valley, Kane Springs Valley and the Muddy River Springs hydrographic areas (1,025 square miles) in southern Lincoln and Clark Counties have been combined for this report because the areas are hydrologically and topographically connected."<sup>73</sup> The faults in the area are believed to control the majority of

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<sup>70</sup> Exhibit No. 10.

<sup>71</sup> Transcript, pp. 12-13.

<sup>72</sup> Transcript, pp. 530-581; *See*, Exhibit Nos. 87, 88, 91.

<sup>73</sup> Transcript, p. 533.



ground-water movement through the carbonate aquifer, including Kane Springs Wash fault zone, which the witness believes to be a conduit for flow to Coyote Spring Valley.<sup>74</sup> Additionally, the NPS witness believes that the Kane Springs Valley Hydrographic Basin and the Coyote Spring Valley are one hydrographic area.<sup>75</sup>

A witness for the Applicants indicated that there is a presumption that the Kane Springs Wash fault zone is effectively a no-flow boundary such that water flowing into Kane Springs Valley Hydrographic Basin flows out of Kane Springs Wash into Coyote Spring Valley, and that the water that is recharged in Kane Springs Valley Hydrographic Basin flows into Coyote Spring Valley.<sup>76</sup> Additionally, evidence developed from the well pump test and analyzed in conjunction with other evidence, such as the implication of a flat gradient, indicates a relatively high transmissivity across the southern half of the study area, indicating a high potential for regional ground-water flow.<sup>77</sup>

The State Engineer finds the evidence indicates a strong hydrologic connection between Kane Springs Valley and Coyote Spring Valley, specifically, that ground water flows from Kane Springs Valley into Coyote Spring Valley. However, carbonate water levels near the boundary between Kane Springs Valley and Coyote Spring Valley are approximately 1,875 feet in elevation, and in southern Coyote Spring Valley and throughout most of the other basins covered under Order No. 1169, carbonate-rock aquifer water levels are mostly between 1,800 feet and 1,825 feet. This marked difference in head supports the probability of a low-permeability structure or change in lithology between Kane Springs Valley and the southern part of Coyote Spring Valley. The State Engineer finds Order No. 1169 was issued to address the requests for the additional appropriation of water filed in Coyote Spring Valley, but the focus of the additional study ordered is the Muddy River Springs Area. The State Engineer finds there is not substantial evidence that the appropriation of a limited quantity of water in Kane Springs Valley Hydrographic Basin will have any measurable impact on the Muddy River Springs that warrants the inclusion of Kane Springs Valley in Order No. 1169. Therefore, the State Engineer denies the request to hold these applications in abeyance and include Kane Spring Valley within the provisions of Order No. 1169.

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<sup>74</sup> Transcript, pp. 545-550.

<sup>75</sup> Transcript, pp. 589-591.

<sup>76</sup> Transcript, pp. 291, 303.

<sup>77</sup> Transcript, pp. 329-330.

#### **XIV.**

The Applicants requested that the State Engineer act on Applications 72220 and 72221 and grant them for a total combined duty of 5,000 acre-feet annually and hold Applications 72218 and 72219 in abeyance. The State Engineer finds that the total amount of 1,000 acre-feet annually of groundwater available to be appropriated in Kane Springs Valley Hydrographic Basin is less than the requested 5,000 acre-feet annually; therefore the State Engineer finds he will not hold any of the applications in abeyance.

#### **CONCLUSIONS**

##### **I.**

The State Engineer has jurisdiction over the parties and the subject matter of this action and determination.<sup>78</sup>

##### **II.**

The State Engineer is prohibited by law from granting a permit to appropriate the public waters where:<sup>79</sup>

- A. there is no unappropriated water at the proposed source;
- B. the proposed use or change conflicts with existing rights;
- C. the proposed use or change conflicts with protectible interests in existing domestic wells as set forth in NRS § 533.024; or
- D. the proposed use or change threatens to prove detrimental to the public interest.

##### **III.**

The State Engineer concludes that to permit the appropriation of water in an amount greater than permitted under this ruling will conflict with existing rights and threaten to prove detrimental to the public interest.

#### **RULING**

The protests to the applications are hereby upheld in part and overruled in part. Application 72220 is hereby granted for a duty of 500 acre-feet annually. Applications 72218, 72219, and 72221 are hereby granted for a total combined duty of 500 acre-feet annually.

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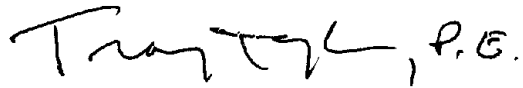
<sup>78</sup> NRS chapters 533 and 534.

<sup>79</sup> NRS 533.370(5).

Applications 72218, 72219, 72220, and 72221 are granted subject to:

1. The payment of statutory permit fees;
2. A monitoring plan to be approved by this office.

Respectfully submitted,



TRACY TAYLOR, P.E.  
State Engineer

TT /jm

Dated this 2nd day of  
February, 2007.

**IN THE OFFICE OF THE STATE ENGINEER  
OF THE STATE OF NEVADA**

IN THE MATTER OF APPLICATIONS 54055, )  
54056, 54057, 54058, 54059, 63272, 63273, )  
63274, 63275, 63276, 63867, 63868, 63869, )  
63870, 63871, 63872, 63873, 63874, 63875 AND )  
63876 FILED TO APPROPRIATE THE )  
UNDERGROUND WATERS OF THE COYOTE )  
SPRING VALLEY HYDROGRAPHIC BASIN )  
(210), CLARK COUNTY AND LINCOLN )  
COUNTY, NEVADA. )

**RULING**  
**#6254**

**GENERAL**

**I.**

Applications 54055, 54056, 54057, 54058 and 54059 were filed on October 17, 1989, by the Las Vegas Valley Water District (LVVWD) to appropriate 6.0 cubic feet per second (cfs) under Applications 54055, 54056 and 54057 and 10 cfs under Applications 54058 and 54059 for a total of 27,510 acre-feet annually (afa) of groundwater from the Coyote Spring Valley Hydrographic Basin for municipal and domestic purposes. The proposed points of diversion are described as being located as follows:

Application 54055 within the SE $\frac{1}{4}$  SW $\frac{1}{4}$  of Section 5, T.13S., R.63E., M.D.B.&M.

Application 54056 within the SE $\frac{1}{4}$  SE $\frac{1}{4}$  of Section 32, T.13S., R.63E., M.D.B.&M.

Application 54057 within the SE $\frac{1}{4}$  NW $\frac{1}{4}$  of Section 16, T.14S., R.63E., M.D.B.&M.

Application 54058 within the NE $\frac{1}{4}$  NE $\frac{1}{4}$  of Section 1, T.13S., R.63E., M.D.B.&M.

Application 54059 within the NW $\frac{1}{4}$  NW $\frac{1}{4}$  of Section 19, T.13S., R.64E., M.D.B.&M.

The proposed place of use is described as being located within Clark, Lincoln, Nye and White Pine counties as more specifically described and defined in Nevada Revised Statutes (NRS) §§ 243.035-243.040 (Clark County), NRS §§ 243.210-243.225 (Lincoln County), NRS §§ 243.275-243.315 (Nye County), and NRS §§ 243.365-243.385 (White Pine County). Item 12 of the applications indicates that the water would be used within the LVVWD service

area and may also be served to users within Lincoln County, Nye County and White Pine County.<sup>1</sup>

## II.

Applications 54055, 54056, 54057, 54058 and 54059 were timely protested by many people or entities.<sup>2</sup>

Application 54055 was timely protested by the Muddy Valley Irrigation Company, U.S. Department of Interior Bureau of Land Management, Las Vegas Fly Fishing Club, City of Caliente, Moapa Band of Paiute Indians, County of White Pine and City of Ely, U.S. Department of Interior Fish and Wildlife Service, County of Nye, U.S. Department of Interior National Park Service, Unincorporated Town of Pahrump, Lincoln County Board of Commissioners, and Christopher Brown.<sup>3</sup>

Application 54056 was timely protested by the Muddy Valley Irrigation Company, U.S. Department of Interior Bureau of Land Management, Las Vegas Fly Fishing Club, City of Caliente, Moapa Band of Paiute Indians, County of White Pine and City of Ely, U.S. Department of Interior Fish and Wildlife Service, County of Nye, U.S. Department of Interior National Park Service, Unincorporated Town of Pahrump, Lincoln County Board of Commissioners, Aerojet Nevada, and Charles F. Hilfenhaus, Jr.<sup>4</sup>

Application 54057 was timely protested by the Muddy Valley Irrigation Company, U.S. Department of Interior Bureau of Land Management, Las Vegas Fly Fishing Club, City of Caliente, Moapa Band of Paiute Indians, County of White Pine and City of Ely, U.S. Department of Interior Fish and Wildlife Service, County of Nye, U.S. Department of Interior National Park Service, Unincorporated Town of Pahrump, Lincoln County Board of Commissioners, and Paula Engel.<sup>5</sup>

Application 54058 was timely protested by the Muddy Valley Irrigation Company, Las Vegas Fly Fishing Club, City of Caliente, Moapa Band of Paiute Indians, County of White Pine and City of Ely, U.S. Department of Interior Fish and Wildlife Service, County of Nye, U.S.

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<sup>1</sup> File Nos. 54055 through 54059, official records in the Office of the State Engineer. Exhibit Nos. 2, 3, 4, 5 and 6, Public Administrative Hearing before the State Engineer, July 16-20, 23-24, August 31, 2001, official records in the Office of the State Engineer (LVVWD Hearing).

<sup>2</sup> File Nos. 54055 through 54059, official records in the office of the State Engineer and Exhibit Nos. 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21 and 22 LVVWD Hearing.

<sup>3</sup> The Las Vegas Fly Fishing Club and Christopher Brown did not appear or participate in the hearing.

<sup>4</sup> The Las Vegas Fly Fishing Club, Aerojet Nevada, and Charles F. Hilfenhaus, Jr. did not appear or participate in the hearing.

<sup>5</sup> The Las Vegas Fly Fishing Club and Paula Engel did not appear or participate in the hearing.

Department of Interior National Park Service, Unincorporated Town of Pahrump, Lincoln County Board of Commissioners, James H. Fincher, and Debra Richardson.<sup>6</sup>

Application 54059 was timely protested by the Muddy Valley Irrigation Company, Las Vegas Fly Fishing Club, City of Caliente, Moapa Band of Paiute Indians, County of White Pine and City of Ely, U.S. Department of Interior Fish and Wildlife Service, County of Nye, U.S. Department of Interior National Park Service, Unincorporated Town of Pahrump, Lincoln County Board of Commissioners, James H. Fincher, Ely Shoshone Tribe, and Carolyn Morrison.<sup>7</sup>

The protests filed by the Federal agencies U.S. Department of Interior Bureau of Land Management, Fish and Wildlife Service and National Park Service were withdrawn by stipulation with the Applicant LVVWD.<sup>8</sup> The protests by the Muddy Valley Irrigation Company were withdrawn,<sup>9</sup> as were the protests by the Lincoln County Board of Commissioners, and White Pine County and the City of Ely, Nye County and Unincorporated Town of Pahrump.<sup>10</sup>

### III.

The protests to Applications 54055, 54056, 54057, 54058 and 54059 by the Moapa Band of Paiute Indians are summarized as follows:<sup>11</sup>

1. The applications seek to extract and export water from federal lands to which the LVVWD holds no interest; therefore, the State Engineer has no authority to issue a permit.
2. There are insufficient descriptions in the applications of the proposed works of diversion, costs of such works, time required to construct said works, and number of persons to be served.
3. It would be detrimental to the public interest to approve the applications before careful consideration of the environmental and socio-economic issues they raise. The State Engineer should require an independent assessment of these issues and obtain additional information on a water resource plan for the Las Vegas Valley.

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<sup>6</sup> The Las Vegas Fly Fishing Club, James H. Fincher, and Debra Richardson did not appear or participate in the hearing.

<sup>7</sup> The Las Vegas Fly Fishing Club, James H. Fincher, Ely Shoshone Tribe and Carolyn Morrison did not appear or participate in the hearing.

<sup>8</sup> Exhibit No. 24 LVVWD Hearing.

<sup>9</sup> Exhibit No. 25 LVVWD Hearing.

<sup>10</sup> File Nos. 54055 through 54059, official records in the Office of the State Engineer.

<sup>11</sup> Exhibit No. 10 LVVWD Hearing.

4. The proposed use, in combination with the other LVVWD applications, will conflict with existing rights, including the rights of the Moapa Band of Paiute Indians to the waters of the Muddy River and to groundwater under the Moapa Indian Reservation.
5. The proposed use is unlawful and threatens to prove detrimental to the public interest because the LVVWD lacks the financial resources and rights of entry to construct the necessary works and transport the water to the intended place of use.
6. Granting applications for massive amounts of water would conflict with federal law and policy regarding use or disposition of federal lands.
7. The quantities applied for exceed the annual recharge and safe yield and will result in groundwater mining resulting in adverse impacts on the location and quantity of water resources.
8. The use of the water will affect water quality and thus impair existing uses.
9. The use of the water will degrade wetlands and riparian habitats, including those on public lands in Death Valley National Monument, Great Basin National Park, Lake Mead National Recreation Area and national wildlife refuge units.
10. The use of the water will damage wetlands, springs, seeps and phreatophytes, which provide water and habitat for migratory species, other wildlife, grazing livestock and other existing uses.
11. The use of the water will jeopardize the existence of endangered and threatened species including, but not limited to, the desert tortoise, prevent or interfere with the conservation of such species, and take or harm such species.
12. The use of the water will impair environmental, scenic and recreational values that the State holds in trust for all of its citizens.
13. The use of the water will encourage waste and discourage reasonable conservation measures within the LVVWD's service area.
14. The use of the water will lead to regional air pollution (particularly carbon monoxide and particulates) in violation of law.

#### IV.

The protests to Applications 54055, 54056, 54057, 54058 and 54059 by the City of Caliente are summarized as follows:<sup>12</sup>

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<sup>12</sup> Exhibit No. 9 LVVWD Hearing.

1. These applications, combined with the others filed at the same time, seek a combined appropriation of 804,195 acre-feet of groundwater and the diversion and the exportation of such a quantity of water will lower the static water level in Coyote Spring Valley, adversely affect the quality of the remaining groundwater and threaten springs, seeps and phreatophytes, which provide water and habitat critical to the survival of wildlife and grazing livestock.
2. There is insufficient water to support the applications.
3. The diversion and export of the water in the applied for quantity will deprive the area of origin of water needed to protect and enhance its environment and economic well being, and destroy environmental, ecological, scenic and recreational values the State holds in trust for all its citizens.
4. It would threaten to prove detrimental to the public interest to grant the applications in absence of comprehensive planning including, but not limited to, environmental impacts, costs and socio-economic considerations, and a water resource plan.
5. The use of the water will conflict with existing rights because it will exceed the safe yield of the basin and unreasonably lower the static water level and sanction water mining. The use of water under the applications will cause a drop in the water table and degrade water quality.
6. The use of the water will threaten to prove detrimental to the public interest in that it will likely jeopardize the continued existence of endangered and threatened species, will prevent and interfere with the conservation of those species, take or harm those species, and interfere with the purposes for which federal lands are managed under federal statutes including, but not limited to, the Federal Land Use Policy Act of 1976 [sic].
7. The approval of the applications will sanction and encourage the willful waste of water that has been allowed by the LVVWD.
8. The applications should be denied because the LVVWD has not obtained the necessary legal interest in the federal lands to extract, develop and transport the water from the proposed points of diversion to the place of use.
9. The use of the water will perpetuate and increase inefficient use of water in the LVVWD service area.
10. The LVVWD lacks the financial ability to develop the resource and transport it to the intended place of use.



11. The applications are deficient in that they fail to include a description of the place of use, works of diversion, estimated cost of the works and estimated time to place the water to beneficial use.
12. The use of the water will exceed the safe yield of the basin thereby adversely affecting phreatophytes and creating air pollution in violation of State and Federal laws.
13. The applications should not be granted as the LVVWD has failed to provide information for the State Engineer to sufficiently guard the public interest. The adverse effects cannot be properly evaluated without an independent, formal and publically-reviewable assessment of the cumulative impacts of the proposed extraction, mitigation measures, alternatives to the project and implementation of water management strategies.
14. The applications should be denied because the population projections are unrealistic and ignore constraints to growth.
15. The applications should be denied because the conservation programs instituted by the LVVWD are ineffective.
16. The applications should be denied because the cost of the project will result in rate increases that will reduce demand thereby rendering the project unnecessary.
17. The applications should be denied because it will allow the LVVWD to lock-up water resources for use beyond current planning horizons.
18. The applications should be denied because current trends in housing, plumbing fixtures standards and demographic patterns all suggest that simplistic water demand forecasts overstate future need.
19. The applications should be denied because the current per capita water consumption rate for LVVWD is too high and there are most cost-effective alternatives.

V.

Applications 63272, 63273, 63274, 63275, 63276, 63867, 63868, 63869, 63870, 63871, 63872, 63873, 63874, 63875 and 63876 were filed on July 24, 1997, and February 24, 1998, by Aerojet General Corporation and assigned to Coyote Springs Investment, LLC (CSI) to appropriate 10.0 cfs, not to exceed 7,239 afa under each application of groundwater from the Coyote Spring Valley Hydrographic Basin for quasi-municipal purposes. The proposed points of diversion are described as being located as follows:

Application 63272 within the SW $\frac{1}{4}$  SW $\frac{1}{4}$  of Section 12, T.12S., R.63E., M.D.B.&M.  
Application 63273 within the NW $\frac{1}{4}$  NW $\frac{1}{4}$  of Section 12, T.12S., R.63E., M.D.B.&M.  
Application 63274 within the NE $\frac{1}{4}$  NW $\frac{1}{4}$  of Section 15, T.13S., R.63E., M.D.B.&M.  
Application 63275 within the NE $\frac{1}{4}$  NE $\frac{1}{4}$  of Section 11, T.13S., R.63E., M.D.B.&M.  
Application 63276 within the SW $\frac{1}{4}$  SE $\frac{1}{4}$  of Section 13, T.11S., R.63E., M.D.B.&M.  
Application 63867 within the NW $\frac{1}{4}$  SW $\frac{1}{4}$  of Section 12, T.13S., R.63E., M.D.B.&M.  
Application 63868 within the NW $\frac{1}{4}$  SW $\frac{1}{4}$  of Section 13, T.13S., R.63E., M.D.B.&M.  
Application 63869 within the SW $\frac{1}{4}$  SW $\frac{1}{4}$  of Section 11, T.13S., R.63E., M.D.B.&M.  
Application 63870 within the SE $\frac{1}{4}$  SE $\frac{1}{4}$  of Section 12, T.13S., R.63E., M.D.B.&M.  
Application 63871 within the SE $\frac{1}{4}$  SE $\frac{1}{4}$  of Section 13, T.13S., R.63E., M.D.B.&M.  
Application 63872 within the SE $\frac{1}{4}$  SW $\frac{1}{4}$  of Section 11, T.12S., R.63E., M.D.B.&M.  
Application 63873 within the SW $\frac{1}{4}$  SW $\frac{1}{4}$  of Section 25, T.12S., R.63E., M.D.B.&M.  
Application 63874 within the SW $\frac{1}{4}$  SW $\frac{1}{4}$  of Section 13, T.12S., R.63E., M.D.B.&M.  
Application 63875 within the SW $\frac{1}{4}$  SW $\frac{1}{4}$  of Section 36, T.11S., R.63E., M.D.B.&M.  
Application 63876 within the NE $\frac{1}{4}$  NE $\frac{1}{4}$  of Section 22, T.11S., R.63E., M.D.B.&M.

The proposed place of use is described as being located within the S $\frac{1}{2}$  of Section 13, Sections 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 32, 33, 34 and 35 and W $\frac{1}{2}$  of Section 36, T.11S., R.63E., M.D.B.&M.; Lots 3 and 4, S $\frac{1}{2}$  NW $\frac{1}{4}$  and SW $\frac{1}{4}$  of Section 1, Lots 1, 2, 3 and 4, S $\frac{1}{2}$  N $\frac{1}{2}$  and S $\frac{1}{2}$  of Section 2, Lots 1, 2, 3 and 4, S $\frac{1}{2}$  N $\frac{1}{2}$  and S $\frac{1}{2}$  of Section 3, Sections 8, 10 and 11, and W $\frac{1}{2}$  W $\frac{1}{2}$  of Section 12, W $\frac{1}{2}$  of Section 13, Sections 14, 17, 20, N $\frac{1}{2}$  and SE $\frac{1}{4}$  of Section 23, W $\frac{1}{2}$  of Section 24, Section 25, E $\frac{1}{2}$  of Section 26 and Section 36, T.12S., R.63E., M.D.B.&M.; Lot 1, E $\frac{1}{2}$  SW $\frac{1}{4}$  NE $\frac{1}{4}$ , SE $\frac{1}{4}$  NE $\frac{1}{4}$ , E $\frac{1}{2}$  W $\frac{1}{2}$  SE $\frac{1}{4}$  and E $\frac{1}{2}$  SE $\frac{1}{4}$  of Section 1 and Sections 9 and 16, T.13S., R.63E., M.D.B.&M. The remarks section of Applications 63272 through 63276 indicate that the total duty of water sought under Applications 63272 through 63276 is 36,195 afa. The remarks section of Applications 63867, 63868, 63869, 63870, 63871, 63872, 63873, 63874, 63875 and 63876 indicate that the total duty of water sought under the applications is in addition to and non-supplemental to any water sought under Applications 63272 through 63276, which equates to an additional 72,390 afa for a total duty of 108,585 afa.<sup>13</sup>

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<sup>13</sup> Exhibit Nos. 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 and 16, Public Administrative Hearing before the State Engineer, August 20-24, 27-28, 2001, official records in the Office of the State Engineer (CSI Hearing).

## VI.

Applications 63272, 63273, 63275, and 63276 were timely protested by the following people or entities: U.S. Department of Interior National Park Service and Nevada Power Company.<sup>14</sup>

Applications 63273 and 63274 were timely protested by the U.S. Department of Interior National Park Service.<sup>15</sup>

Applications 63867, 63868, 63869, 63870, 63871, 63872, 63873, 63874, 63875 and 63876 were timely protested by the following people or entities: U.S. Department of Interior National Park Service, Nevada Power Company, U.S. Department of Interior Bureau of Indian Affairs, U.S. Department of Interior Fish and Wildlife Service, Las Vegas Valley Water District and Moapa Valley Water District.<sup>16</sup>

Applications 63272, 63274, 63275, 63276, 63867, 63868, 63869, 63870, 63871, 63872, 63873, 63874, 63875 and 63876 were protested on various grounds summarized as follows:

1. The perennial yield of Coyote Spring Valley is about 2,000 afa from precipitation recharge. Groundwater inflow to Coyote Spring Valley is about 35,000 afa and originates from basins upgradient from the valley. Discharge from the valley is primarily by subsurface outflow (about 37,000 afa) to the Muddy River Springs Area and the Muddy River. Rights to the water in the Muddy River were decreed by the Tenth Judicial District Court of the State of Nevada. The committed resources in the area of Coyote Spring Valley and the Muddy River Springs Area nearly equal the estimated groundwater underflow in the area and recharge; thus, there is no water available for appropriation in Coyote Spring Valley or the Muddy River Springs Area.
2. Coyote Spring Valley is already over-appropriated.
3. The use of the water will impair the water rights of the United States by reducing the discharge of the Muddy River from which others hold senior water rights.
4. The use of the water will reduce the discharge of springs at Lake Mead National Recreation Area and impair water rights of the United States on those spring sources.

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<sup>14</sup> Exhibit Nos. 17, 18 and 19 CSI Hearing.

<sup>15</sup> Exhibit No. 17 CSI Hearing.

<sup>16</sup> Exhibit Nos. 20, 21, 22, 23, 24 and 25 CSI Hearing.

5. The use of the water will threaten to prove detrimental to the public interest in that the groundwater resources of Coyote Spring Valley will be mined and the water and water-related resources of the Lake Mead National Recreation Area will be impaired.
6. No further permits should be issued in the Coyote Spring Valley until an approved monitoring plan has been established.
7. The use of the water could impair the senior water rights of the Moapa Valley Water District in the downgradient basin (Muddy River Springs Area - Basin 219). The Moapa Valley Water District provides public water supplies from springs (Baldwin Spring Permit 28791, and Pipeline Jones Spring Permit 22739), and wells (MX well Permit 46932 and Arrow Canyon Well Permits 52520, 55450, and 58269) and use of water under the applications has the potential to impact the quantity and quality of these rights.
8. Granting the applications would not be in the public interest.
9. Model simulations suggest there may be an immediate and substantial impact on spring discharge from the proposed withdrawals with the effect especially pronounced at the Muddy River Springs. The results from the model suggest that even the current level of pumping of already permitted rights (8,600 afa permitted to Aerojet) will affect spring discharge at the Muddy River Springs.
10. The use of the water could impair the senior water rights of the U.S. Fish and Wildlife Service at the Moapa Valley National Wildlife Refuge, which is 10 to 20 miles east of the proposed points of diversion and at the Pahrangat National Wildlife Refuge, which is 20 to 30 miles north of the proposed points of diversion. The springs that emerge at these national wildlife refuges are part of the White River Flow System, which is the same source of water the Applicant CSI proposes to appropriate and Coyote Spring Valley is physically and hydrologically connected to these regional springs.
11. The use of the water may damage habitat for species that are endangered or threatened under the Endangered Species Act or other species of concern; therefore, the use of the water would threaten to prove detrimental to the public interest. This includes the endangered Moapa dace, a minnow that is endemic to the headwaters of the Muddy River system, on the Moapa Valley National Wildlife Refuge, the endangered southwest willow flycatcher and the threatened bald eagle found at the Pahrangat National Wildlife Refuge.

12. The use of the water could impact groundwater resources beneath the Moapa Indian Reservation and the surface waters of the Muddy River.
13. The use of the water will impair the rights of the U.S. National Park Service to the Muddy River and to the springs at the Lake Mead National Recreation Area.
14. The use of the water is not in the public interest because it would result in groundwater mining.
15. The use of the water is not in the public interest given the potential sale of existing water rights by the Applicant only to apply for new water rights is speculative and indicates the Applicant has no intention of applying the water to beneficial use.

#### **VII.**

By Notice of Pre-hearing Conference dated September 15, 2000, the State Engineer held a pre-hearing conference on October 25, 2000, in the matter of the above-referenced applications.

#### **VIII.**

After notice to all parties, the State Engineer held two separate hearings on the above-referenced applications. In the matter of the LVVWD Applications 54055 through 54059, the State Engineer held a public administrative hearing on July 16-20, 23-24, and August 31, 2001. In the matter of the CSI's Applications 63272, 63273, 63274, 63275, 63276, 63867, 63868, 63869, 63870, 63871, 63872, 63873, 63874, 63875, and 63876, the State Engineer held a public administrative hearing on August 20-24, 27 and 28, 2001.

### **FINDINGS OF FACT**

#### **I.**

#### **Order 1169 and 1169A**

After the close of the above-referenced hearings, the State Engineer issued State Engineer's Order No. 1169 (Order 1169) on March 8, 2002. In that order, the State Engineer addressed what is known as the carbonate-rock aquifers, which are groundwater aquifers that exist underneath a significant portion of eastern and southern Nevada. The carbonate-rock aquifers have long been recognized as a potential water resource, but for which the water resources are not well defined, the hydrology and geology of the area are complex and data is sparse. The State Engineer noted that since 1984 it has been known that to arrive at some reasonable understanding of the carbonate-rock aquifer system, substantial amounts of money would be required to develop the science, that a significant period of study would be required,

and “unless this understanding is reached, the development of carbonate water is risky and the resultant effects may be disastrous for the developers and current users.”<sup>17</sup>

The State Engineer noted that previous studies suggested that confidence in predictions regarding the effect of development was low and would remain low until observations of the initial hydrologic results of development were analyzed. The State Engineer was concerned that the adverse effects of development would overshadow the benefits and found that the development of the carbonate-rock aquifer system must be undertaken in gradual stages together with adequate monitoring. The State Engineer noted that it is unknown what additional quantity, if any, of groundwater could be appropriated in the Coyote Spring Valley Hydrographic Basin without unreasonable and irreversible impacts. The State Engineer pointed out that the Applicants’ own experts were unable to make a suggestion as to what part of the water budget could be captured without a great deal of uncertainty and that the question could not be resolved without stressing the system.

Order 1169 noted that testimony and evidence indicated approximately 50,000 afa of underflow comes into the Coyote Spring Valley from northern groundwater basins and approximately 53,000 afa of subsurface water flows out of the Coyote Spring Valley. Of that 53,000 afa that flows out of Coyote Spring Valley, approximately 37,000 afa of water discharges at the Muddy River Springs, which is appropriated under the Muddy River Decree.<sup>18</sup> Testimony and evidence indicated another approximately 16,000-17,000 afa is believed to flow to the groundwater basins farther south. Additionally, the State Engineer found that another 50,465 afa of groundwater was already appropriated in Coyote Spring Valley and the surrounding basins identified as Black Mountains Area, Garnet Valley, Hidden Valley, Muddy River Springs Area (a.k.a. Upper Moapa Basin) and Lower Moapa Valley Hydrographic Basins. Because very few of these groundwater rights had actually been pumped, and water rights already issued in Coyote Spring Valley alone equaled the estimate of the amount of flow that by-passes the region, the State Engineer ordered additional study before consideration of granting any additional water rights in Coyote Spring Valley.

Order 1169 ordered that all applications for new appropriations from the carbonate-rock aquifer system in Coyote Spring Valley (Basin 210), Black Mountains Area (Basin 215), Garnet

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<sup>17</sup> State Engineer’s Order No. 1169, dated March 8, 2002, p. 2, official records in the Office of the State Engineer.

<sup>18</sup> Judgment and Decree, *In the Matter of the Determination of the Relative Rights In and To the Waters of the Muddy River and Its Tributaries in Clark County, State of Nevada*, March 12, 1920, Tenth Judicial District Court of the State of Nevada, In and For the County of Clark.

Valley (Basin 216), Hidden Valley (Basin 217), Muddy River Springs Area a.k.a. Upper Moapa Valley (Basin 219) and Lower Moapa Valley (Basin 220) would be held in abeyance until further information could be gathered by stressing the aquifer system by way of a pumping test. *See*, Attachment 1, Location Map of the Order 1169 Hydrographic Basins, Clark County and Lincoln County, Nevada. Unlike other basins in Nevada, the above listed basins were tied together in Order 1169 because it was well established that the spring discharge in the Muddy River Springs Area was produced from a distinct regional carbonate-rock aquifer that underlies and uniquely connects the basins. There is a very high hydraulic transmissivity found in most of this area of the carbonate-rock aquifer which results in a flat potentiometric surface in these basins. Changes in the potentiometric surface in any one of these basins occur in lockstep directly affecting the other basins, further demonstrating the regional nature of the aquifer across these basins.

In Order 1169, the State Engineer ordered a study under the provisions of NRS § 533.368 that required at least 50% (8,050 afa) of the water rights then currently permitted in Coyote Spring Valley be pumped for at least two consecutive years, and that data be gathered from others who currently held water rights in the Order 1169 area. At the end of the study, the study participants, which included the Las Vegas Valley Water District, Southern Nevada Water Authority, Coyote Springs Investment, LLC, Nevada Power Company, Moapa Valley Water District, Dry Lake Water Company, LLC, Republic Technologies, Inc., Chemical Lime Company, Nevada Cogeneration Associates or their successors, were required to submit reports identifying the information obtained and any impacts seen to the groundwater or surface water resources of the carbonate-rock aquifer system or alluvial system from the pumping. The State Engineer also ordered the LVVWD to update a model it had presented during the course of its case-in-chief at the LVVWD hearing with the new data. The State Engineer indicated that he would then decide whether sufficient information had been gathered to act on the pending applications. By State Engineer's Ruling No. 5115, dated April 18, 2002, the California Wash Hydrographic Basin (Basin 218) was included in Order 1169 because of its hydrologic connection.

By letter dated May 26, 2010, the Moapa Band of Paiute Indians indicated their concern that the pumping test itself was likely to impact water resources at the Muddy River Springs, which are the source of water for the Muddy River.

At a meeting of the Order 1169 study participants on June 22, 2010, each of the participants agreed that the pumping test would provide sufficient information even if the minimum 8,050 afa was not pumped. In response to that meeting, in a letter dated July 1, 2010, the State Engineer expressed his concern that it had been eight years since the pumping test was ordered, that the pumping requirements of the study had not even begun, and found that decisions regarding future appropriations in the basins subject to the order could not be deferred indefinitely. The State Engineer ordered that the test was to go forward even if the 8,050 afa minimum amount of pumping designated in Order 1169 was not pumped.

On December 21, 2012, the State Engineer issued Order 1169A, wherein he revised the requirements of Order 1169, indicating his belief that sufficient information had been obtained and declaring the pumping test completed as of December 31, 2012. Order 1169A provided the study participants the opportunity to address the information obtained from the study/pumping test, the impacts of pumping, and to opine as to the availability of additional water resources to support the pending applications. These reports were due in the Office of the State Engineer by June 28, 2013. The State Engineer finds that reports were submitted in a timely manner and that all the requirements of Order 1169 and 1169A have been satisfied.

## II.

### **Order 1169 and 1169A Pumping Test**

The Order 1169 pumping test originally required the participants to pump 8,050 afa from wells in Coyote Spring Valley for two years. As stated above, the State Engineer ordered on July 1, 2010, that the test go forward with reduced pumping. The test officially began on November 15, 2010. Water pumped from the MX-5 well was piped to the Moapa Valley Water District municipal infrastructure, and ultimately piped to Bowman Reservoir in Lower Moapa Valley. This water was released from Bowman Reservoir in an open channel to Lake Mead. Water pumped from wells operated by CSI was put to beneficial use in Coyote Spring Valley.

The pumping test officially ended on December 31, 2012, after a period of 25½ months. The total amount pumped between the CSI wells and the MX-5 well during the test period was 11,249 acre-feet, which translates to about 5,290 acre-feet per year, well short of the intended amount to be pumped in the study. There were a number of mechanical problems encountered during the test that required the MX-5 well to shut down. Even without the mechanical issues, the maximum pumping rate would not have resulted in a total pumpage from Coyote Spring Valley of 8,050 afa.



In addition to measuring pumping from wells in Coyote Spring Valley, pumpage was also measured and reported from 30 other wells in the Muddy River Springs Area, Garnet Valley, California Wash, Black Mountains Area, and Lower Meadow Valley Wash. Stream diversions from the Muddy River to the Reid Gardner power plant were reported by NV Energy. Measurements of the natural discharge of the Muddy River and of several of the Muddy River's headwater springs were collected daily. Water-level data were collected for 79 monitoring and pumping wells. Barometric data were collected at three sites; two sites in Coyote Spring Valley and one site in California Wash. The State Engineer finds the pumping test proceeded as required and all of the required data was collected and made available to each of the parties and the public.

### **III.**

#### **Pumping Test Reports**

Order 1169A provided the study participants the opportunity to file reports and requested they address three questions: (1) what information was obtained from the study/pumping test; (2) what were the impacts of pumping under the pumping test; and (3) what is the availability of additional water resources to support the pending applications. Reports or letters were submitted by the Southern Nevada Water Authority (SNWA), the U.S. Department of Interior Bureaus of Fish and Wildlife Service, National Park Service and Land Management (DOI Bureaus), Moapa Band of Paiute Indians (MBOP), Moapa Valley Water District (MVWD), Coyote Springs Investment, LLC (CSI), Great Basin Water Network (GBWN) (who was not a party to the hearings or a protestant) and Center for Biological Diversity (CBD) (who also was not a party to the hearings or a protestant).

#### **1. Southern Nevada Water Authority**

SNWA prepared a comprehensive report that discusses water levels in monitoring wells throughout the Order 1169 basins and stream flows in the Muddy River Springs Area. As to Question 2, SNWA did not differentiate water-level decline due to pumping at the MX-5 well from other pumping in the area.

SNWA recognized that declines in spring flow occurred at Pedersen and Pederson East springs, and that the spring flows declined as a result of new pumping at the MX-5 well. Decline in flow at Warm Springs West was characterized as minimal, and it did not recognize any other surface flow reductions caused by groundwater pumping at the MX-5 well. SNWA provided figures that illustrate how groundwater levels and some spring flows are highly correlated with

climate. Figure 12 of SNWA's report clearly shows how the long-term declining trend in groundwater levels recovered after the wet winter of 2005.<sup>19</sup> A similar correlation is noted for flows at the Warm Springs West gage, where a declining trend in spring discharge reversed after the winter of 2005.<sup>20</sup> SNWA points out that the flows of the Muddy River at Moapa did not decline during the period of the pumping test and asserts that the river flows are primarily impacted by valley fill pumping, primarily by NV Energy, and not carbonate pumping.

As to the availability of additional water for appropriation, SNWA states that:

It remains unclear if additional resource development beyond existing permitted rights could take place in Coyote Spring Valley at locations north of the Kane Spring fault in the area near CSMV-3. However, the presence of boundaries and variations in hydraulic conductivity suggest that, at a minimum, these areas may have the potential to be used for redistributing development of existing rights. Whether pending applications in Coyote Spring Valley are approved or denied, in whole or in part, they should be considered in order of priority with all other groundwater applications held in abeyance by Order 1169.<sup>21</sup>

## 2. Coyote Springs Investment, LLC

CSI submitted a letter in which they stated that they agree with the SNWA report. CSI believes water can be developed in Coyote Spring Valley north of the Kane Springs fault without impacting the Muddy River Springs and that pending applications of both CSI and SNWA should be granted in whole or part.

## 3. U.S. Department of Interior Bureaus

DOI Bureaus provided documentation and interpretations of the effects of the pumping test as well as predictions of the effects of various pumping scenarios. They analyzed water levels, spring and stream flows, and climate in the Order 1169 basins and some adjacent areas.

DOI Bureaus found the pumping test was sufficient to document the effects of the pumping, identify regional drawdown, predict future effects of pumping on water levels and spring flow, and to determine the availability of water pursuant to the applications. Their analyses of impacts under the test were extensive. They used SeriesSEE<sup>22</sup> to discern and partition the effects of pumping at the MX-5 well from pumping at other locations. Their

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<sup>19</sup> Southern Nevada Water Authority, *Nevada State Engineer Order 1169 and 1169A Study Report*, pp. 23 – 25, June 2013, official records in the Office of the State Engineer.

<sup>20</sup> *Id.* at 26.

<sup>21</sup> *Id.* at 57 - 58.

<sup>22</sup> Halford, K., Garcia, C.A., Fenelon, J., and Mirus, B., 2012, *Advanced methods for modeling water-levels and estimating drawdowns with SeriesSEE, an Excel add-In*, U.S. Geological Survey Techniques and Methods 4-F4, 29 pp.

reported findings are that water-level decline due to MX-5 pumping (drawdown) encompasses 1,100 square miles and extends from northern Coyote Spring Valley through the Muddy River Springs Area, Hidden Valley, Garnet Valley, California Wash, and the northwestern part of the Black Mountains Area. Drawdown due to MX-5 pumping is estimated to be 1 to 1.6 feet in this area. They also found minor drawdown of 0.5 feet or less in the northern part of Coyote Spring Valley north of the Kane Springs Wash fault zone, in disagreement with SNWA. They found that water-level decline did not extend into Lower Moapa Valley. They estimate 80-90% of the pumped groundwater was derived from storage (hence the drawdown) and the remainder from capture of spring flow or from reductions in the flow of the Muddy River.<sup>23</sup>

They completed an in-depth analysis of spring flows in relation to nearby carbonate water levels and found a direct correlation. Measurable flow decline at Pedersen, Plummer and Aparcar units and Baldwin Spring are highly correlated with water levels in adjacent carbonate wells. If linear trends continue, spring flow can be estimated as a function of water levels in the adjacent carbonate aquifer. They argue that all pumping from carbonate aquifers will ultimately capture spring flow.

They also compared observed water level changes to water levels simulated in a groundwater flow model of the region.<sup>24,25</sup> The model was updated to include pumping through 2012.<sup>26</sup> If the applications, which are the subject of this ruling, were pumped along with current water rights, they predict springs in the headwaters of the Muddy River, and the Muddy River itself above Moapa, would cease to flow in less than 200 years. The effects would occur much sooner if all of the pending applications held in abeyance pursuant to Order 1169 were granted and pumped. They report that the model under-predicts drawdown, and also would therefore under-predict flow losses in the springs. After analyzing model results and observations made from monitor wells and springs, they believe that pumping at current (Order 1169) rates of less

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<sup>23</sup> U.S. Fish and Wildlife Service, U.S. Bureau of Land Management and U.S. National Park Service Order 1169A Report, *Test Impacts and Availability of Water Pursuant to Applications Pending Under Order 1169*, June 28, 2013, official records in the Office of the State Engineer.

<sup>24</sup> Tetra Tech, *Development of a Numerical Groundwater Flow Model of Selected Basins within the Colorado Regional Groundwater Flow System, Southeastern Nevada*, September 28, 2012. References provided along with the DOI Report, official records in the Office of the State Engineer.

<sup>25</sup> Tetra Tech, *Predictions of the Effects of Groundwater Pumping in the Colorado Regional Groundwater Flow System Southeastern Nevada*, September 28, 2012. References provided along with the DOI Report, official records in the Office of the State Engineer.

<sup>26</sup> Tetra Tech, *Comparison of Simulated and Observed Effects of Pumping from MX-5 Using Data Collected to the End of the Order 1169 Test, and Prediction of the Rates of Recovery from the Test*, June 10, 2013. References provided along with the DOI Report, official records in the Office of the State Engineer.

than one-half of existing permits, will result in both of the Pedersen springs going dry in 3 years or less.<sup>27</sup>

The overall conclusions of the DOI Bureaus' report are that the effects of pumping from the MX-5 well are spread out over a 1,100 square-mile area. They suggest that five basins within that area, Coyote Spring Valley, Muddy River Springs Area, Hidden Valley, Garnet Valley, and California Wash should be managed as one hydrographic area because of their uniquely immediate hydrologic connection. Pumping within any of these five basins, with the possible exception of the northernmost part of Coyote Spring Valley, will have substantially similar effects on groundwater levels throughout the area because of the hydrologic connection, and will eventually capture water that discharges in the Muddy River Springs Area.<sup>28</sup>

As to the availability of water pursuant to the pending applications, the DOI Bureaus indicated that their review of the water budget and perennial yield information for Coyote Spring Valley leads to the conclusion that there is no water available for new appropriation within the five-basin area delineated through their groundwater analyses. The five-basin area that the DOI Bureaus referenced includes Coyote Spring Valley, Muddy River Springs Area, Hidden Valley, Garnet Valley and California Wash. They assert that the water budget information and pumping test results suggest that all available water in Coyote Spring Valley is appropriated and that the basin may currently be over-appropriated. Additionally, the groundwater modeling simulation results, which examined progressively greater pumping of pending water right applications in these five basins, provide supporting evidence of the wide-ranging effects that can be expected in these five basins with increased pumping in a very short period of time.

The DOI Bureaus point out that groundwater that was withdrawn in the Coyote Spring Valley over the period of the pumping test is only one-third of the groundwater rights that already exist in the basin. The DOI Bureaus assert that the pumping test provides evidence that even this reduced volume of groundwater pumping cannot be developed long-term without adverse impacts to springs, endangered fish, Federal trust resources, and downstream senior water rights. They argue that the five-basin area uniquely behaves as one connected aquifer, and pumping in any of the basins will have similar effects on the whole. Consequently, they conclude that no additional groundwater is available for appropriation to satisfy the pending

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<sup>27</sup> U.S. Fish and Wildlife Service, U.S. Bureau of Land Management and U.S. National Park Service Order 1169A Report, *Test Impacts and Availability of Water Pursuant to Applications Pending Under Order 1169*, p. 85, June 28, 2013, official records in the Office of the State Engineer.

<sup>28</sup> *Id.* at 84.

water right applications that are currently being held in abeyance for this portion of the carbonate-rock aquifer.<sup>29</sup>

#### 4. Moapa Band of Paiute Indians

MBOP provided a report that analyzed varying lines of evidence in addition to data collected during the pumping test. They analyzed water budgets, climatic effects, stream base flow identification, water demand for power generation, and water temperature-electrical conductivity and mixing models. MBOP argues that the drawdown due to MX-5 pumping was significantly less than that cited by the DOI Bureaus, and that the limit of detection of drawdown due to MX-5 pumping extended only five miles from the MX-5 well.<sup>30</sup> Nevertheless, they contend that carbonate pumping in Coyote Spring Valley and Muddy River Springs Area will have a 1:1 impact on Muddy River flows. They interpret total flux of the system in the Muddy River Springs Area as variable, ranging from about 35,000 afa to 42,000 afa, with the average being about 38,000 afa. Their average annual estimate is similar to Eakin's estimate of 36,000 afa.<sup>31</sup> MBOP asserts that some of the regional water-level decline during the period of the pumping test, and much of the annual fluctuation, is attributed to changes in the water level in Lake Mead. MBOP argues that crustal loading and deformation is associated with the rising and falling Lake Mead surface, which in turn causes pore-pressure changes and pore-volume reductions in the carbonate aquifer. They argue that these crustal effects cause carbonate water levels to rise and fall in near tandem with lake levels. They assert that these conditions have resulted in the water-level decline on the MBOP reservation that others have attributed to MX-5 pumping. They also argue for the existence of a southern carbonate aquifer flow field separated from Coyote Spring Valley and the Muddy River Springs Area by a northeasterly-trending barrier. MBOP argues this southern flow field, which includes California Wash, Hidden and Garnet valleys, and portions of the Black Mountains Area, is hydrologically isolated and could be developed without impacting spring flows. They estimate that groundwater supply to the southern flow field is 15,000 to 20,000 afa.<sup>32</sup>

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<sup>29</sup> *Id.* at 5.

<sup>30</sup> Johnson and Mifflin, *Summary of Order 1169 Testing Impacts, per Order 1169A*, p. 25, June 28, 2013, official records in the Office of the State Engineer.

<sup>31</sup> T.E. Eakin, *A Regional Interbasin Ground-water System in The White River Area, Southeastern Nevada*, Water Resources Bulletin No. 33, (Department of Conservation and Natural Resources, Division of Water Resources and U.S. Department of Interior, Geological Survey), p. 264, 1966.

<sup>32</sup> Johnson and Mifflin, *Summary of Order 1169 Testing Impacts, per Order 1169A*, p. 26, June 28, 2013, official records in the Office of the State Engineer.

As to the availability of additional water resources, the MBOP asserts that the Order 1169 test results indicate that the 1989 LVVWD applications for approximately 27,000 afa should be denied. Their rationale is that these applications equal about 72% of the flux in the carbonate-rock aquifer that discharged as pre-development base flows of the Muddy River and that all the hydrogeological evidence indicates such production would reduce the flux to the discharge area by a similar amount over a relatively short time. They assert that almost one-third of pre-development Muddy River flows are currently consumed before reaching the Moapa gage, and these applications should be denied on the grounds that they would impact senior rights by the full amount.<sup>33</sup>

The MBOP argues for the creation of a new water management unit that would include upgradient basins including at least the Muddy River Springs Area, Coyote Spring Valley and Kane Springs Valley. They assert to prevent future desiccation of the headwater springs, the currently undeveloped permits within the proposed management unit must be largely revoked, restricted, or otherwise creatively managed because they total up to a similar order of magnitude as the current flow of the Muddy River.<sup>34</sup> They indicate that the water-resource potential of the southern flow field should be evaluated with a large interim pumping experiment in the northern portion of the southern flow field near the MBOP reservation.<sup>35</sup>

#### 5. Moapa Valley Water District

MVWD evaluated only data for water levels and flows in the Muddy River Springs Area. MVWD's report recognizes that water-level declines are attributable to MX-5 pumping, as are spring flow decreases at the two Pedersen springs, Warm Springs West gage, and Baldwin Spring, but it does not recognize effects at Jones Spring or Muddy Spring at LDS.

As to the availability of additional water resources, MVWD did not provide a direct response. However, MVWD submitted a supplemental report analyzing its applications in the Lower Moapa Valley, coming to the conclusion that those applications could be developed without impacting the springs.

#### 6. Great Basin Water Network

GBWN provided both a technical report by Dr. Tom Myers and a letter summarizing their position and interpretation of the test. Their report recognized a water-level decline in

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<sup>33</sup> *Id.* at 30.

<sup>34</sup> *Ibid.*

<sup>35</sup> *Id.* at 31.

Coyote Spring Valley and the Muddy River Springs Area and decreases in spring flow that they assert are directly attributable to the MX-5 well pumping. The report states that the test did not provide adequate data to analyze water availability in the other Order 1169 basins. As to the availability of additional water resources for the pending applications, GBWN argues against granting any of the pending applications and states that pumpage of even the existing water rights in Coyote Spring Valley and the Muddy River Springs Area will result in spring flow reductions to rates that are insufficient to maintain a known endangered species.

GBWN somewhat contradicts their own report with a statement that the test did not provide adequate data to analyze water availability, and asserts that the information obtained was sufficient to make determinations on the effects of the pumping and of the availability of water not just in Coyote Spring Valley, but in all of the Order 1169 basins. The letter also argues that their report supports a conclusion that full pumping of existing rights in the Order 1169 basins will unacceptably decrease spring discharge.

#### 7. Center for Biological Diversity

CBD used the same report from Dr. Myers that was filed by the GBWN. CBD believes that pumping of existing water rights will have unacceptable effects on the springs, and, therefore, all pending applications in the Order 1169 basins should be denied. Furthermore, they assert that all applications in the entire White River Flow System up to Cave Valley should be denied. CBD also recommends that the State Engineer take administrative action to reduce permits in the Order 1169 basins to sustainable levels.

Based on the responses received and the State Engineer's own interpretations of the test, the State Engineer finds that sufficient information has been obtained from the Order 1169 pumping test to rule on the pending applications.

Based on reports filed pursuant to Orders 1169 and 1169A and the State Engineer's analysis of the pumping test, the State Engineer finds:

1. The information obtained from the pumping test satisfied the goal of the test and is sufficient to document the effects of pumping on water levels and spring flows in the Order 1169 basins. The information obtained from the test and reports is adequate to formulate an informed opinion as to the future impacts from groundwater pumping and the availability of groundwater in Coyote Spring Valley pursuant to the applications.
2. The impacts of pumping from the MX-5 well, and other existing wells, during the pumping test are widespread, and extend north in Coyote Spring Valley at least to Kane

Springs Valley, south to Hidden Valley and Garnet Valley, and southeast to the Muddy River Springs Area and California Wash. Pumping effects were seen in a small part of the Black Mountains Area, but were not observed in Lower Moapa Valley. Groundwater-level declines attributable to MX-5 pumping range from less than one foot in northern Coyote Springs Valley, two feet or more in central Coyote Spring Valley, and one foot or more in the carbonate aquifer in the Muddy River Springs Area and California Wash. The additional pumping at the MX-5 well contributed significantly to decreases in spring flow at high-elevation spring (Pedersen Springs) sources of the Muddy River, and contributed to measurable decreases in flow at Baldwin and Jones Springs and to the numerous springs whose combined flows are measured at the Warm Springs West and Iverson gages. The pumping test effects documented in Coyote Spring Valley, Muddy River Springs Area, Hidden Valley, Garnet Valley, California Wash, and part of Black Mountains Area provide clear proof of the close hydrologic connection of the basins that distinguishes these basins from other basins in Nevada.

3. Most of the groundwater in Coyote Spring Valley flows to the Muddy River Springs Area, whose surface waters are fully appropriated. After pumping approximately 5,300 afa in the Coyote Spring Valley basin for just over two years, flows in some of the Muddy River springs decreased significantly, and the decrease in flow continued through the end of pumping. The results of the pumping test and opinions provided by the DOI Bureaus, the MBOP, GBWN and CBD are persuasive, and therefore the State Engineer finds that any additional pumping from the pending applications in addition to existing rights would result in a significant regional water-level decline and an associated decrease in spring and river flows, and would conflict with existing rights at the headwater springs to the Muddy River in a few years or less. There is no unappropriated water available in Coyote Spring Valley to satisfy the subject applications.



#### IV.

##### **Perennial Yield**

Nevada Revised Statute § 533.370(2) requires that the State Engineer reject an application to appropriate water where there is no unappropriated water at the source of supply. For groundwater appropriations, the State Engineer uses the perennial yield of a basin as the measure of the amount of water available for appropriation. The perennial yield is based on water budgets for the basin in question. Water budgets and perennial yield were significant issues raised in the 2001 hearings on the pending applications that needed additional information.

The perennial yield of a groundwater basin has been defined in numerous State Engineer rulings. It can be defined as the maximum amount of groundwater that can be withdrawn each year over the long-term without depleting the groundwater reservoir. Perennial yield is ultimately limited to the maximum amount of natural discharge that can be utilized for beneficial use. The perennial yield cannot be more than the natural recharge to a groundwater basin and in some cases is less. If the perennial yield is exceeded, groundwater levels will decline and steady state conditions will not be achieved, a situation commonly referred to as groundwater mining. Additionally, withdrawals of groundwater in excess of the perennial yield may contribute to adverse conditions such as water quality degradation, storage depletion, diminishing yield of wells, increased pumping costs, and land subsidence.

In the eleven years since Order 1169 was issued, much additional hydrologic information has been made available, including publications by the U.S. Geological Survey and others. There have also been hearings before the Office of the State Engineer for water rights in nearby hydrographic basins. Technical exhibits and expert testimony in those hearings include hydrological analyses of the carbonate aquifers and water budgets in the Order 1169 basins. This information significantly expands on the available knowledge of the hydrology and water resources of the Lower White River Flow System in Coyote Spring Valley, the Muddy River Springs Area and the surrounding basins. In hearings held in the fall of 2011 concerning SNWA applications in Delamar Valley, Dry Lake Valley, and Cave Valley, several exhibits and expert testimony were presented that revise and update information presented at the Coyote Spring Valley water rights hearings.<sup>36</sup>

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<sup>36</sup> SNWA Exhibit Nos. 258 and 452, In the Matter of Applications 53987 through 53992 filed by the SNWA to Appropriate the Groundwater in Spring Valley, Cave Valley, Dry Lake Valley and Delamar Valley Hydrographic Basins (180, 181, 182, 184), September 26 through October 14 and October 31 through November 18, 2011, official records in the Office of the State Engineer.

SNWA Exhibit No. 452 from the 2011 hearing on Delamar, Dry Lake and Cave valleys is an Excel workbook that is designed to estimate groundwater recharge for all of the basins contributing to the White River Flow System from the Muddy River Springs Area northward. The exhibit was accepted by the State Engineer with some revisions,<sup>37</sup> and basin recharge and interbasin flows are specified for both Coyote Spring Valley and the Muddy River Springs Area hydrographic basins. From that exhibit, the supply of water to the Coyote Spring Valley is estimated to be approximately 41,000 afa, of which, 39,000 is subsurface inflow from upgradient basins and 2,000 afa is derived from in-basin recharge. Prior to groundwater pumping in the region, all of this water flowed in the subsurface to the Muddy River Springs Area.

The total pre-development supply of water to the Muddy River Springs Area is estimated to be approximately 49,000 afa. The basin receives roughly 41,000 afa from subsurface inflow from Coyote Spring Valley, and an estimated 8,000 afa from the Lower Meadow Valley Wash. In-basin recharge is minimal. Discharge from the basin by surface flow is estimated to be 33,600 afa, evapotranspiration is approximately 6,000 afa, and subsurface outflow to downgradient basins is an estimated 9,900 afa.<sup>38</sup> It is noted here that during periods of flood, inflows and outflows can be significantly greater than average. Flood flows are not included in these calculations, in part because these sources are transitory and not amenable to capture and long-term supply.

For basins similar to Coyote Spring Valley, where there is no groundwater evapotranspiration and all of the groundwater flows in the subsurface to an adjacent basin, recent rulings have limited the perennial yield to the portion of recharge from precipitation in that basin that was not needed to satisfy rights in the immediate downgradient basin.<sup>39</sup> In State Engineer's Ruling Nos. 6165, 6166, and 6167, there was a consideration for how long it might take for an existing water right to be impacted, and the State Engineer found that where no significant effects would be felt for hundreds of years, the upgradient groundwater could be appropriated. Other early decisions of the State Engineer had allowed one-half of the total subsurface groundwater discharge to be appropriated as the perennial yield of such basins. State of Nevada

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<sup>37</sup> State Engineer's Ruling No. 6166, dated March 22, 2012, pp. 72 – 73, official records in the Office of the State Engineer.

<sup>38</sup> SNWA Exhibit Nos. 258 and 452, In the Matter of Applications 53987 through 53992 filed by the SNWA to Appropriate the Groundwater in Spring Valley, Cave Valley, Dry Lake Valley and Delamar Valley Hydrographic Basins (180, 181, 182, 184), September 26 through October 14 and October 31 through November 18, 2011, official records in the Office of the State Engineer.

<sup>39</sup> State Engineer's Ruling Nos. 6165, 6166, and 6167, dated March 22, 2012, official records in the Office of the State Engineer.

Water Planning Report No. 3 lists the perennial yield of Coyote Spring Valley as 18,000 acre-feet, approximately one-half of the basin subsurface discharge.<sup>40</sup> One of the goals of the Order 1169 test was to determine the perennial yield of Coyote Spring Valley.

The vast majority of the scientific literature supports the premise that, unlike other separate and distinct basins in Nevada that do not feature carbonate-rock aquifers, all of the Order 1169 basins share virtually all of the same supply of water. The Order 1169 pumping test further supports the conclusion that pumping from any of the five basins with a close hydrologic connection (Coyote Spring Valley, Muddy River Springs Area, Hidden Valley, Garnet Valley and California Wash) will have a similar impact on water levels in the five-basin area and on the Muddy River spring flows. Therefore, because these basins share a unique and close hydrological connection and share virtually all of the same source and supply of water, unlike other basins in Nevada, these five basins will be jointly managed. The perennial yield of these basins cannot be more than the total annual supply of 50,000 acre-feet. Because the Muddy River and Muddy River springs also utilize this supply, and are the most senior water rights in the region, the perennial yield is further reduced to an amount less than 50,000 acre-feet. The State Engineer finds that the amount and location of groundwater that can be developed without capture of and conflict with senior water rights on the Muddy River and springs remains unclear, but the evidence is overwhelming that unappropriated water does not exist.

#### V.

Recent rulings by the State Engineer for groundwater applications in other basins within the White River Flow System allowed for the appropriation of additional water.<sup>41</sup> These basins, Cave Valley, Dry Lake Valley, and Delamar Valley Hydrographic Basins, lie 40 to 100 miles north of the Muddy River Springs. Groundwater from both Dry Lake Valley and Delamar Valley is believed to contribute to discharge from the springs. Water rights were granted in the Cave Valley, Dry Lake Valley and Delamar Valley basins based on two critical points that do not exist in the basins in Order 1169. First, the groundwater appropriated in the Cave Valley, Dry Lake Valley and Delamar Valley basins is recharged within the basins. Water is available at the source and can be developed without depleting the supply. Second, the water can be developed without conflicting with any existing rights for hundreds of years. In contrast, neither of these conditions is met in the Order 1169 basins. Recharge in each of the Order 1169 basins is

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<sup>40</sup> Office of the State Engineer, *Water for Nevada, State of Nevada Water Planning Report No. 3*, Oct. 1971.

<sup>41</sup> State Engineer's Ruling Nos. 6165, 6166 and 6167, dated March 22, 2012, official records in the Office of the State Engineer.

already appropriated. Subsurface inflow is appropriated as well. Development of additional water will conflict with existing rights in months to years. The State Engineer finds the basins of Order 1169 fail on both statutory requirements.

## VI.

### Existing Rights

Nevada Revised Statute § 533.370(2) requires that the State Engineer reject an application to appropriate water where the use of the water conflicts with existing rights or with protectable interests in existing domestic wells. There are 16,200 acre-feet of senior groundwater rights in Coyote Spring Valley as well as approximately 33,000 acre-feet of senior groundwater rights in the other Order 1169 basins. The Muddy River and springs, the discharge location of the bulk of the region's water, have approximately 30,000 afa of decreed and appropriative rights.

One of the main goals of Order 1169 and the associated pumping test was to observe the effects of increased pumping on groundwater levels and spring flows. The Pedersen and Pedersen East springs, the highest elevation springs in the area and which are considered to be the "canary in the coal mine" with respect to impacts from pumping, showed an unprecedented decrease in flow during the pumping test. Pedersen spring flow decreased to 0.08 cfs, down from its average of about 0.22 cfs prior to the test. Pedersen East decreased to 0.12 cfs, down from its average flow of 0.2 cfs prior to the test.<sup>42,43</sup> The Warm Springs West gage, the site at which trigger levels have been set among parties to a memorandum of agreement,<sup>44</sup> declined from 3.6 to 3.3 cfs during the test.<sup>45</sup> Baldwin and Jones Springs declined about 4% during the test.<sup>46</sup> The Muddy River at the Moapa gage did not display any decrease in flow,<sup>47</sup> although the

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<sup>42</sup> U.S. Fish and Wildlife Service, U.S. Bureau of Land Management and U.S. National Park Service Order 1169A Report, *Test Impacts and Availability of Water Pursuant to Applications Pending Under Order 1169*, pp. 43 – 46, June 28, 2013, official records in the Office of the State Engineer.

<sup>43</sup> <http://waterdata.usgs.gov/nv/nwis/>.

<sup>44</sup> In 2006, a Memorandum of Agreement (MOA) was signed by the Southern Nevada Water Authority, U.S. Fish and Wildlife Service, Coyote Springs Investment, LLC, Moapa Band of Paiute Indians, and Moapa Valley Water District pursuant to which, the parties agreed to certain conservation measures for the protection and recovery of the Moapa dace, an endangered species found in the Moapa Valley National Wildlife Refuge.

<sup>45</sup> <http://waterdata.usgs.gov/nv/nwis/>.

<sup>46</sup> U.S. Fish and Wildlife Service, U.S. Bureau of Land Management and U.S. National Park Service Order 1169A Report, *Test Impacts and Availability of Water Pursuant to Applications Pending Under Order 1169*, pp. 50 – 51, June 28, 2013, official records in the Office of the State Engineer.

<sup>47</sup> Southern Nevada Water Authority, *Nevada State Engineer Order 1169 and 1169A Study Report*, p. 41, June 2013, official records in the Office of the State Engineer.

MBOP report points out that total flux of the system is variable, and argues that flows in the river would have been even higher if Order 1169 pumping had not occurred.<sup>48</sup>

The State Engineer finds that pumping under the Order 1169 test measurably reduced flows in headwater springs of the Muddy River, and it is clear that if pending water right applications were permitted and pumped in addition to existing groundwater rights in Coyote Spring Valley and the other Order 1169 basins, headwater spring flows would be reduced in tens of years or less to the point that there would be a conflict with existing rights. The State Engineer finds the Muddy River and the Muddy River springs, the discharge location of the bulk of the region's water, is fully appropriated. As for the Muddy River, the State Engineer finds that evidence submitted by the DOI Bureaus and MBOP is convincing that pumping of groundwater under the pending applications in addition to existing rights would reduce the flow of the Muddy River in tens of years or less to the point where there would be a conflict with existing rights.

## VII.

### Public Interest

Nevada Revised Statute § 533.370(2) requires the State Engineer reject an application if the use of the water threatens to prove detrimental to the public interest. The State Engineer views this requirement in terms of Nevada water law and management of the public's water, but not to areas that are outside of his purview. The State Engineer finds to approve applications that will within a short period of time conflict with existing water rights threatens to prove detrimental to the public interest.

The Moapa dace is an endangered species that lives only in the headwater springs of the Muddy River. The USFWS holds water rights on some of the springs in the Muddy River Springs Area that were appropriated specifically for the protection of the dace. The State Engineer finds to permit the appropriation of additional groundwater resources in the Coyote Spring Valley, which is directly connected to the regional aquifer in the Order 1169 area, would impair protection of these springs and the habitat of the Moapa dace and therefore threatens to prove detrimental to the public interest.

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<sup>48</sup> Johnson and Mifflin, *Summary of Order 1169 Testing Impacts, per Order 1169A*, pp. 5 - 8, June 28, 2013, official records in the Office of the State Engineer.

## CONCLUSIONS

### I.

The State Engineer has jurisdiction over the parties and the subject matter of this action and determination.<sup>49</sup>

### II.

The State Engineer is prohibited by law from granting a permit under an application to appropriate the public water where:<sup>50</sup>

- A. there is no unappropriated water at the proposed source;
- B. the proposed use or change conflicts with existing rights;
- C. the proposed use or change conflicts with protectable interests in existing domestic wells as set forth in NRS § 533.024; or
- D. the proposed use or change threatens to prove detrimental to the public interest.

### III.

The State Engineer concludes that there is no additional groundwater available for appropriation in the Coyote Spring Valley Hydrographic Basin without conflicting with existing water rights in the Order 1169 basins.

### IV.

The State Engineer concludes that approval of the applications would threaten to prove detrimental to the public interest by removing water that in the past has been available for the endangered species in the Order 1169 basins. The State Engineer concludes that while the use of the water under these applications may have a public benefit, removing the water from the springs would threaten to prove detrimental to the public interest in that it would threaten the water resources upon which the endangered Moapa dace are dependent.

## RULING

The protests to Applications 54055, 54056, 54057, 54058, 54059, 63272, 63273, 63274, 63275, 63276, 63867, 63868, 63869, 63870, 63871, 63872, 63873, 63874, 63875, and 63876 are hereby upheld in part and the applications are hereby denied on the grounds that there is no unappropriated groundwater at the source of the supply, the proposed use would conflict with existing rights in the Order 1169 basins and the proposed use of the water would threaten to prove detrimental to the public interest in that it would threaten the water resources upon which

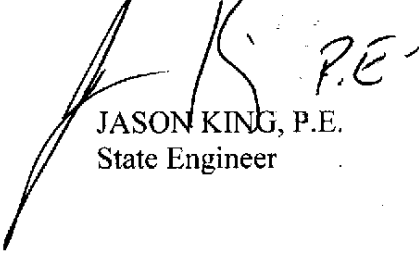
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<sup>49</sup> NRS Chapters 533 and 534.

<sup>50</sup> NRS § 533.370(2).

the endangered Moapa dace are dependent. No ruling is made on the merits of the remaining protest grounds.

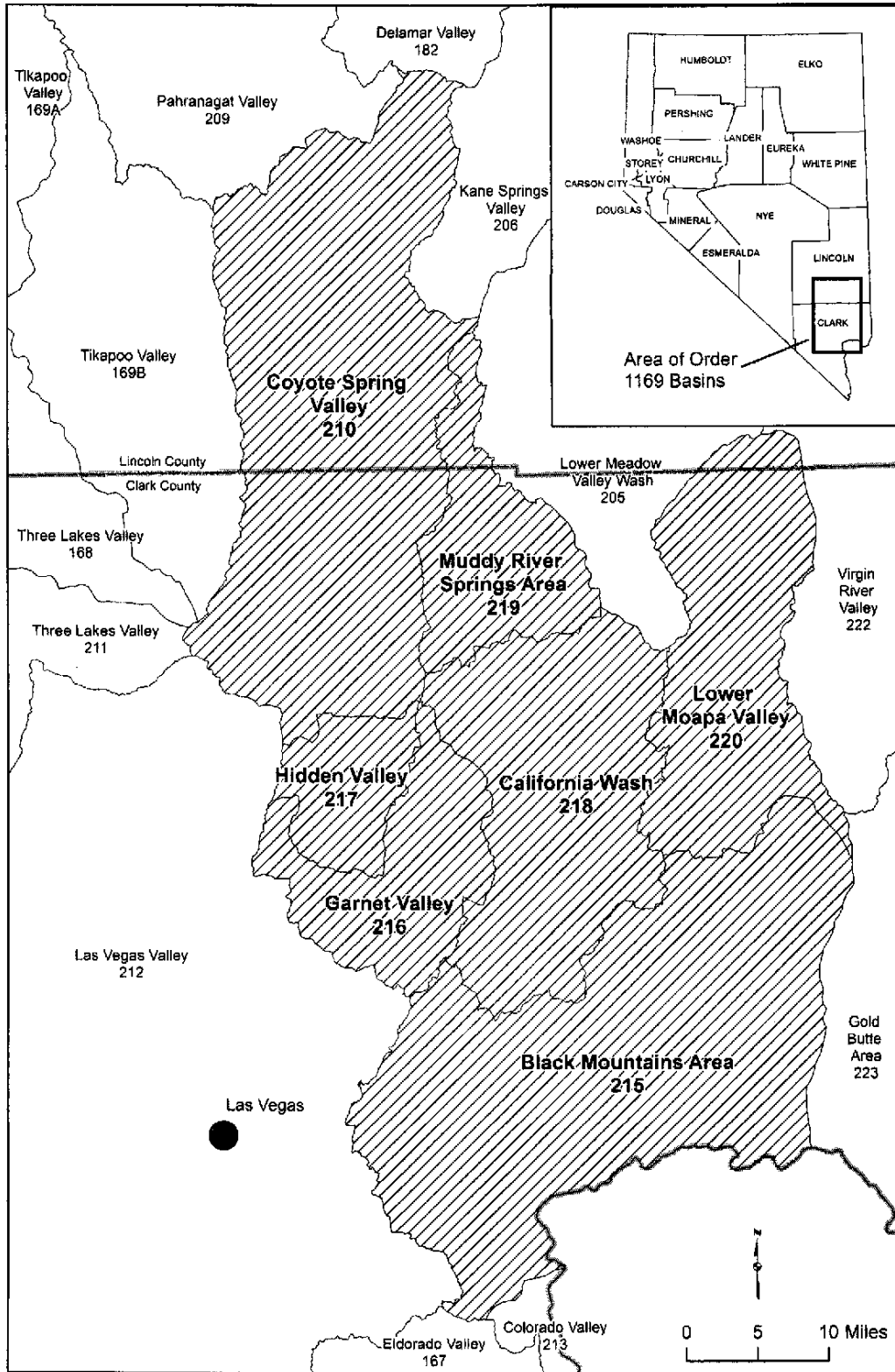
Respectfully submitted,



JASON KING, P.E.  
State Engineer

Dated this 29<sup>th</sup> day of  
January, 2014.

ATTACHMENT 1



Location Map of the Order 1169 Hydrographic Basins, Clark County and Lincoln County, Nevada.



## MEMORANDUM OF AGREEMENT

This Memorandum of Agreement (“MOA”) is entered into this 20<sup>th</sup> day of April, 2006, (the “Effective Date”) by and between the Southern Nevada Water Authority (“SNWA”), a political subdivision of the State of Nevada, the United States Fish and Wildlife Service (“FWS”), Coyote Springs Investment LLC, a Nevada limited liability company (“CSI”), the Moapa Band of Paiute Indians (“Tribe”) and the Moapa Valley Water District (“MVWD”), a political subdivision of the State of Nevada. For convenience, SNWA, FWS, CSI, the Tribe and MVWD are at times herein referred to individually as “Party” and collectively as “Parties.”

### RECITALS

A. In Order No. 1169 the Nevada State Engineer held in abeyance applications for new groundwater rights in certain groundwater basins, and mandated that SNWA, MVWD and other parties conduct a regional groundwater study including the pumping of at least 50 percent of the permitted water rights within the Coyote Spring Valley hydrographic basin for a period of at least two consecutive years (“Pump Test”).<sup>1</sup> SNWA currently owns 9,000 afy of water rights with points of diversion within the Coyote Spring Valley hydrographic basin under Permit Nos. 49414, 49660 through 49662 and 49978 through 49987 (“SNWA Water Rights”).

B. To facilitate the Pump Test and delivery of SNWA Water Rights, SNWA applied to the Bureau of Land Management (“BLM”) for a right-of-way across Federal land for the

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<sup>1</sup> Currently there are 16,100 acre-feet per year (“afy”) of permitted groundwater rights in the Coyote Spring Valley hydrologic basin, including the SNWA Water Rights and CSI Water Rights, defined in Recitals A and D herein, and Order No. 1169 requires the continuous diversion of 8,050 acre-feet per year during the Pump Test.

construction and operation of a pipeline to deliver groundwater from the Coyote Spring hydrographic basin to either the Muddy River System or to MVWD's service system.

C. In Ruling No. 5115 the Nevada State Engineer granted Application No. 54075, filed by the Las Vegas Valley Water District ("District") on October 17, 1989, for a total duty of 2,500 afy with a diversion rate of 5.0 cubic feet per second ("cfs") within the California Wash hydrographic basin ("Permit No. 54075"). By separate agreement, the District has transferred ownership of Permit No. 54075 to the Tribe. The Tribe plans to divert and utilize groundwater under Permit No. 54075.

D. CSI is a private landowner in the Coyote Spring Valley hydrographic basin and owns 4,600 afy of water rights with points of diversion within the basin under Permit Nos. 70429 and 70430 ("CSI Water Rights").

E. MVWD is responsible for supplying the municipal water needs of Upper and Lower Moapa Valley located in Clark County, Nevada. MVWD owns several water rights within Upper Moapa Valley including surface rights to spring flows in the Muddy Springs area and groundwater rights (Permit Nos. 52520, 55450 and 58269) with points of diversion at the Arrow Canyon well and a right to 1.0 cfs of spring flow from the Jones Spring (Certificate No. 10060) ("Jones Water Right").

F. FWS is a Federal agency within the Department of the Interior. FWS' responsibilities include implementation of the Endangered Species Act and administration of the National Wildlife Refuge System. FWS holds a Nevada State water right certificate for a flow rate of not less than 3.5 cfs as measured at the Warm Springs West flume (Permit No. 56668; Certificate No. 15097 issued subject to the terms of Permit No. 56668) for the maintenance of habitat of the Moapa dace and other wildlife purposes ("FWS Water Right").

G. The Moapa dace (*Moapa coriacea*) is an endemic fish that inhabits the upper Muddy River and tributary thermal spring systems within the Warm Springs area in Clark County, Nevada. The Moapa dace was federally listed as endangered on March 11, 1967 (32 FR 4001). FWS manages the Moapa Valley National Wildlife Refuge established in 1979 as part of the National Wildlife Refuge System.

H. Based upon its evaluation of available data, FWS postulates that current groundwater pumping by MVWD at the Arrow Canyon well is causing a decline in spring flows in the Warm Springs area and that future withdrawals of groundwater by SNWA and/or CSI in the Coyote Spring Valley hydrographic basin and/or by the Tribe in the California Wash hydrographic basin may cause spring flows to decline. SNWA, CSI, and MVWD do not believe the available hydrologic data supports these conclusions.

I. The Tribe believes that regional groundwater monitoring and scientifically valid, but conservative, regional computer modeling have demonstrated and will continue to demonstrate that on-Reservation groundwater pumping authorized under Permit No. 54075 will not cause appreciable declines in spring flows in the Warm Springs area.

J. Prior to the issuance of Order No. 1169, a stipulation was executed on July 19, 2001, between Federal agencies and SNWA regarding protests filed by Federal agencies against SNWA applications for new groundwater rights in the Coyote Spring Valley hydrographic basin. The Federal agencies and SNWA agreed to implement a monitoring study that was clarified in a Monitoring, Management, and Mitigation Plan for Existing and Future Permitted Groundwater Development in Coyote Spring Valley ("3M Plan") attached to and incorporated in that stipulation.

K. As part of the approval of the MVWD water rights at the Arrow Canyon well, the Nevada State Engineer required a monitoring plan. A monitoring plan has been developed and agreed upon jointly by MVWD, Nevada Power Company, FWS and National Park Service, with the most recent amendments to that plan being submitted to the State Engineer in September 2002 (“MVWD Monitoring Plan”).

L. State Engineer Ruling No. 5115 requires that “[a] monitoring program approved by the State Engineer prior to the diversion of any water [under Permit No. 54075] be prepared in conjunction with the [Pump Test] ordered in State Engineer’s Order No. 1169.”<sup>2</sup> The Tribe will develop, in coordination with the other Parties, a monitoring plan approved by the Nevada State Engineer prior to applying any groundwater to beneficial use under Permit No. 54075 (“Tribal Monitoring Plan”).

M. On March 11, 2005, the Nevada State Engineer approved a document entitled “Southern Nevada Water Authority’s Monitoring Plan for Groundwater Applications and Permits in Coyote Spring Valley, Hidden and Garnet Valleys, and California Wash Hydrographic Basin, Clark and Lincoln Counties March, 2005” (“SNWA Monitoring Plan”). The State Engineer directed that the SNWA Monitoring Plan serve as the monitoring plan required by the State Engineer for the SNWA Water Rights and the CSI Water Rights.

N. The Parties share a common interest in the conservation and recovery of the Moapa dace and its habitat. Each Party also has an interest in the protection, use and enjoyment of its water rights and entitlements. To serve these interests, the Parties have identified certain conservation measures with the objective of making measurable progress toward the conservation and recovery of the Moapa dace, and have agreed to coordinate the monitoring, management and mitigation measures included and to be included in the 3M Plan, MVWD

Monitoring Plan, SNWA Monitoring Plan, and Tribal Monitoring Plan (collectively the “Regional Monitoring Plans”).

O. The Parties desire that FWS engage in consultation and prepare a formal biological opinion under the provisions of Section 7 of the Endangered Species Act and its implementing regulations prior to execution of this MOA. The consultation shall consider the effects on the Moapa dace from the pumping of 9,000 afy under the SNWA Water Rights, 4,600 afy under the CSI Water Rights, and 2,500 afy by the Tribe under Permit No. 54075, together with the implementation of the monitoring, management and conservation measures identified herein.

NOW, THEREFORE, in consideration of the mutual promises and covenants contained herein, the Parties do agree as follows:

I. Conservation Measures. The Parties agree that in order to make measurable progress toward protection and recovery of the Moapa dace and its habitat concurrent with the operation and development of water projects for human use, it is beneficial to the public interest to establish the following conservation measures:

1. Establishment of Recovery Implementation Program. To effectuate the goals of this MOA the Parties agree to establish a Recovery Implementation Program (“RIP”) whereby measures necessary to accomplish the protection and recovery of the Moapa dace, the operation and development of regional water facilities, and the inclusion of necessary and interested third parties are outlined and implemented. To facilitate establishment of the RIP:

a. The Parties agree to cooperate in the selection of qualified personnel and/or contractors to oversee the development of the RIP.

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<sup>2</sup> Ruling No. 5115 at 40.

b. SNWA agrees to provide funding in the amount of \$300,000.00 to develop the RIP. SNWA agrees to execute such documents as may be necessary to ensure that these funds are available to meet the needs of those persons designated by the Parties with the task of establishing the RIP.

c. The Parties agree to seek the cooperation of other parties within the region that have an interest in the development and management of water and biological resources. To achieve the goals of the RIP, the Parties agree to employ principles of adaptive management to further the current understanding of the habitat and aquatic needs of the Moapa dace. The Parties will jointly negotiate the participation of any other party in the RIP.

2. Dedication of the Jones Water Right. The Parties agree that the recovery of the Moapa dace will be enhanced by the guarantee of additional in-stream flows in areas of historical Moapa dace habitat. One such area is the Apcar Stream down gradient of the Jones Spring. The Parties concur that the dedication of the Jones Water Right to the purpose of providing in-stream flows will be beneficial to the Moapa dace population in this area and further the recovery of the species. To effectuate the dedication of the Jones Water Right to the provision of in-stream flows in the Apcar Stream, the Parties agree as follows:

a. MVWD agrees to record an agreement between MVWD and FWS (“Jones Springs Agreement”) on the Jones Water Right with both the Nevada State Engineer and the Clark County, Nevada, Recorder’s Office that requires the entire 1.0 cfs flow right under the Jones Water Right to be dedicated to the purpose of maintaining in-stream flows in the Apcar Stream subject to the provisions of paragraph 7 of the Jones Springs Agreement. MVWD shall retain ownership of the Jones Water Right. The Jones Springs Agreement shall be executed and recorded promptly upon execution of this MOA. A draft of the Jones Springs Agreement is

attached hereto as "Exhibit A." The Jones Springs Agreement ultimately recorded pursuant to this paragraph shall be in substantially the same form as Exhibit A.

b. SNWA agrees to transfer to MVWD, at no cost, a portion of Permit No. 49414 equal to 724 afy. This transferred portion of Permit No. 49414 shall remain of equal priority date with that portion of Permit No. 49414 retained by SNWA.

c. MVWD agrees to transfer to SNWA, at no cost, the first 724 afy, or any portion thereof if less than 724 afy is permitted, of any permit(s) issued by the Nevada State Engineer pursuant to Application Nos. 54055 through 54059, inclusive.

d. The Parties agree to cooperate with MVWD in the filing and processing of any change applications, including applications to change the manner or place of use that are filed by MVWD with the Nevada State Engineer in order to effectuate the Jones Springs Agreement referenced in paragraph I(2)(a) above.

e. Subject to paragraph 2 of the Jones Springs Agreement, the Parties agree to cooperatively determine the best methods to ensure that the Jones Water Right accomplishes the purpose stated in paragraph I(2)(a) above, as related to the recovery of the Moapa dace and other endemic species, including the possibility of restoration of the springhead at Jones Spring.

3. Dedication of Portion of CSI Water Rights.

a. CSI agrees to record a conservation easement with both the Nevada State Engineer and the Clark County, Nevada, Records Office dedicating 460 afy of the CSI Water Rights to the survival and recovery of the Moapa dace and its habitat. The use of this water would be at the discretion of the FWS in consultation with the CSI and the Parties.

b. In addition, CSI agrees to dedicate 5 percent of all water rights above 4,600 afy that CSI may in the future be entitled to withdraw from Coyote Spring Valley

hydrographic basin or any water rights that CSI imports into and uses in the basin. The Parties, consistent with the RIP, will determine the most effective method for utilizing such water rights. CSI shall execute and record such documentation, including conservation easements, deeds, change applications and reports of conveyance, as may be necessary to effectuate the dedication of that portion of such water rights that is subject to the terms and conditions contained herein.

4. Habitat Restoration and Recovery Measures. To restore the habitat necessary for the Moapa dace and take other steps to protect and recover the species, the Parties agree as follows:

a. SNWA agrees to provide funding in the amount of \$750,000.00 for the restoration of Moapa dace habitat under the direction of FWS on the Apcar Unit of the Moapa National Wildlife Refuge or otherwise. All tasks funded under this paragraph I(4)(a) shall be agreed to in advance by SNWA and FWS in consultation with the other Parties. SNWA agrees to execute such documents as may be necessary in order to ensure that these funds are available for such habitat restoration.

b. FWS agrees to provide funding in the amount of \$125,000.00 and SNWA agrees to provide funding in the amount of \$125,000.00 to develop an ecological model designed to investigate the effects of habitat change on the ecology of the Moapa dace. FWS and SNWA shall, in consultation with the other Parties, agree upon the selection of a contractor to prepare the model.

c. SNWA agrees to provide funding in the amount of \$50,000.00 to construct fish barriers to help eliminate the predacious Tilapia from areas of Moapa dace habitat. FWS and SNWA shall, in consultation with the other Parties, agree upon the selection of a contractor to perform such work.



d. SNWA agrees to provide funding in the amount of \$25,000.00 to implement programs related to the eradication of non-native fish species, including predacious Tilapia, in the Warm Springs area. FWS and SNWA shall, in consultation with the other Parties, agree upon the selection of a contractor to perform such work.

e. CSI agrees to provide FWS with funding on an annual basis in the amount of \$50,000.00 for a period of four years following the execution of this MOA for the restoration of Moapa dace habitat outside the boundaries of the Moapa National Wildlife Refuge along the Apcar Stream, or at such other locations as CSI and FWS, in consultation with the other Parties, agree.

f. The Tribe agrees to use a reasonable portion of the existing on-Reservation greenhouse facility for a reasonable period of years, for the purpose of cultivating native vegetation for use in RIP-approved habitat restoration. The Parties understand that the greenhouse is in a state of major disrepair and that such use of the greenhouse will require repairs and a water supply. FWS will work with the Tribe to obtain the funding necessary to provide for such repairs and to identify and secure a water supply adequate for such use. The Tribe reserves the right to pursue, and if feasible implement, separate arrangements for the improvement and commercial operation of the remainder of the greenhouse.

g. The Tribe agrees to provide access to the Tribe's Reservation for the construction and subsequent maintenance of at least one fish barrier, at a mutually agreeable location, to help eliminate the predacious Tilapia from Moapa dace habitat. FWS will work with the Tribe to obtain the funding necessary for construction, maintenance and repair of such barrier(s).

h. The Tribe agrees to provide the services of the Tribe's Environmental Director for in-kind staff services and participation in the RIP.

5. Protection of In-Stream Flows. The Parties recognize that maintenance of minimum in-stream flows in the Warm Springs area is essential for the protection and recovery of the Moapa dace. Although those flows are unknown at this time, the Parties agree as follows:

a. For purposes of this paragraph I(5), all "Average Flow Levels" specified herein shall be determined by flow measurements at the Warm Springs West flume. Average Flow Levels will be determined to have reached a particular level within a range specified in paragraphs I(5)(b) through (g) ("Trigger Range"): (1) if the daily average flow for each of 45 consecutive days decreases to an amount within the Trigger Range, or if the 90 day average flow over any 90 consecutive day period decreases to an amount within the Trigger Range; or (2) if the daily average flow for each of 90 consecutive days increases to an amount within the Trigger Range, or if the 135 day average flow over any 135 consecutive day period increases to an amount within the Trigger Range. If determined to be necessary by the Parties, the Parties will cooperate in removing phreatophytes, repairing or replacing the flume or taking any other steps to ensure the accuracy of flume measurements. Any adjustment in the rating curve for the Warm Springs West flume shall result in a pro-rata adjustment of the Trigger Ranges. The remaining provisions of this paragraph I(5) apply both during and after the Pump Test, except for paragraphs I(5)(c)(i) and (ii) which apply only during the Pump Test.

b. If the Average Flow Level decreases to an amount within the Trigger Range of 3.2 cfs or less, the Parties agree to meet as soon as practicably possible to discuss and interpret all available data and plan for mitigation measures in the event flows continue to decline.

c. If the Average Flow Level decreases to an amount within the Trigger Range of 3.0 cfs or less, the following Parties agree to take the following further actions:

- i. During the pendency of the Pump Test, MVWD agrees to immediately cease pumping from the Arrow Canyon well; and
- ii. While the Arrow Canyon Well is shut down pursuant to paragraph I(5)(c)(i) above, SNWA agrees to supply MVWD with all necessary municipal and domestic water supplies from the MX-5 and RW-2 wells or other sources available to the SNWA. Except for the express provision contained in paragraph I(2)(b) of this MOA, nothing in this MOA will obligate SNWA to supply MVWD with any water from SNWA's existing permits in the Coyote Spring Valley following the completion of the Pump Test; and
- iii. SNWA and CSI agree to take necessary actions to prepare to geographically redistribute their groundwater pumping in the Coyote Spring Valley should flow levels continue to decline; and

d. If the Average Flow Level is within the Trigger Range of 3.0 cfs or less but greater than 2.9 cfs, the pumping of SNWA from the MX-5, RW-2, CS-1 and CS-2 wells in combination with the pumping of CSI from the MX-5, RW-2, CS-1 and CS-2 and CSI's pumping from other wells within the Coyote Springs Valley ("CSV") shall be restricted to 8,050 afy.

e. If the Average Flow Level is within the Trigger Range of 2.9 cfs or less but greater than 2.8 cfs, the pumping of SNWA from the MX-5, RW-2, CS-1 and CS-2 wells in combination with the pumping of CSI from the MX-5, RW-2, CS-1 and CS-2 and CSI's

pumping from other wells in CSV shall be restricted to 6,000 afy, and the pumping of the Tribe under Permit No. 54075 shall be restricted to 2,000 afy.

f. If the Average Flow Level is within the Trigger Range of 2.8 cfs or less but greater than 2.7 cfs, the pumping of SNWA from the MX-5, RW-2, CS-1 and CS-2 wells in combination with the pumping of CSI from the MX-5, RW-2, CS-1 and CS-2 and CSI's pumping from other wells in CSV shall be restricted to 4,000 afy, and the pumping of the Tribe under Permit No. 54075 shall be restricted to 1,700 afy.

g. If the Average Flow Level is within the Trigger Range of 2.7 cfs or less, the pumping of SNWA from the MX-5, RW-2, CS-1 and CS-2 wells in combination with the pumping of CSI from the MX-5, RW-2, CS-1 and CS-2 and CSI's pumping from other wells in CSV shall be restricted to 724 afy, and the pumping of the Tribe under Permit No. 54075 shall be restricted to 1,250 afy.

h. The Parties agree that any pumping of the 460 afy of CSI Water Rights dedicated to the survival and recovery of the Moapa dace pursuant to paragraph 3.a. of this MOA shall be at the discretion of FWS and not counted against the pumping restrictions set forth in paragraphs 5(d) through 5(g) of this MOA.

6. Hydrologic Review Team. Upon execution of this MOA, the Parties shall establish a Hydrologic Review Team ("HRT") which shall be constituted and function as follows:

a. Membership. Each Party shall appoint two representatives ("HRT Representatives"), including at least one with substantial formal training and experience in hydrogeology ("Technical Representative"). Except as otherwise provided herein, the two HRT Representatives shall together have one vote on HRT matters. By consensus, the HRT

Representatives may offer voting or non-voting HRT membership to others who provide regional monitoring records and analyses to the HRT.

b. Objectives. The objectives of the HRT shall be: (1) to identify opportunities and make recommendations for the purpose of coordinating and ensuring accuracy, consistency and efficiency in monitoring, other data collection, and analytical activities performed under the Regional Monitoring Plans; (2) to establish technically sound analyses of impacts on Muddy River Springs and Muddy River flows resulting from regional groundwater pumping; (3) to assess based thereon whether the pumping restrictions, but not the Trigger Ranges, under paragraphs I(5)(c) through (g) above (or any successors thereto) should be adjusted to better reflect the extent to which regional groundwater pumping by the respective Parties causes, or is likely to cause, impacts on Muddy River Springs and Muddy River flows; and (4) to adopt by consensus appropriate adjustments to such restrictions, if warranted.

c. Regional Baseline Pumping Analysis. Within one year following the execution of this MOA, the Technical Representatives shall prepare a written analysis of regional groundwater pumping data and impacts (“Regional Baseline Pumping Analysis”). In preparing such baseline analysis, the HRT shall consider all relevant and available data and analytical materials. The Regional Baseline Pumping Analysis shall set forth all shared and dissenting analyses, interpretations and recommendations of the participating Technical Representatives. All modeling analyses contained therein shall be based on modeling codes in the public domain and data files that are available for comprehensive review by all Technical Representatives.

d. Annual Determination. Based on the Regional Baseline Pumping Analysis, and no later than one year after preparation of that analysis and annually thereafter, the HRT shall endeavor to determine by consensus (“Annual Determination”) whether the

groundwater pumping restrictions, but not the Trigger Ranges, under paragraphs I(5)(c) through (g) above (or any successors thereto) should remain in place, or whether and how any of such restrictions should be adjusted (“Pumping Restriction Adjustments”) to better reflect the extent to which regional groundwater pumping by the respective Parties causes, or is likely to cause, impacts on Muddy River Springs and Muddy River flows. However, no Pumping Restriction Adjustments will be made within the first five years following the Effective Date of this MOA. All Annual Determinations (including any Pumping Restriction Adjustments adopted by HRT consensus) shall be final and binding on all Parties, except that by consensus the HRT may at any time modify or vacate any Annual Determination.

e. Annual Determination Reports. Each Annual Determination shall be set forth and explained in a written Annual Determination Report which includes as appendices the Regional Baseline Pumping Analysis, all previously submitted Annual Technical Representative’s Reports, and any other data or analytical materials considered by the HRT. If the Annual Determination is not made due to lack of consensus or any other reason, the positions thereon of the HRT Representatives shall be set forth and explained in the Annual Determination Report. Furthermore, if the HRT fails to adopt Pumping Restriction Adjustments recommended in a timely submitted Annual Technical Representative’s Report, the Annual Determination Report shall briefly explain why such recommendation was not adopted.

f. Annual Technical Representative’s Reports. Within six months after the close of the year of this MOA and annually thereafter, based on the best available scientific data and information, any Technical Representative may submit to all other HRT Representatives a written report (“Annual Technical Representative’s Report”) containing both: (1) a well-

documented professional analysis of monitored regional pumping and pumping impacts; and (2) recommendations, if any, for Pumping Restriction Adjustments.

g. Provision for Peer Review. If the HRT Representatives are unable to reach consensus on an Annual Determination, the Parties shall refer the matter to a qualified panel of third party reviewers (“Panel”) consisting of three scientists unaffiliated with any Party and having substantial formal training and experience in hydrogeology. If the Parties cannot agree by consensus on the make-up of the Panel, one member of the Panel shall be designated by each of the following from its own ranks: U.S. Geologic Survey, Desert Research Institute and a private firm with the requisite expertise designated by a majority of the Parties (“Appointing Entities”), provided that the Parties by consensus may designate different similarly qualified Appointing Entities. If any Appointing Entity for any reason is unable or refuses to designate a member of the Panel, the Parties by majority vote shall designate a qualified replacement Appointing Entity. The purpose of the referral to the Panel will be to obtain peer review of the then-current Annual Determination Report, the data upon which it is based, all previously submitted Annual Technical Representative’s Reports, and any other relevant and available data and analytical materials. The Panel will be asked to make its recommendation based on the foregoing information concerning the appropriate content of the Annual Determination. All Parties shall have a fair and reasonable opportunity to present factual and analytical submissions in person and/or in writing to the Panel. The Parties contemplate that a determination of the Panel on the Annual Determination will constitute the best available scientific information concerning the impacts on Muddy River Springs and Muddy River flows resulting from regional groundwater pumping, and the appropriateness of any proposed Pumping Restriction Adjustments. The cost of the Panel shall be borne equally by the Parties.

7. Acquisition of Additional Land and Water Rights. As a potential conservation measure, the Parties agree to work cooperatively to identify both land and water rights that, if acquired and dedicated to the recovery of the Moapa dace, will assist in making measurable progress towards the recovery of the Moapa dace. SNWA agrees to make a good faith effort to acquire land and water rights identified by the Parties. The Parties expressly agree that the reasonableness of any terms and conditions for any acquisition of land or water rights by SNWA shall be determined by SNWA at SNWA's sole discretion, and that SNWA shall have no obligation to acquire any land or water rights upon terms and conditions that SNWA finds unreasonable. When such land or water rights are acquired by SNWA, SNWA will cooperate with FWS in establishing restrictions upon the use of such lands and water rights consistent with existing laws so as to effectuate the conservation of these resources and the recovery of the Moapa dace.

8. Operational Coordination Among FWS, SNWA, CSI and MVWD. Consistent with the terms of this MOA and to accomplish the goals of protecting and recovering the Moapa dace, and accommodating the operation of municipal water supply infrastructure, FWS, SNWA, CSI and MVWD agree to examine all reasonable water operational scenarios and agree to implement feasible scenarios that will minimize impacts to the Moapa dace and its habitat, including, but not limited to the provision of water to MVWD from the Coyote Spring Valley hydrographic basin during the Pump Test or other water supplies available to SNWA and MVWD. MVWD shall have the right during the Pump Test to use the Arrow Canyon Well only in the event and to the extent SNWA is unable to supply MVWD with "all necessary municipal and domestic water supplies" pursuant to the provisions of paragraph I(5)(c)(ii) of this MOA. Except for the express provision contained in paragraph I(2)(b) of this MOA, nothing in this



MOA will obligate SNWA to supply MVWD with any water from SNWA's existing permits in the Coyote Spring Valley hydrographic basin following the completion of the Pump Test.

SNWA and CSI agree, following the execution of this MOA, and in coordination with FWS, to cooperate in locating and drilling one or more production wells in the northern part of the Coyote Spring Valley hydrographic basin. The details of this cooperative effort shall be contained in a separate agreement between CSI and SNWA.

9. Adaptive Management Measures. The Parties agree to carry out additional conservation measures that will need to be taken to protect and recover the Moapa dace following the initiation of the RIP and as more data becomes available both as to the biology of the Moapa dace and regional hydrology. Thus, the Parties agree to cooperate in carrying out the following measures as may be appropriate:

- a. Funding, preparation and implementation of biological and hydrological studies and activities supporting the recovery of the Moapa Dace; and
- b. Establish a regional monitoring and management plan that will include science-based management and mitigation measures for RIP participants; and
- c. Assessing the feasibility of augmenting and/or restoring in-stream flows and establishing those flows as deemed feasible.
- d. Continue to re-evaluate necessary measures to protect and recover the Moapa dace.

II. Current Access Agreement. SNWA currently has an access agreement with the owners of the Warm Springs Ranch, which contains Moapa dace habitat, in order to conduct biological surveys of the Moapa dace. SNWA agrees to use its best efforts to seek to amend this access

agreement so that each of the Parties to this MOA will have similar rights of access to the Warm Springs Ranch.

III. Modification of MVWD Monitoring Plan. Pursuant to the MVWD Monitoring Plan, submitted to the Nevada State Engineer in September 2002, FWS and MVWD agreed to a monitoring plan for development of MVWD's water rights at the Arrow Canyon well that contained certain management and mitigation measures that would be taken if flows at the Warm Springs West flume reached 3.17 cfs and 2.94 cfs respectively. This monitoring plan was recognized by the Nevada State Engineer in Ruling No. 5161. The Parties agree that, in order to effectuate a uniform regional monitoring and management plan, that the flow level restrictions and mitigation measures contained in this MOA shall replace the flow and water level restrictions and mitigation measures contained in the MVWD Monitoring Plan.

IV. No Assertion of FWS State Water Right. Provided that the other Parties to this MOA are in full compliance with the terms of this MOA, FWS expressly agrees not to assert a claim of injury to the FWS Water Right against either MVWD for pumping at the Arrow Canyon Well, against the Tribe for pumping within the California Wash hydrographic basin or against SNWA or CSI for any pumping in the Coyote Spring Valley for any diminution in flows at the Warm Springs West flume above 2.7 cfs. This provision shall in no way prejudice the FWS' ability and/or right to assert any and all rights inherent to the FWS Water Right for any diminution in flows at the Warm Springs West flume below 2.7 cfs.

V. No Waiver of Statutory Duties or Legal Rights. This MOA does not waive any of the authorities or duties of the FWS or the United States, nor does it relieve SNWA, CSI, the Tribe and MVWD from complying with any Federal laws, including but not limited to, the National Environmental Policy Act, Endangered Species Act, National Wildlife Refuge System

Improvement Act of 1997, and Federal Land Policy and Management Act of 1976, and any and all rules and regulations thereunder. Except as provided in paragraph IV of this MOA, it is the expressed intention of the Parties that FWS and the United States are not waiving any legal rights or obligations of any kind, including obligations to consult or re-consult under the Endangered Species Act, by entering into this MOA. Further, this agreement is entered as a good faith resolution of certain issues and is not intended to waive any party's rights in a subsequent legal proceeding regarding those issues. In addition, except for the restrictions set forth in paragraphs I(5)(e) through (g) above, this MOA does not in any respect waive, limit, or diminish any rights or claims of the Tribe to any federally-reserved or State surface or groundwater rights.

VI. No Modification of Previous Agreements. The Parties recognize that CSI, SNWA and MVWD have previously entered into multiple agreements concerning the sale, purchase and settlement of water rights within the Coyote Spring Basin including a certain *Agreement For Settlement Of All Claims To Groundwater In The Coyote Spring Basin* entered into between MVWD, CSI, SNWA and the District on March 7, 2002, and a certain *Agreement For Option, Purchase and Sale of Water Rights, Real Property and Easements* entered into between SNWA and CSI on April 16, 1998. Nothing contained herein is intended to abrogate or modify in any manner any of the provisions contained in any of those agreements except as expressly provided in paragraphs I(2)(b) and I(2)(c) of this MOA.

VII. Miscellaneous Provisions.

1. Notices. If notice is required to be sent by the Parties, the addresses are as follows:

If to FWS:

Supervisor  
Nevada Fish and Wildlife Office  
Fish and Wildlife Service  
1340 Financial Blvd., #234  
Reno, Nevada 89502

If to SNWA:

General Manager  
Southern Nevada Water Authority  
1001 South Valley View Boulevard  
Las Vegas, Nevada 89153

If to MVWD:

General Manager  
Moapa Valley Water District  
Post Office Box 257  
Logandale, Nevada 89021

If to CSI:

Carl Savely, General Counsel  
Wingfield Nevada Group  
6600 North Wingfield Parkway  
Sparks, Nevada 89436

If to the Tribe:

Chairperson, Moapa Band of Paiute Indians  
Post Office Box 340  
Moapa, Nevada 89025  
Fax: 702-865-2875

With copies to:

Steven H. Chestnut  
Richard M. Berely  
Ziontz, Chestnut, Varnell, Berely & Slonim  
2101 Fourth Avenue, Suite 1230  
Seattle, Washington 98121  
Fax: 206-448-0962

2. Choice of Law. This MOA shall be governed in accordance with applicable Federal laws, and the laws of the State of Nevada to the extent not inconsistent with Federal law.

3. Funding. Any commitment of funding by FWS, MVWD or SNWA under this MOA is subject to appropriations by the respective governing bodies of those entities.

4. Amendment. This MOA may be amended in writing by mutual agreement of the Parties.

5. Integration. This MOA sets forth the entire agreement of the Parties and supercedes all prior discussions, negotiations, understandings or agreements with respect to the subject matter hereof. No alteration or variation of this MOA shall be valid or binding unless contained in an amendment in accordance with paragraph VI(4) of this MOA.

6. Binding Effect, Withdrawal From MOA. The terms and conditions of this MOA shall be binding upon and inure to the benefit of the Parties hereto and their respective personal representatives, successors, transferees and assigns. However, the Parties expressly agree that should the execution of this MOA, or any consultation held or biological opinion issued under Section 7 of the Endangered Species Act which is premised thereon, be challenged in a court of competent jurisdiction and be found in violation of the Endangered Species Act or any other law, any of the Parties may withdraw from the MOA upon thirty days written notice to the other Parties. Upon such withdrawal, the withdrawing Party shall have no further obligation to perform any commitment contained in this MOA.

7. Effective Date, Counterparts. This MOA will become effective as between the Parties upon all Parties signing this MOA. The Parties may execute this MOA in two or more counterparts, which shall, in the aggregate, be signed by all Parties; each counterpart shall be deemed an original as against any party who has signed it.

8. Additional Parties. Other entities may become Parties to this MOA by mutual written assent of the Parties.

9. Headings. The underlined paragraph headings used in this MOA are for the convenience of the Parties only, and shall not be deemed to be of substantive force in interpreting the MOA.

10. No Third Party Beneficiaries. This MOA does not create any right or benefit, substantive or procedural, enforceable by any third parties against the Parties or against any other person or entity. The terms of this MOA are not enforceable by any person or entity other than a Party.

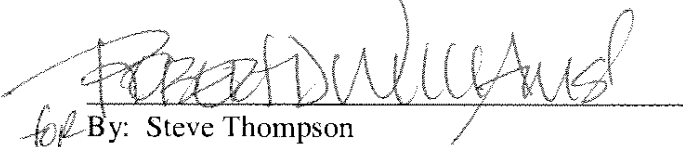
IN WITNESS WHEREOF, the Parties have executed this Memorandum of Agreement on the 20<sup>th</sup> day of April, 2006.

MOAPA VALLEY WATER DISTRICT



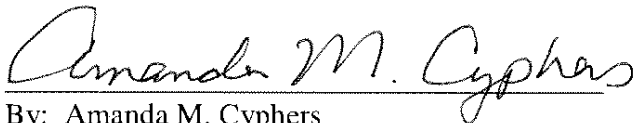
By: Ivan Cooper  
Title: Chairman

U.S. FISH AND WILDLIFE SERVICE



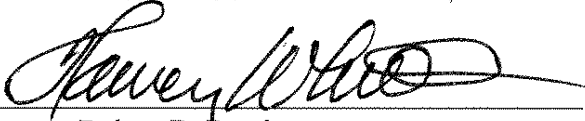
for By: Steve Thompson  
Title: Manager, California/Nevada Operations Office

SOUTHERN NEVADA WATER AUTHORITY



By: Amanda M. Cyphers  
Title: Chair

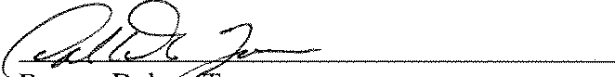
COYOTE SPRINGS INVESTMENT, LLC



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By: Robert R. Derck  
Title: General Manager

MOAPA BAND OF PAIUTE INDIANS



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By: Dalton Tom  
Title: Chairman

**When Recorded Mail To:**

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**Jones Springs Agreement**

This Jones Springs Agreement ("Agreement") is entered into for the purposes described herein this 20<sup>th</sup> day of April, 2006 by between Moapa Valley Water District ("MVWD"), Muddy Valley Irrigation Company ("MVIC") and the U.S. Fish and Wildlife Service ("FWS").

**RECITALS**

1. MVWD was created in 1983 by an act of the Nevada Legislature and is the municipal water purveyor in upper and lower Moapa Valleys and serves the communities of Moapa, Glendale, Logandale and Overton, and the surrounding areas, located in Clark County, Nevada.
2. One of MVWD's water sources is a spring known locally as Pipeline Jones Spring ("Jones Spring"). Certificate No.10060 issued by the Nevada State Engineer provides MVWD the right to divert 1 c.f.s. of flow of water from Jones Spring for municipal purposes. The waters of Jones Spring and Certificate No.10060 constitute a portion of the Muddy River Decreed water rights.
3. Water from Jones Spring, as well as numerous other springs, form small streams which make up the Muddy River ("Tributary Streams").
4. There lives in the upper reaches of the Muddy River and in the Tributary Streams, a small minnow known as the Moapa Dace ("Dace"). The Dace was listed as endangered in 1967 under the Endangered Species Preservation Act of 1966 and continues to be so listed and protected under the Endangered Species Act of 1973 as amended.
5. MVWD needs the quantity of water represented by Certificate No.10060 to serve its municipal customers.
6. As an inducement to MVWD to grant this Agreement, the Southern Nevada Water Authority ("SNWA") has agreed to furnish to MVWD a quantity of water equal to MVWD's rights under Certificate No.10060 from SNWA's wells and water rights in Coyote Spring Valley ("Coyote Spring Water"). The terms and conditions of SNWA's obligations are set forth in a separate agreement.
7. MVWD desires to help in the recovery and preservation of the Dace.

NOW THEREFORE, for the purpose of aiding in the recovery and preservation of the Dace, MVWD and FWS hereby agree as follows:

1. Effective on MVWD receiving Coyote Spring Water from Southern Nevada Water Authority, the water from Jones Spring shall not be diverted for municipal purposes pursuant to Certificate No.10060, but shall be allowed to flow down the Tributary Streams to the Muddy River.



2. MVWD may, as soon as Coyote Spring Water is available and being furnished to MVWD for municipal purposes disconnect their existing pumping facilities from the Jones Spring diversion pipe and or otherwise affix appurtenances that will allow the entire flow of water from Jones Spring to flow down to the Muddy River, thus increasing the flow of water in one or more Tributary Streams.

3. MVWD shall file any necessary change applications with the State Engineer as may be required by Nevada Law as a result of this Agreement.

4. The Agreement herein granted shall be for a non-consumptive use of water, with no warranty as to quality or quantity of flow.

5. MVWD reserves the right to change the point of diversion for its consumptive use right to the water from Jones Spring to a point on the Muddy River below that site generally known as the White Tank Narrows and to utilize such water for any purpose permitted by the Nevada State Engineer. Any such change shall not affect the flow of water at Jones Spring for in-stream purposes.

6. This Agreement will be recorded with the Clark County Recorder and filed with the Nevada State Engineer.

7. So long as MVWD is in full compliance with the terms and conditions applicable to MVWD in the Memorandum of Agreement dated April 20, 2006 and attached hereto as Attachment 1, then, if for any reason, whether natural, man-made or otherwise, any portion of the Coyote Spring Water becomes unavailable or unusable to meet MVWD's municipal needs previously supplied by Certificate 10060 (Jones Spring), then MVWD shall have the right to utilize a like portion of water from Jones Spring to replace such portion of the Coyote Spring Water that remains unavailable to MVWD for so long as the Coyote Spring Water remains unavailable.

8. MVIC has joined in the execution of this Agreement to reflect MVIC's approval of the terms thereof.

IN WITNESS WHEREOF, MVWD, MVIC and FWS have executed this Agreement the date first above written.

MOAPA VALLEY WATER DISTRICT

By: Ivan Cooper  
Ivan Cooper, Chairman of the Board

U.S. FISH AND WILDLIFE SERVICE

for By: Steve Thompson  
Steve Thompson, Manager  
California/Nevada Operations Office

MUDDY VALLEY IRRIGATION COMPANY

By: Todd Robison  
Todd Robison, Chairman of the Board

STATE OF NEVADA )  
 )  
COUNTY OF CLARK )

This instrument was acknowledged before me on April 20, 2006, by Ivan Cooper as Chairman of the Board of MOAPA VALLEY WATER DISTRICT.



Dianne K West  
NOTARY PUBLIC in and for the State of Nevada  
My Commission Expires: 12-16-09

[SEAL]

STATE OF NEVADA )  
 )  
COUNTY OF CLARK )

This instrument was acknowledged before me on April 20, 2006, by Robert D. Williams as Field Supervisor of U.S. FISH AND WILDLIFE SERVICE

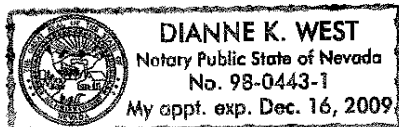


Dianne K West  
NOTARY PUBLIC in and for the State of Nevada  
My Commission Expires: 12-16-09

[SEAL]

STATE OF NEVADA )  
 )  
COUNTY OF CLARK )

This instrument was acknowledged before me on April 20, 2006, by Todd Robison as Chairman of the Board of MUDDY VALLEY IRRIGATION COMPANY.



Dianne K West  
NOTARY PUBLIC in and for the State of Nevada  
My Commission Expires: 12-16-09

[SEAL]

# Test Impacts and Availability of Water Pursuant to Applications Pending Under Order 1169

Presentation to the Office of the Nevada State Engineer

U.S. Fish and Wildlife Service  
Bureau of Land Management  
National Park Service

June 28, 2013



In this report, we analyze groundwater level, pumping, spring/stream discharge, and climatic data collected before and during the Order 1169 pumping test to address these three questions. In Section 1, we present a detailed evaluation of the impacts of pumping on groundwater levels and spring discharge. In Section 2, we present results from a numerical groundwater model that was used to evaluate impacts at future times and under varying pumping scenarios. We also use the model to evaluate the recovery of the system following curtailment of pumping. In Section 3, we address the central question of availability, given what was learned from the pumping test and previous water budget and perennial yield information. In Section 4 of the report, we briefly discuss the potential implications of decreased spring/stream discharge on groundwater-dependent resources, such as Moapa dace and the Moapa Valley National Wildlife Refuge (NWR). In the last section, we summarize our findings and conclusions.

## Summary of Conclusions

### *What information was obtained from the pumping test?*

Groundwater level, pumping, and spring/stream discharge data collected before and during the Order 1169 pumping test are sufficient to:

- Document the immediate effects of the test pumping, including pumping approximately one-third of existing permitted groundwater rights in CSV, on groundwater levels and spring/stream flows in the Study Area.
- Delineate a portion of the carbonate-rock aquifer, a subset of the Order 1169 Study Area, in which pumping results in roughly equal drawdown throughout the area in a relatively short period of time.
- Develop a conceptual model of the delineated portion of the carbonate-rock aquifer with significant implications for the impacts of carbonate pumping anywhere within the area on spring and stream flows and phreatophytic vegetation in the MRSA and California Wash.
- Estimate the extent to which pumping was captured from groundwater storage (a lowering of groundwater levels) as opposed to spring/stream discharge as of the end of the test, and consequently the degree to which the full impacts of the test on spring/stream flows and phreatophytic vegetation have been realized to date.
- Determine the availability of water pursuant to applications pending under Order 1169.

### *What were the impacts of pumping under the pumping test?*

Based on our analyses of groundwater level data from the pumping test, we have delineated a portion of the carbonate-rock aquifer, consisting of five hydrologic basins within the Study Area, in which carbonate pumping results in drawdown of nearly uniform magnitude everywhere within the five basin area within a period of months. The delineated area encompasses almost 700,000 acres, or 1,100 square miles, and includes the following hydrographic basins: CSV, the MRSA, Hidden and Garnet valleys, and

California Wash. Drawdown during the pumping test ranged from 1.9 to 2.5 ft throughout this portion of the carbonate-rock aquifer, with over half of the drawdown attributable to MX-5 pumping in CSV. The observed declines in groundwater levels are unprecedented in the record.

The near uniformity and large areal extent of drawdown indicates a high degree of hydrologic connectivity throughout the five basins and suggests that carbonate pumping anywhere within these five basins will affect groundwater levels throughout the delineated area. We hypothesize that this portion of the carbonate-rock aquifer acts as a high-transmissivity (high-diffusivity) reservoir with fixed inflows. The potential for pumping to induce additional groundwater inflow into this portion of the carbonate-rock aquifer system is very limited. As a consequence, carbonate pumping would eventually capture the only major forms of natural groundwater discharge in the area – spring/stream discharge and ET in the MRSA and California Wash.

The drawdown observed, to date, has resulted in a small capture of spring discharge, and possibly ET, in the MRSA and California Wash. Almost all the springs and flow monitoring sites in the MRSA showed some level of decline during the pumping test. The degree to which spring discharges were impacted is a function of the land surface elevation of the springs, with the higher elevation springs showing the greater relative declines in discharge. The discharge at Pederson Spring, the highest elevation spring in the MRSA, declined about 63% during the pumping test. If the current rate of carbonate pumping and drawdown continues, this spring will be dry in another 1.5 years. The discharge at Pederson East Spring, the second highest elevation spring in the MRSA, declined about 45% during the test and will be dry in another 2.5 to 3 years, if the current rate of pumping and drawdown continues. Flows at Warm Spring West flume declined about 9% during the test. Relative changes in flows at other lower elevation springs and flow sites during the pumping test were -6% at Iverson Flume, -4% at both Jones Spring and Baldwin Spring, and +19% per year at Muddy Springs. The flow increase at Muddy Springs may be partially due to upstream effects from the July 2010 fire in the MRSA.

We estimate that 80 to 90% of groundwater withdrawn during the pumping test was captured from groundwater storage, with only a small fraction captured from natural groundwater discharge. We interpret this to mean that the system has not yet reached equilibrium with respect to the increased carbonate pumping imposed during the test. The potential for drawdown to induce more inflow into the area is very low because the increase in hydraulic gradient will be 1% or less. Therefore, all pumping from the carbonate-rock aquifer in this area must eventually capture the only forms of natural groundwater discharge in the area before a new state of equilibrium can be established. Consequently, we expect the longer-term impacts from the current level of pumping on spring discharge and ET rates in the MRSA and California Wash to be much greater as the system transitions from capture of groundwater storage to capture of groundwater discharge.

Although the pumping test has been completed, SNWA has chosen so far to continue the pumping at MX-5 in CSV at approximately the same rate, presumably to augment water supply for Las Vegas. It is not known how much longer this pumping will continue. Numerical pumping simulations performed by Tetra Tech (2012b) show that pumping in the carbonate-rock aquifer at the rates imposed during the test (or greater) can be expected to result in substantial additional declines in groundwater levels and

spring and stream flows beyond those observed as of the end of the test. The results of the 'post-audit' simulation of the second year of the test suggest that the Tetra Tech Version 1.0 Model used to perform these pumping simulations (Tetra Tech, 2012a) underestimates the amount of drawdown created by pumping and the impacts to spring discharges, and overestimates the timeframes in which the projected impacts will occur, but the areal extent of drawdown is simulated accurately.

The recovery simulation, in which MX-5 pumping was simulated as being stopped as of the end of the test, suggests that recovery of water levels from the effects of MX-5 pumping would take years, and that in the MRSA, recovery from the MX-5 test pumping would be approximately 70% complete after 15 years. Longer periods or greater volumes of pumping will result in even slower recovery. This has some serious implications for the effectiveness of management strategies aimed at reducing or curtailing pumping in order to protect spring flows, biological resources, and downstream water rights.

While the pumping test yielded much information, there are some things that are still uncertain. The level of pumping in CSV during the test was only one-third of the annual volume allocated in CSV under existing water right permits, although the Order required that 50% of the existing permitted rights be pumped. Therefore, the impacts of pumping half or all of the permitted allocation in this basin were not evaluated. The effectiveness of pumping reductions or curtailment was simulated with the modeling but was not directly evaluated during the test. If the higher elevation springs stop flowing completely, it is not known how fast or how effectively the system will respond to adjustments in pumping and whether biological resources may be adversely affected in the process.

#### *What is the availability of water pursuant to the pending applications?*

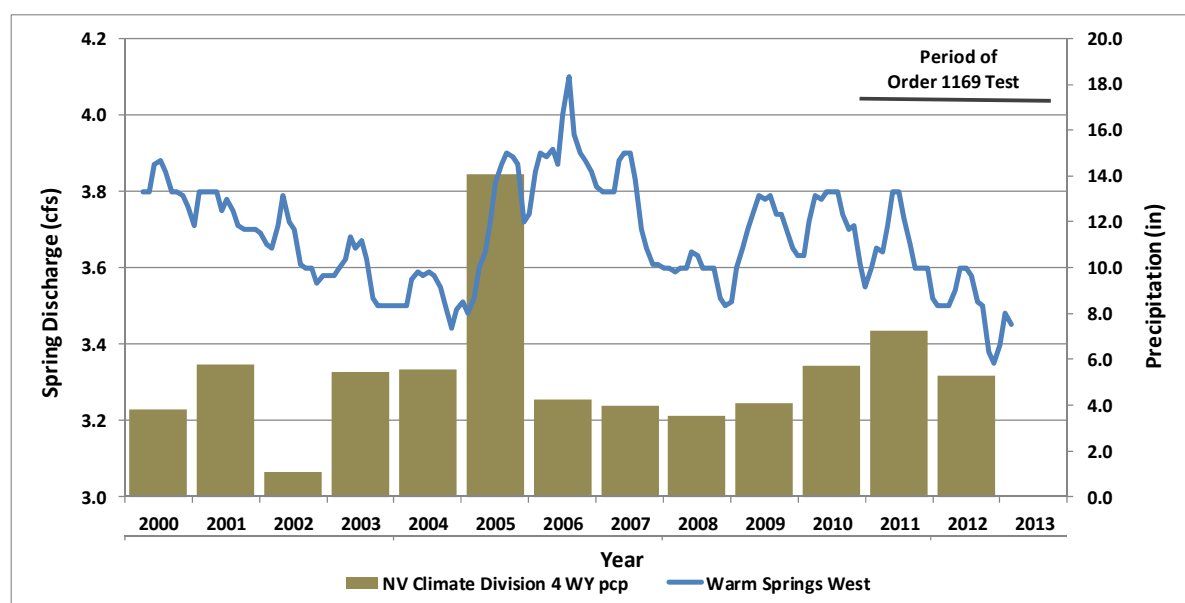
Our review of earlier water budget and perennial yield information for CSV, as presented in Order 1169 (NSE, 2002a), leads to the conclusion that there is no water available for appropriation within the five-basin area delineated through our groundwater analyses (CSV, the MRSA, Hidden and Garnet valleys, and California Wash). The water budget information and pumping test results suggest that all available water in CSV is appropriated and our additional analysis of information in recent rulings suggests that the basin may currently be over-appropriated. Additionally, the groundwater modeling simulation results, which examined progressively greater pumping of pending water rights in these five basins, provide supporting evidence to the wide-ranging effects that can be expected in these five basins with increased pumping.

An average of 5,400 afy of groundwater was withdrawn in CSV over the period of the test. This is only one-third of the 16,300 afy of existing permitted rights to groundwater already appropriated in CSV. The pumping test provides evidence that even this reduced volume of groundwater pumping cannot be developed long-term without adverse impacts to springs, endangered fish, Federal trust resources, and downstream senior water rights. Consequently, we conclude that no additional groundwater is available for appropriation to satisfy the pending water right applications that are currently being held in abeyance for this portion of the carbonate-rock aquifer.

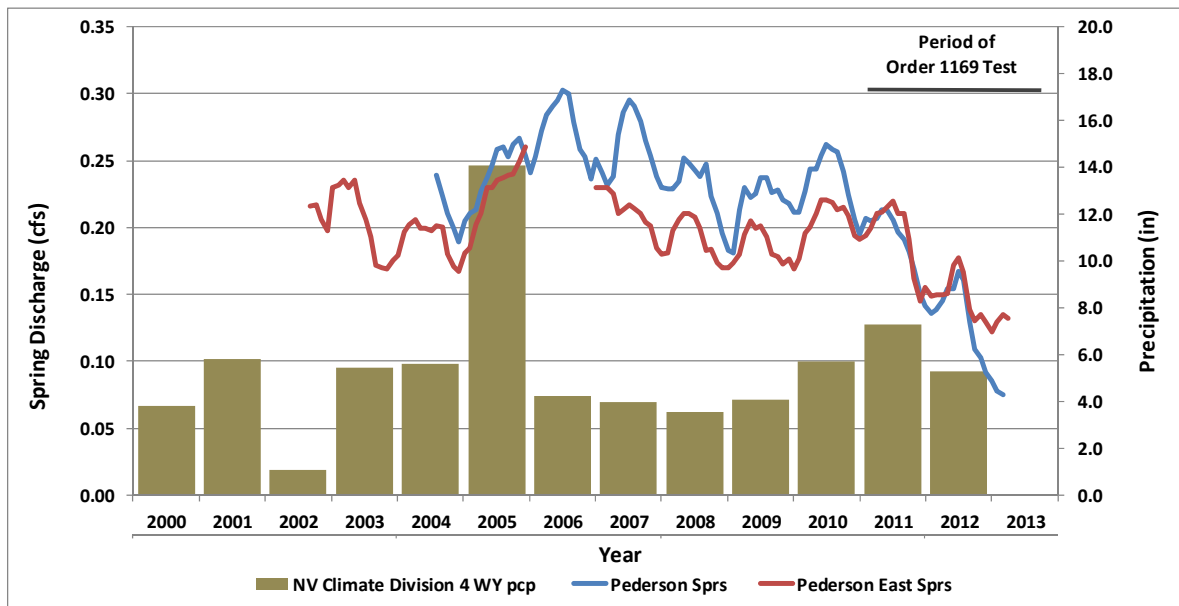
## Results and Discussion

### Pedersen Unit

**Figures 1.22** and **1.23** show spring discharge at the three continuous surface water monitoring sites on the Pedersen Unit of the Refuge, along with water year precipitation in NV Climate Division 4. Springflow measurements are more variable than groundwater level measurements. Note that the discharge scale for the Warm Springs West gauge only extends from 3.0 to 4.2, while that for the Pederson gauges extend from 0.0 to 0.35. Thus the variability in the Pederson flows are proportionally larger than those for Warm Springs West. The seasonal cycles and trends in flows since 2000 generally mirror the carbonate water levels, decreasing from 2000 through 2004 due to increased carbonate pumping, increasing in 2005-2006 in response to the 2005 wet year, and declining overall during the 2-year pumping test. As with the groundwater levels, the lowest spring flows in the record at all of these sites occur during 2012, near the end of the pumping test despite the wet year in 2011. However, as can be seen on the figures, not all the spring measurement sites show the same degree of response to groundwater level declines, mainly because of differences in spring elevations, as discussed above. Next, we examine those individual responses in more detail, by considering relationships between discharge and carbonate water levels in EH-4.



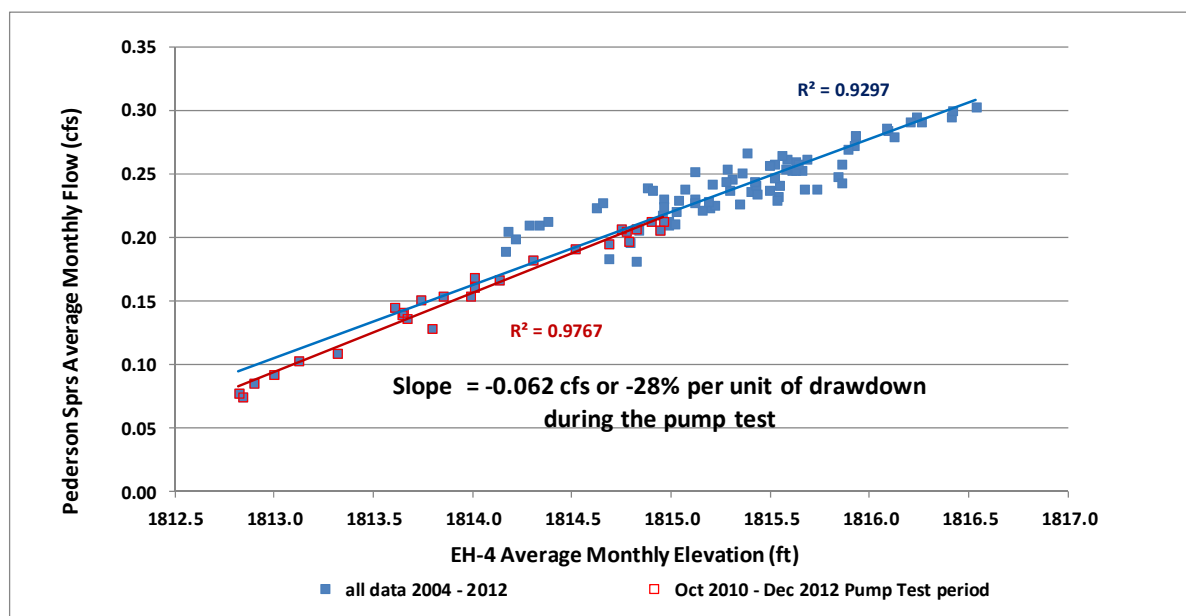
**Figure 1.22.** Monthly flows at the USGS Warm Springs West gage (USGS No. 09415920) and Nevada Climate Division 4 water year precipitation (centered on April of each water year) for the period Jan 2000 to Dec 2012.



**Figure 1.23.** Monthly flows at the USGS Pederson Spring gage (USGS No. 09415910), Pederson East Spring gage (USGS No. 09415908), and Nevada Climate Division 4 water year precipitation (centered on April of each water year) for the period Jan 2000 to Dec 2012.

The first spring considered is the Pederson Spring, the highest elevation spring in the area (the gage datum or zero point of flow is 1810.99 ft). During the pumping test, the flows at Pederson Spring declined from a maximum of 0.22 cfs to 0.08 cfs (a 0.14 cfs or 63% reduction total from the maximum flow observed during the pumping test, [Figure 1.24](#)). The correlation between spring discharge and water level for EH-4 is very high ( $r^2 = 0.98$  during the pumping test and  $r^2 = 0.93$  for the entire 2004-2012 record). The slope of the discharge-water level relationship over the pumping test equates to -0.062 cfs (-28%) per unit foot of drawdown in the carbonate-rock aquifer. This means that for every one foot decline in the EH-4 water level, Pederson Spring loses about 0.06 cfs of discharge (about 28% relative to the maximum discharge observed during the pumping test). The next question we address is: “Is this reasonable and close to what we expect for this site?”



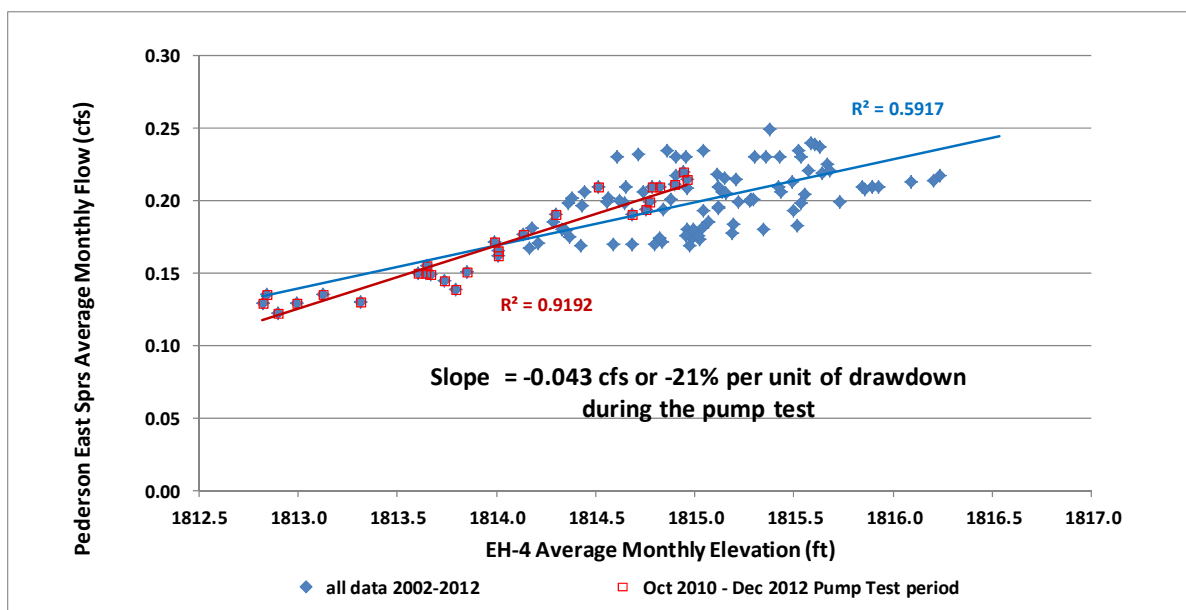


**Figure 1.24.** Monthly flows at Pederson Spring versus monthly carbonate water level elevations in EH-4 for the period May 2004 to Dec 2012.

The maximum and minimum monthly EH-4 carbonate water level elevations observed from October 2010 to December 2012 were 1815 ft and 1812.8 ft, respectively. At the maximum groundwater level elevation, Pederson Spring, with a water surface elevation of 1811 ft, had a hydraulic head differential of 4.0 ft (the “head differential” being estimated as the difference between EH-4 water level elevation and the spring water surface elevation). At the minimum EH-4 water level elevation observed during the pumping test, 1812.8 ft, the “head differential” is only 1.8 ft. Based on these two estimates, there is a predicted 25% decrease in hydraulic head differential per unit foot of drawdown, or a total reduction in head differential of 55% (assuming the maximum head of 4.0 ft represents 100%). Under the assumption that flow is proportionate to head, we should expect a similar percentage decline in flow. As shown above, there was a 28% decrease in flow per unit foot of drawdown or about 63% over the 2.2 foot range of carbonate water levels observed during the pumping test. The observed decline is very close to the independent estimate. The spring appears to be behaving in response to the decline in carbonate water levels and head differential as expected.

The x-intercept of the discharge/water level regression for the period of the pumping test is 1811.5 ft (**Figure 1.24**). This is the predicted carbonate water level elevation at which the spring discharge goes to zero (the spring dries up), based on the relationship between spring discharge and EH-4 levels. It differs from the estimated spring water surface elevation, perhaps because of the errors associated with the assumption that the water level in EH-4 represents the hydraulic head at the springs. Anyway, if the current rate of drawdown in EH-4 (0.92 ft/year) continues, the spring will stop flowing in about 1.5 years.

Next, we consider Pederson East Spring, which is the second highest elevation spring in the area, with a gage datum or zero point of flow of 1807.7 ft. During the pumping test, the flows at Pederson East Spring ranged from 0.22 cfs to 0.12 cfs (a 0.10 cfs or 45% reduction in total discharge, **Figure 1.25**). The correlation between spring discharge and EH-4 water level for Pederson East Spring is high during the pumping test but poorer for the entire period of record ( $r^2 = 0.92$  during the pumping test and  $r^2 = 0.59$  for the entire record). The reason for the poorer correlation over the entire record is not clear but it may indicate some changes or problems in the earlier flow record at the site. The slope of the relationship over the pumping test equates to -0.043 cfs (-21%) per unit foot of drawdown in the carbonate-rock aquifer. This means that for every one foot decline observed in the EH-4 water level, Pederson East Spring loses about 0.04 cfs (or about 21% per unit foot of drawdown). This is less than Pederson Spring, as expected, since Pederson East Spring is slightly lower in elevation and has a greater hydraulic head differential, and therefore, should be less sensitive to drawdown (see **Figure 1.19**).

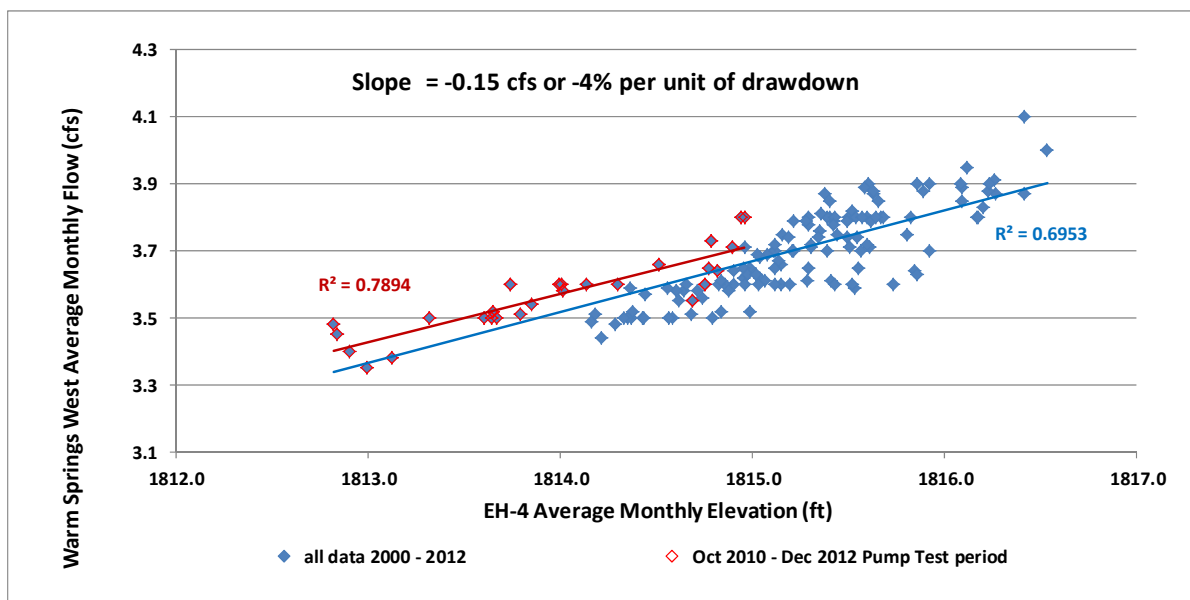


**Figure 1.25.** Average monthly flows at Pederson East Spring versus carbonate water level elevations in EH-4 for the period June 2002 to Dec 2012.

At 1815 ft., the maximum EH-4 carbonate water level elevation observed during the pumping test, Pederson East Spring has a hydraulic head differential of 7.3 ft (based on a water surface elevation of 1807.7 ft). At 1812.8 ft., the minimum EH-4 elevation observed, the “head differential” is 5.1 ft, which represents a 30% reduction in head from the maximum EH-4 water level elevation during the test. For every unit foot of drawdown, we expect about a 14% decrease in hydraulic head differential and flow. As shown above, the observed decline in flow was greater than this, about 21% per unit of drawdown or about 45% over the range of carbonate water levels. Nevertheless, the estimated and observed reductions are less than at Pederson Spring, and the Pederson East Spring discharge appears to be less sensitive to drawdown, as expected.

The x-intercept of the regression for the period of the pumping test is 1810.1 ft (**Figure 1.25**). This is the predicted carbonate water level elevation at which the spring discharge will go to zero. As with Pederson Spring, the elevation of the x-intercept of the regression differs from the water surface elevation of the spring, perhaps because of errors associated with the assumption that EH-4 exactly represents the hydraulic head at the spring. If the current rate of drawdown in EH-4 (0.92 ft/year) continues, the spring will stop flowing in about 2.5 to 3 years.

The relationship of Warm Springs West flow to carbonate water levels in EH-4 is shown in **Figure 1.26**. The correlation between discharge and water level for Warm Springs West is fairly high during the pumping test and for the entire period of record ( $r^2 = 0.79$  during the pumping test and  $r^2 = 0.70$  for the entire record). We may expect a poorer correlation between discharge and carbonate water levels at this site compared to the other two spring sites because the site is downstream of the major springs and may be responsive to shallow basin-fill aquifer water levels and rainfall runoff, as well as carbonate-rock aquifer water levels.



**Figure 1.26.** Average monthly flows at Warm Springs West versus carbonate water level elevations in EH-4 for the period Jan 2000 to Dec 2012.

During the pumping test, Warm Springs West declined from an average flow of 3.72 cfs, at a carbonate water level elevation of 1815.0 ft, to an average flow of 3.40 cfs, at a water level elevation of 1812.8 ft. The total decline equates to about 0.32 cfs (9%) or about a 4% decrease from the pre-test flow rate per unit foot of drawdown. The total decline, 0.32 cfs, is 0.09 cfs greater than the sum of the declines (0.13+0.10=0.23 cfs) observed in the Pederson and Pederson East Springs, located upstream of the gage. Note that there appears to be little or no decline in flow during the first year of the pumping test at the Warm Springs West gage; most of the decline is observed in the second year (see **Figure 1.22**). We believe that higher precipitation during the first year of the pumping test may have increased shallow groundwater seepage upstream of the gage and countered some of the effects of pumping.

Next, we compare the observed decline with the estimates of the expected decline at the Warm Springs West gage, given the range of carbonate water levels at EH-4 observed during the pumping test. Since the Warm Springs West gage measures the combined discharge from a number of individual springs, estimating the hydraulic head differential at the site is more involved. The majority of flow at the Warm Springs West gage is accounted for with measurements at Pederson Spring and the four major spring groups measured by the USGS twice a year: Spring 19, Spring 13, Spring 12, and Spring 11. (The discharge at Pederson East Spring is included in the measurement at Spring 19). Beck et al. (2006) provides information on the approximate elevation of these different spring groups. Using these approximate elevations, we estimated the reduction in head differential at each spring group and applied this reduction to the average flow, available from the periodic measurements from each of the spring groups (M-19, M-11, M-12, M-13).

The approximate elevations, average flows, estimated head differentials, and estimated reductions in head for each spring or spring group are shown in **Table 1.2**. Because the periodic flow measurements at the spring groups are so variable, we used the measurements from September 2007 to September 2010 (a period when EH-4 elevations averaged 1815.2 ft, see **Figure 1.2** and **1.3**) to calculate the average flow at each of the four spring groups prior to the start of the pumping test. The total discharge at all four measurement sites, along with flows at Pederson Spring, averaged 2.88 cfs for this period (these measurements are plotted **Figure 1.21**). The average of the daily flows at the Warm Springs West gage on concurrent dates for the same period is 3.65 cfs. Approximately 80% of the flow at the Warm Springs West gage is accounted for with the spring measurements during the 2007 to 2010 period.

Using the maximum and minimum carbonate water levels observed at EH-4 during the pumping test, (1815 ft to 1812.8 ft), the proportional reductions in head differential at the five spring groups are 55% at Pederson Spring and 9% to 17% at the other four spring groups. Multiplying the estimated proportional reduction in head differential by the average flow from 2007-2010 at each of the five spring groups shows that the contribution of the springs should have been reduced in total by about 0.5 cfs during the pumping test. Applying a similar reduction in flow at the Warm Springs West gage means the flow during the pumping test should have declined by about 0.5 cfs or 14% in total. The observed decline during the pumping test was slightly less than this, about 0.32 cfs or about 9% in total. Nevertheless, the relative decline at Warm Springs West is considerably less than at Pederson and Pederson East Springs, as expected based on the lower elevations of the other springs.

### *Plummer Unit, Apcar Unit, and other MRSA Sites*

Next, we examine the observed and/or expected reductions in discharge at springs on the Plummer and Apcar Units and elsewhere in the MRSA, given the changes in carbonate water levels observed during the pumping test. Springs in all of these areas are lower in elevation than the springs on the Pederson Unit, so they are expected to be less sensitive to declines in carbonate water levels.

**NEVADA**

EXHIBIT NO. \_\_\_\_\_

IDEN. \_\_\_\_\_

ADM. \_\_\_\_\_

**COPY OF DECREE**

**"In the Matter of the Determination of the  
Relative Rights in and to the Waters of the  
Muddy River and Its Tributaries in Clark  
County, State of Nevada**

1 IN THE TENTH JUDICIAL DISTRICT COURT OF THE STATE OF NEVADA,  
2 IN AND FOR THE COUNTY OF CLARK.

3

4 MUDDY VALLEY IRRIGATION COMPANY, a  
5 corporation, NEVADA LAND & LIVESTOCK  
6 COMPANY, a corporation, SAMUEL H. WELLS,  
7 JOHN F. PERKINS and ELLEN C. PERKINS,  
8 his wife,  
9 Plaintiffs

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Vs.

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12 MOAPA & SALT LAKE PRODUCE COMPANY, a  
13 corporation, GEORGE BALDWIN and ALETHA  
14 L. BALDWIN, his wife, ISALAH COX and ANNA  
15 M. COX, his wife, JOSEPH PERKINS and  
16 KATHRYN PERKINS, his wife, D. H. LIVINGSTON  
17 and RICHARD SMITH, G. S. HOLMES and JULIA  
18 MAY KNOX, W. J. POWERS and MARY A. POWERS,  
19 his wife, SADIE GEORGE, LOS ANGELES & SALT  
20 LAKE RAILROAD COMPANY, a corporation, and  
21 WALKER D. HINES, as Director General of  
22 Railroads, and JACOB BLOEDEL.  
23 Defendants.

24

AND

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26 IN THE MATTER OF THE DETERMINATION OF THE RELATIVE  
27 RIGHTS IN AND TO THE WATERS OF THE MUDDY RIVER  
28 AND ITS TRIBUTARIES IN CLARK COUNTY, STATE OF  
29 NEVADA

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JUDGMENT AND DECREE.

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34 The above entitled action and the above entitled matter  
35 having come on for hearing before the Court on the 10th day  
36 of March, 1920, all of the parties to said action, appearing and  
37 being represented in court by their respective attorneys, and  
38 J. G. Scrugham, the State Engineer of the State of Nevada,  
39 appearing in person, and after hearing and the taking of testimony  
40 and evidence, and the making of an order for a further determination  
41 by the State Engineer, as hereinafter set forth in the said action and

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1 matter having been continued for further hearing and determination  
2 and have now come on for hearing this 12 th day of March, 1920,  
3 all of the parties to the above entitled action appearing and being  
4 represented in open court by their respective attorneys;

5 And it appearing that on the 23rd day of April, 1919,  
6 a stipulation was made and filed herein by and on behalf of all of  
7 the parties who had then appeared in said action, signed by their  
8 respective attorneys, which said stipulation, after the title of the  
9 court and cause was in words and figures following to-wit:

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STIPULATION

The parties to the above entitled action, by their respective attorneys, for the purpose of settling and determining as between themselves the issues in said action, do hereby stipulate and agree as follows:

1. That the defendants in this paragraph named, their grantors and predecessors in interest, have diverted and appropriated from the Muddy River, its head waters, sources of supply and tributaries, for use upon the lands herein described or referred to, and that said defendants are respectively entitled to divert to their said lands for use thereon, the respective amounts of water herein specified.

The defendants, George Baldwin, and Aletha L. Baldwin, his wife, for use on the lands described in their Amended and Supplemental Answer, other than those described in their original answer, 16/70 of one cubic foot of water per second.

The defendant, Moapa and Salt Lake Produce Company, for use on the lands described in its separate Answer, 2 and 15/70 cubic feet of water per second.

The defendants, D. H. Livingston and Richard Smith, for use upon the said lands described in their separate Answer, 2 and 20/70 cubic feet of water per second.

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The defendants, Joseph Perkins and Kathryn Perkins, his wife, for use upon the lands described in their separate Answer, 30/70 of a cubic foot of water per second.

The defendants, G. S. Holmes and Julia May Knox, for use upon the lands described in their separate Answer, 1 and 25/70 of a cubic foot of water per second.

The defendants, Isaiah Cox and Annie Cox, his wife, for use on ten acres of land described in their separate Answer, 10/70 of a cubic foot of water per second. Provided, that if the State Engineer in his adjudication shall find that because of the situation of said land, and the small stream or small head of water diverted, or other causes, said defendants need more than said amount to properly irrigate said land, the said defendants shall be entitled to divert such amount of water as the State Engineer may find necessary for said purpose.

The defendants, W. J. Powers and Mary Powers, his wife, for use on the land described in their separate Answer, and for 2 and 8/10 acres situate in the NW 1/4 of the SE 1/4 and the N. E. 1/4 of the S. W. 1/4, of Section 27, Township 14 South, Range 65 East, 29/70 of a cubic foot of water per second. Provided, however, that if the State Engineer in his adjudication shall find that because of the situation and character of said lands, the length of the ditch, or other causes, said defendants need more than said amount to properly irrigate, twenty-nine acres of said lands, being the lands heretofore irrigated, said defendants shall be entitled to divert such amount of water as the State Engineer may find necessary for said purposes.

The defendant, Sadie George, for use on 2.1 acres of land situate in the West side of the S. E. 1/4 of the N. E. 1/4, of Section 1, Township 15, South, Range 65 East, 21/700 of a cubic foot of water per second.

The defendants, Los Angeles and Salt Lake Railway and Walker D. Hines, as Director General of Railroads, are entitled



1 to take from the Muddy River, by the pumping plant of said Railroad  
2 at Moapa, such amount of water as the State Engineer may find has  
3 by said Railroad been lawfully appropriated for any beneficial use  
4 at Moapa. Subject, however, to contest by any party hereto and to  
5 an appeal from such finding and review thereof by the Court.

6 The above volumes or amounts of water to which it is  
7 agreed the respective parties are entitled shall be understood  
8 to include and define the amount of all the waters now or hereto-  
9 before rightfully used on said lands, whether diverted directly from  
10 said Muddy River, or from its tributaries, springs, head waters or  
11 other sources of supply, including the waters claimed to have been  
12 developed heretofore by any of the said parties. All measurements  
13 of amounts diverted are to be made at the places of diversion, or  
14 as near thereto as practicable or convenient, as the State Engineer  
15 or Water Commissioner may select or approve.

16 2. That the waters now and heretofore used by defendants,  
17 George Baldwin and Aletha L. Baldwin, his wife, upon the lands des-  
18 cribed in their original separate Answer, are waters which have been  
19 developed and appropriated by said defendants in the manner and by  
20 the means alleged in their said Answer, and that such development  
21 and use has not and does not diminish the flow or volume of the  
22 Muddy River, or interfere with the rights of any of the other parties  
23 to this action.

24 The said defendants Baldwin shall during the present 1919  
25 irrigating season permit the plaintiffs, or any agent or agents of  
26 plaintiffs, to enter upon the said lands of said defendants and  
27 make measurements of the cultivated areas and of the waters now  
28 developed or used thereon. The said defendants Baldwin shall not  
29 make any attempt to develop any additional water upon said land  
30 before October 1, 1919, and thereafter no further development of  
31 water, or additional use of water, shall be made on or for said  
32 lands which in any way diminishes the flow of the waters of the  
Muddy River, or impairs the rights therein or thereto of the other

parties to this action.

1           3.           The Indian Reservation, situated above Moapa, and the  
2 inhabitants thereof, are entitled to divert from the waters of  
3 said Muddy River, and to use upon lands on said reservation, 1.25  
4 of a cubic foot of water per second, and no more, measured at  
5 place of diversion or such place as the State Engineer or Water  
6 Commissioner may select.

7           4.           That the Plaintiff, Muddy Valley Irrigation Company, and  
8 the Plaintiffs John F. Perkins, and Ellen C. Perkins, his wife and  
9 their grantors and predecessors in interest, have diverted and  
10 appropriated from the Muddy River, its head waters, sources of  
11 supply and tributaries, for use on the lands hereinafter described  
12 or referred to, all of the waters flowing therein or therefrom,  
13 save and except the several amounts specified in paragraph 1 and  
14 3 hereof. The said plaintiffs Perkins are entitled to water for  
15 the irrigation of two acres of ground at or near St. Thomas, in  
16 the N. E 1/4 of the S. E. 1/4, of Section 10, Township 17 South,  
17 Range 68 East, which water is diverted from the River and  
18 conveyed to their land by said Muddy Valley Irrigation Company.

19           The said Muddy Valley Irrigation Company is and at the  
20 time of the commencement of this action was the legal owner of  
21 the rights to divert, convey and use all of said waters of said  
22 River, its head waters, sources of supply and tributaries, save  
23 and except the rights heretofore specified and described, and to  
24 divert said waters, convey and distribute the same to its present  
25 stockholders, and future stockholders, and other persons who may  
26 have acquired or who may acquire temporary or permanent rights  
27 through said Company, for the various purposes described in the  
28 Complaint, and upon the land situated as stated in the Complaint;  
29 and that its stockholders are the equitable owners of rights to  
30 use said waters in accordance with its articles and amended  
31 Articles of Incorporation, and its By Laws, and the accepted uses  
32 and practices of said corporation.

5. That the parties named in paragraphs 1 and 3 of this Stipulation shall not be required to take or use the waters of said River in continuous flow, but may cumulate the same or any part thereof in rotation and in turn periods, with the approval of the Water Commissioner, and subject to his control and direction, and under such rules and regulations as may be prescribed by the State Engineer and the statutes of the State of Nevada. The whole amount of water diverted from the River at any one time by all of the parties named in paragraph 1 shall not exceed in the aggregate the total of the amounts of water awarded to the several parties named in said paragraph 1. Below the lowest diversion of the defendants Holmes and Knox the flow in the stream shall be maintained substantially constant, subject to seasonal variations, but only in so far as the parties named in paragraph 1 can be held to be responsible for the fluctuations of said stream. The whole of said River system shall be under the supervision, rules and regulations of the State Engineer, and the direction and control of the Water Commissioner, to be appointed as hereafter provided or as provided by law, as a fully adjudicated stream; but it is the intention hereof that so far as practicable the stream shall be treated as divided into two parts, that above and that below the lowest diversion of the ranch now belonging to the defendants Holmes and Knox; and the Muddy Valley Irrigation Company, although under the supervision and control of the State Engineer and Water Commissioner, will, subject to said supervision and general control, distribute and control the distribution of the waters diverted and conveyed by its works to its stockholders and other persons obtaining water by means thereof. Such head gates, measuring devices, etc., as the State Engineer or Water Commissioner may order shall be installed by all who divert or use the waters of said stream system.

6. The owners of land on the upper part of said River, as in the last paragraph defined, shall keep the channels through their respective lands clear of all ordinary obstructions, but

1 in case of extraordinary obstruction, such as the formation of  
2 lime beds or deposits, in the channel of the stream, the same shall  
3 be removed under the direction of the Water Commissioner, and the  
4 expense thereof paid as he or the State Engineer may assess the  
5 same.

6 7. All the water rights hereinbefore specified shall be  
7 deemed and held to be vested rights, acquired by valid appropria-  
8 tion and beneficial use prior to March 1, 1905, and by continued,  
9 uninterrupted use since said date, and shall be considered as  
10 equal in rank, without one having any priority over any other.  
11 This stipulation shall apply to and include whatever rights are  
12 held or possessed by the Muddy Valley Irrigation Company under  
13 the certificates of appropriation issued to the plaintiff, Nevada  
14 Land and Live Stock Company, as set forth in paragraph twelve of  
15 the Complaint herein.

16 8. All abnormal losses from the flow of said stream shall  
17 be pro rated and shared among the parties hereto. Abnormal losses  
18 shall include such as any substantial loss from the permanent flow  
19 of the stream, caused by some cataclysm of nature, as a cloud-  
20 burst, destroying or obstructing the channel thereof, or as the  
21 opening up of a fissure in the bed of the stream, or in one of the  
22 courses of supply, and the disappearance therein of a substantial  
23 amount of the waters, thereby causing a substantial diminution  
24 in the flow available for appropriation by any of the parties. Any  
25 diversion of water by the Indian Reservation, or the inhabitants  
26 thereof, in excess of the 1.25 cubic foot per second, specified  
27 in paragraph 3, or any award by the State Engineer to or for the  
28 lands of the Indian Reservation in excess of said 1.25 cubic foot  
29 per second, and any water in excess of such amount, which in any  
30 suit or action may be awarded or decreed to or for the lands on  
31 said Indian Reservation, or any water which in the final adjudicat-  
32 ion of this action or any other may be awarded or decreed to any  
party not a party to this action, shall also be deemed an abnormal  
loss from the stream.

If any such abnormal loss occur at any time the pro-rata share of such loss to be borne by each party shall be as follows:

The defendants Baldwin and wife shall bear 16/3169 of such loss.

The defendant, Moapa and Salt Lake Produce Company, 155/3169 thereof.

The defendants, Livingston and Smith, 160/3169 thereof.

The defendants, Perkins and wife, 30/3169 thereof.

The defendants Holmes and Knox 95/3169 thereof.

The defendants, Cox and wife, 10/3169 thereof.

The defendants, Powers and wife, 29/3169 thereof.

The defendant, Sadie George, 2/3169 thereof.

And the Plaintiff, Muddy Valley Irrigation Company 2672/3169 of such loss.

9. An order may be entered by the Court referring this suit to the State Engineer for an adjudication of the water rights on the Muddy River, in accordance with the provision of Chapter 140 of the Statutes of Nevada, of 1913, approved March 22, 1913, and all acts amendatory thereof. The order shall direct that said State Engineer in making such adjudication shall as between the parties to this Stipulation, and in determining their relative rights as between themselves, be bound by and give effect to the terms and conditions of this Stipulation, and the division of the waters which said parties have made between themselves.

And the parties further stipulate and agree that any final Decree entered herein shall, in determining the relative rights of the parties hereto, follow and give effect to the terms and conditions of this Stipulation.

10. Pending the final adjudication of said River, and final Decree in this action, and the legal organization of a Water District embracing the Muddy River Valley, and the legal appointment of a Water Commissioner, therefor, the parties themselves shall select and employ a Water Commissioner to act under the terms of this

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Stipulation, subject to the supervision of the State Engineer, and such rules and regulations as he may prescribe not inconsistent with this Stipulation. Said Water Commissioner shall be selected by a representative of the Muddy Valley Irrigation Company and a representative chosen by a majority in interest of the defendants, and if such representatives cannot agree then the State Engineer shall have the selection and appointment of the Water Commissioner. The salary and expenses of such Water Commissioner shall be borne by the parties hereto in the same proportion as fixed in paragraph eight hereof for the sharing of losses. The representatives of the respective parties who are to select the Water Commissioner shall agree on the time and manner and person through whom each party shall pay his share of such salary and expenses, and such agreement shall be binding on each party and become a legal obligation.

11. An Order shall also be entered, binding on all of the parties hereto, modifying the terms of the temporary injunction heretofore made and granted, in accordance with the terms of this Stipulation, so that during the pendency of this action and until the final adjudication and final Decree each party shall be enjoined from interfering with or impairing any right given by this Stipulation to any other party and from violating any of the terms and conditions and agreements of this Stipulation, or any part thereof.

12. Each party shall pay its or his own costs in this action, but the costs and expenses of the adjudication of the State Engineer, including any surveys or maps made by him, shall be borne by the respective parties, in accordance with the Statutes of this State. But in determining the Water Right and acreage against which such expense shall be assessed the numerators in the fractions in paragraph eight shall as between these parties be deemed to be the number of acres to be irrigated by the respective parties.

Dated this 23rd day of April, A. D., 1919.

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A. S. Henderson,  
Brown & Belford  

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Attorneys for Plaintiffs.

F. R. McNamee and  
Leo A. McNamee  

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Attorneys for all defendants,  
except W. J. Powers and Mary  
Powers.

C. D. Breeze  

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Attorney for Defendants,  
W. J. Powers and Mary Powers.

That on the said 23rd day of April, 1919, an order was made and entered by the Court in the above entitled action referring to the State Engineer of the State of Nevada the said action for an adjudication of the water rights of the Muddy River, its head waters and tributaries and providing that the said State Engineer in making such adjudication should, as between the parties to said Stipulation, in determining their relative rights, as between themselves, be bound by, and give affect to, the terms and conditions of said stipulation and the division of the waters which said parties have made between themselves. That a copy of said Order of reference, duly certified, was delivered to said State Engineer and thereupon the said State Engineer proceeded in accordance with said order and with the provisions of the Statutes of the State of Nevada to make an adjudication of said Muddy River; that the various notices as required by Statute were given by said State Engineer and that claims were filed by various claimants for the use of water on said river and proofs taken and used by said State Engineer in accordance with the provisions of said Statute. That thereafter and on the 21st day of January 1920, said State Engineer made his order of determination entitled "In the matter of the determination of the relative rights in and to the waters of the Muddy River and its tributaries in Clark County, State of Nevada."

That on the 26th day of January, 1920, a copy of the said Order of Determination, duly certified by the State Engineer

1 was filed with the Clerk of the above entitled court and an  
2 order made and entered by the Judge of said Court appointing the  
3 10th day of March, 1920, 10 o'clock A. M. of said day, as the  
4 time for hearing the matter of said determination and that a  
5 certified copy of such order and a notice of such hearing was  
6 duly published and served as required by law and that there-  
7 after, and within the time provided by law, various parties to  
8 the above entitled action, claimants of water rights in said  
9 Muddy River, duly filed with the clerk of said court and served  
10 upon the State Engineer their exceptions to the said order of  
11 determination.

12 That on the 10th day of March, 1920, the defendant  
13 Jacob Bloedel, a claimant of a water right on said river who  
14 had not theretobefore been a party to said action, was by stip-  
15 ulation made a party defendant thereto and duly appeared by  
16 his attorneys and it was stipulated that he should be deemed  
17 to have made a claim for water right in said Muddy River without  
18 further pleading; and also on said date it was stipulated that  
19 the defendants Isaiah Cox and Anna Cox his wife, who appeared  
20 to the satisfaction of the court to have become the owners of  
21 and entitled to land and water rights of J. H. Mitchell, should  
22 be deemed to have made a claim in said action for the water rights  
23 for said land so acquired by them without further pleading. That  
24 on the said 10th day of March, 1920 there was made and filed in  
25 said action a stipulation supplemental to said stipulation of  
26 April 23rd, 1919 which said stipulation after the entitlement of  
27 the court and cause is in words and figures following, to-wit:

28 STIPULATION SUPPLEMENTAL TO STIPULATION OF  
29 APRIL 23, 1919.

30 WHEREAS, since the making and filing of a stipulation  
31 by all of the parties to the above entitled action, who has then  
32 appeared therein under date of April 23rd, 1919, Jacob Bloedel  
has been made a party defendant to said action and has duly  
appeared therein by F. R. McNamee and Leo A. McNamee, his attorneys;



1 AND, WHEREAS, since the making of said stipulation the  
2 rights of J. H. Mitchell, and the lands belonging to him have been  
3 sold and conveyed to Isaiah Cox and Annie M. Cox, his wife, two of  
4 said defendants, and whereas a stipulation has been filed herein  
5 providing and allowing water rights in behalf of the land so sold  
6 by Mitchell to Cox and wife, and providing that the same may be  
7 considered as having been made in this action without further  
8 pleading,

9 AND WHEREAS, in view of the foregoing premises it is  
10 deemed desirable to supplement and amend the said stipulation of  
11 April 23rd, 1919.

12 The parties to the above entitled action by their respect-  
13 ive attorneys do hereby agree and stipulate as follows:

14 1. The said defendant, Jacob Bloedel, and the said  
15 defendants, Isaiah Cox and Anna M. Cox, his wife, in behalf of the land  
16 and water rights so acquired from Mitchell, do hereby assent to and  
17 make themselves parties in all respects to the said stipulation of  
18 April 23rd, 1919, except as the same is changed and amended here-  
19 inafter.

20 2. The said defendant, Jacob Bloedel, his grantors and pre-  
21 decessors in interest have diverted and appropriated from the Muddy  
22 River, its headwaters, sources of supply and tributaries, and the  
23 said defendant, Bloedel, is entitled to divert from said river 2/70  
24 of one cubic foot of water per second, for use upon the NE 1/4 of  
25 the NE 1/4 of Sec. 21, T. 14 S. R. 65 E. M. D. B. & M.

26 The defendants, Isaiah Cox and Anna M. Cox, his wife,  
27 their grantors and predecessors in interest have diverted and  
28 appropriated from the said Muddy River, its headwaters, tributaries  
29 and sources of supply and are entitled to divert, in addition to the  
30 quantity of water described in the said original stipulation of  
31 April 23rd, 1919, 3/70 of one cubic foot of water per second for  
32 use upon said land in the N.W1/4 of the NE 1/4 of the N. E.  
1/4 of Section 16 T. 14 S. R. 65 E. M. D. B. & M., the same being

the land acquired by said defendants Cox and wife from J. H. Mitchell,

1                   3. Paragraph 3 of said stipulation of April 23rd, 1919, is  
2 amended to read as follows:

3                   "the Indian Reservation, situate above Moapa, and  
4 the inhabitants thereof, are entitled to divert from the waters  
5 of said Muddy River, and to use upon said land on said Reservation  
6 1.242 of a cubic foot of water per second, and no more, measured  
7 at the place of diversion, or such place as the State Engineer or  
8 Water Commissioner, may select."

9                   4. That portion of Paragraph 8 of said stipulation of April  
10 23rd, 1919, fixing the pro rata share of any abnormal loss to be  
11 borne by each party, is amended to read as follows:

12                   "If any such abnormal loss occurs at any time the pro-  
13 rata share of such loss to be borne by each party shall be as  
14 follows:

15                   The defendants, Baldwin and Wife, shall bear 16/3169 of  
16 such loss;

17                   The defendant Moapa and Salt Lake Produce Company  
18 155/3169 thereof;

19                   The defendants Livingston & Smith 160/3169 thereof;

20                   The defendants Perkins and wife 30/3169 thereof;

21                   The defendants Knox and Holmes 95/3169 thereof;

22                   The defendants Cox and wife 13/3169 thereof;

23                   The defendants Powers and wife 29/3169 thereof;

24                   The defendant Sadie George 2/3169 thereof;

25                   The defendant Jacob Bloedel 2/3169 thereof; and

26                   The Plaintiff Muddy Valley Irrigation Company 2667/3169  
27 thereof."

28                   5. In Paragraph 8 of said stipulation of April 23rd, 1919,  
29 is amended, so that the definition of abnormal losses from the flow  
30 of said stream wherever the figures 1.25 occur, the same shall be  
31 struck out and the figures 1.242 substituted therefor. The parties  
32 hereto do not admit or recognize any rights to the use of the

1 Muddy River by or for the Indian Reservation and the inhabit-  
2 ants thereof, except the amount awarded and found to belong to  
3 such reservation by the State Engineer. The parties have in-  
4 cluded in their definition of abnormal losses a possible diversion  
5 of a greater amount by said reservation or possible acquisition  
6 of an increase right, only as a measure of security against a  
7 possible contingency which might arise through the uncertainty  
8 of litigation.

9 6. Paragraph 7 of said stipulation of April 23rd, 1919,  
10 is amended to read as follows:

11 "All of the water rights hereinbefore specified shall  
12 be deemed and held to be vested rights acquired by valid appropri-  
13 ation and beneficial use prior to March 1, 1905, and by continued  
14 and uninterrupted use since said date, and shall be considered as  
15 equal in right, without one having any priority over any other.  
16 This stipulation shall apply to and include whatever rights are  
17 held or possessed by the Muddy Valley Irrigation Company under  
18 the certificates of appropriation issued to the plaintiff Nevada  
19 Land & Live Stock Company as set forth in paragraph twelve of the  
20 amended complaint herein and under any certificate of appropriation  
21 which may be issued to the Muddy Valley Irrigation Company under  
22 its application to the State Engineer numbered 1611.

23 7. The amount of water awarded in the said stipulation of  
24 April 23rd, 1919, and in this stipulation to the respective parties  
25 shall be deemed a continuous right during the entire year, it being  
26 understood that the minimum duty of water during the summer season  
27 shall be one cubic foot per second for 70 acres of land;  
28 during the winter season, one cubic foot per second for 100 acres  
29 of land, and that by the summer season is meant the period between  
30 and including the first day of May of each year up to and including  
31 the 30th day of September of each year, and by the winter season is  
32 meant the period from and including the 1st day of October to and  
including the following 30th day of April.

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8. It is understood and agreed that the amounts of water awarded by this stipulation to the respective parties and to the Indian Reservation absorbs and exhausts all of the flow of the said stream, its sources of supply, headwaters and tributaries during the entire year.

9. The order of determination of the State Engineer and any further or supplemental order of determination made by him under order of the court shall give effect to the terms and conditions of said stipulation of April 23rd, 1919 and of this supplemental stipulation as said order of determination may define or effect the rights of the parties to the above entitled action and any final decree entered herein shall, in determining the relative rights of the parties hereto follow and give effect to the terms of the said new stipulation.

DATED this 10th day of March, 1920.

A. S. Henderson  
Brown & Belford  
Attorneys for Plaintiff

F. R. McNamee &  
Leo A. McNamee  
Attorneys for Defendants other  
than W. J. and Mary Powers.

C. D. Breeze  
Attorney for W. J. and Mary  
Powers.

That the said exceptions of the respective parties to the order of determination came regularly on for hearing on said 10th day of March, 1920 and witnesses were sworn and testified for and on behalf of the said excepting parties and documentary and other evidence was introduced in support of said exceptions and thereupon the court made and entered an order requiring the State Engineer to make a further determination of the waters of the said Muddy River and its tributaries, subject to instructions of the court which were embodied in such order; and thereafter, to-wit, on the 11th day of March, 1920 said State Engineer did make and file in his office a further and supplemental order of determination and has filed a duly certified

copy thereof with the Clerk of this Court.

1 And the above entitled action and the above entitled  
2 matter and the said original and said further and supplemental  
3 order of determination of the State Engineer in said matter  
4 having now come on for hearing and the Court having considered  
5 the pleadings of the parties, the oral and documentay evidence  
6 heretofore taken herein, and the stipulations of the parties  
7 filed herein, and written findings having been waived by attorneys  
8 for the respective parties, thereupon, upon motion of the  
9 attorneys for plaintiffs and defendants,

10 It is by the Court ORDERED, ADJUDGED AND DECREED

11 as follows:

12 First: That the said order of determination of the  
13 State Engineer in the matter of the determination of the relative  
14 rights in and to the waters of the Muddy River and tributaries  
15 in Clark County, State of Nevada, as amended and modified by the  
16 said further and supplemental order of determination, and the said  
17 further and supplemental order of determination be and the same  
18 hereby are affirmed and confirmed. Wherever the said further and  
19 supplemental order of determination differs from, changes, modifies,  
20 or is in conflict with the original order of determination, the  
21 said original order of determination is and shall be deemed to  
22 be modified by the said further and supplemental order of  
23 determination and by the order and decree of this court and the same  
24 as so modified is hereby affirmed. A copy of said original order  
25 of determination marked "Exhibit 'A'" and a copy of said further  
26 and supplemental order of determination marked "Exhibit 'B'" are  
27 annexed to this decree and are made parts hereof as if set forth  
28 at length herein. Hereinafter in this decree whenever the order  
29 of determination is referred to it shall, unless otherwise specif-  
30 ied, be understood to include both the original order of determin-  
31 ation and the further and supplemental order of determination and  
32 the former as amended, changed and modified by the latter. Said

1 order of determination shall and does define the rights of the  
2 parties named therein except as hereinafter in this decree provided.

3 Second: That the parties to the above entitled action,  
4 their grantors and predecessors in interest have diverted and  
5 appropriated from the Muddy River, its headwaters, sources of  
6 supply and tributaries for use upon the lands described in their  
7 several answers and specifically described in the order of deter-  
8 mination and the said parties are respectively entitled to divert  
9 to said lands for use in the irrigation thereof, the respective  
10 amounts of water herein setforth:

11 The defendants George Baldwin and Aletha Baldwin his wife,  
12 ,2286 of one cubic foot of water per second.

13 The defendant Moapa and Salt Lake Produce Company 2.215  
14 cubic feet per second.

15 The defendants D. H. Livingston and Richard Smith,  
16 2,286 cubic feet per second.

17 The defendants Joseph Perkins and Kathryn Perkins, his  
18 wife, .428 cubic feet per second.

19 The defendants G. S. Holmes and Julia May Knox, 1.357  
20 cubic feet per second.

21 The defendants Isaiah Cox and Anna Cox his wife for  
22 use on 10 acres of land described in their separate answer .143 of  
23 a cubic foot per second.

24 The defendants Isaiah Cox and Anna Cox his wife for use  
25 upon the lands formerly belonging to J. H. Mitchell, described in  
26 the order of determination .043 of a cubic foot per second.

27 The defendants, W. J. Powers and Mary Powers his wife,  
28 .4143 of a cubic foot per second.

29 The defendant, Sadie George for use on the land described  
30 in the order of determination, .03 of a cubic foot per second.

31 The defendant, Los Angeles & Salt Lake Railroad Company  
32 for the use specified in the order of determination, .04646 of a  
cubic foot per second.

1 The defendant, Jacob Bloedel for use upon the land  
2 described in the order of determination, .0286 of a cubic foot  
3 per second.

4 The plaintiff, John F. Perkins, .0286 of a cubic foot  
5 per second.

6 The plaintiff, Muddy Valley Irrigation Company, for  
7 use during the summer season, as hereinafter defined and as  
8 defined in said order of determination, upon the lands described  
9 in said order of determination, 36,2588 cubic feet per second,  
10 which said amount includes the amount of water for summer use  
11 allowed by State Engineer's certificate No. 59. Said company is  
12 also the owner of the right to and entitled to divert during the  
13 winter season for use upon the lands described in said order of  
14 determination and in State Engineer's Certificate Nos. 58, 59  
15 and 60, and also upon the lands described in any certificate or  
16 permit granted or issued by said State Engineer upon said Company's  
17 application No. 1611 - the several amounts of water allowed by said  
18 certificate or permits for winter use.

19 Third: That the Moapa Indian Reservation has diverted  
20 and appropriated from the said Muddy River for use upon the lands  
21 of said reservation and is entitled to divert upon said lands  
22 for use thereon 1,242 cubic feet per second during the summer  
23 season and .87 of a cubic foot per second during the winter season.

24 Fourth: That all of the defendants to the above entitled  
25 action and the plaintiff John F. Perkins are and shall be entitled  
26 to use the several amounts of water which they have appropriated  
27 as aforesaid during both the summer and winter seasons.

28 Fifth: That the duty of water allowed for all land  
29 in the Muddy Valley except on the Moapa Indian Reservation shall  
30 be one cubic foot per second of flow to 70 acres for the summer  
31 irrigation season which is defined as extending from May 1st to  
32 October 1st, and one cubic foot per second flow to 100 acres for  
the winter irrigation season which is defined as extending from  
October 1st to May 1st. On said Indian Reservation the duty of

1 water allowed is 1 cubic foot per second flow to 70 acres for  
2 the summer irrigation season which is defined as from April 1st  
3 to October 1st, and one cubic foot per second flow to 100 acres  
4 for the winter irrigation season which is defined as from October  
5 1st to April 1st.

6 The volumes or amounts of water awarded and allotted  
7 by this decree to the parties hereinbefore named and to which they  
8 are entitled shall be understood to include and define the amount  
9 of all the waters now or heretofore rightfully used on the lands  
10 given in the tabulation in the original order of determination  
11 whether diverted directly from said Muddy River or from its trib-  
12 utaries, springs, head waters or other sources of supply, including  
13 waters claimed to have been developed heretofore by any of the said  
14 parties. All measurements of amounts to which the said several  
15 parties are entitled except that awarded to the Moapa Indian Reser-  
16 vation shall be made at the places of diversion or as near thereto  
17 as practicable or convenient, as the State Engineer or Water  
18 Commissinner may select or approve. On said Indian Reservation  
19 all measurements of amounts diverted are to be made at the point  
20 where the main ditch enters or becomes adjacent to the land  
21 irrigated or as near thereto as practicable as the State Engineer  
22 or Water Commissioner may select or approve.

23 Sixth: That the waters now and heretofore used by the  
24 defendants George Baldwin and Aletha Baldwin his wife, upon the  
25 lands described in their original separate answer, and which are  
26 the waters of what is known as the George Baldwin Spring, the  
27 maximum flow of which is found to be .8298 of a cubic foot per  
28 second of water are waters which have been developed and approp-  
29 riated by said defendants in the manner and by the means alleged  
30 in their said answer; and that such development and use has not and  
31 does not diminish the flow or volume of the Muddy River or interfere  
32 with the rights of any of the other parties to the above entitled  
action or the Moapa Indian Reservation.



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Seventh: That, as between the parties to the above entitled action, the Muddy Valley Irrigation Company is declared and decreed to have acquired by valid appropriations and beneficial use and to be entitled to divert and use upon the lands described in the amended complaint and more particularly described in the order of determination, all the waters of said Muddy River, its head waters, sources of supply and tributaries, save and except the several amounts and rights hereinbefore specified and described as awarded and decreed to the other parties to this action and to the Moapa Indian Reservation, and said Company is to divert said waters, convey and distribute the same to its present stockholders and to its future stockholders and to other persons who have acquired or who may hereafter acquire temporary or permanent rights from said Company, for the various purposes described in the complaint and upon the lands situated as stated in the complaint and specifically designated in the order of determination and that the stock holders of said Company are the equitable owners of rights to use said waters in this decree and by the order of determination allotted and decreed to said Company, in accordance with its articles and amended articles of incorporation, or its by-laws or the accepted uses and practices of said corporation.

Eighth: As between the parties to this action and except against the rights awarded the Indian Reservation and the Inhabitants thereof, all of the water rights enumerated as belonging to the parties to the action shall be deemed and held to be and are hereby decreed to be vested rights acquired by valid appropriation and beneficial use prior to March 1st, 1905, and by continued uninterrupted use since said date and shall be considered as equal in rank without anyone having any priority over another and that this shall apply to and include the rights held by the Muddy Valley Irrigation Company as grantee or assignee of Nevada Land & Live Stock Company under the State Engineer's certificates, 58, 59 and 60, and under such permit or certificate as may hereafter be

1 granted by the State Engineer to the Muddy Valley Irrigation  
2 Company under its application No. 1611. That, as against the  
3 water right granted and allotted to the said Indian Reservation,  
4 the water rights held by the Muddy Valley Irrigation Company  
5 under said certificates or permits shall be deemed to be sub-  
6 sequent to the water rights allotted and decreed the said Indian  
7 Reservation. The water right allotted and decreed the Indian  
8 Reservation shall be deemed and held to be vested rights acquired  
9 by valid appropriation prior to March 1st, 1905 and by uninter-  
10 rupted use thereafter and shall, to the extent decreed and allotted,  
11 rank, as equal in priority with all the other rights, allotted,  
12 awarded and decreed to the said several parties, except those  
13 granted by the said certificates or permits.

14 Ninth: That the defendants in said action shall not be  
15 required to take or use the waters in said river in continuous  
16 flow, but may cumulate the same or any part thereof in rotation  
17 and turn periods, with the approval of the Water Commissioner, and  
18 subject to his control and direction and under such rules and  
19 regulations as may be prescribed by the State Engineer and the  
20 statutes of the State of Nevada. That the whole amount of water  
21 diverted from said river at any one time by all of the defendants  
22 shall not exceed in the aggregate the total of the amounts of  
23 water awarded to the said defendants. Below the lowest diversion  
24 of the defendants Holmes and Knox, the flow in the stream shall be  
25 maintained substantially constant, subject to seasonal variations,  
26 only, however, in so far as the defendants can be held to be  
27 responsible for the fluctuations of the stream. The whole of said  
28 river system shall be under the supervision, rules and regulations  
29 of the State Engineer, and the direction and control of the water  
30 commissioner to be appointed as provided by law, as a fully  
31 adjudicated stream; but it is the intention hereof, and it is hereby  
32 decreed that, so far as practicable, the stream shall be treated  
as divided into two parts, that above and that below the lowest  
diversion on the ranch now belonging to Knox and Holmes. The  
Muddy Valley Irrigation Company, although under the supervision

1 and control of the state engineer and water commissioner, shall,  
2 subject to said supervision and general control, distribute and  
3 control the distribution of the waters diverted and conveyed by  
4 its works to its stockholders and other persons obtaining water  
5 by means thereof. Substantial headgates, weirs or other measur-  
6 ing devices and sand boxes, as the State Engineer, through the  
7 water commissioner may direct or require, shall be installed and  
8 maintained in good order by all who divert or use the waters of  
9 said stream system.

10 Tenth: That the owners of land on the upper part of said  
11 river as in the last paragraph defined, and defined in the said  
12 order of determination, as that part of said river above the  
13 "narrows", shall keep the channel through their respective lands  
14 cleared, of all ordinary obstructions, but in case of extra-  
15 ordinary obstructions, such as the formation of lime beds or  
16 deposits in the channel of the stream, the same shall be removed  
17 under the direction of the water commissioner and the expenses there-  
18 of paid pro rata by all parties to the determination in proportion  
19 to the acreage owned or controlled by them as defined in said order  
20 of determination.

21 Eleventh: That all abnormal losses from the flow of the  
22 stream shall be pro rated and shared among the parties holding water  
23 rights on the stream, but as between the parties to the above entit-  
24 led action, abnormal losses shall be defined as in paragraph 8 of  
25 said stipulation of April 23rd, 1919, as amended by paragraph 5 of  
26 the stipulation supplemental thereto, and, as between the parties  
27 to said action, such abnormal losses shall be borne by the parties  
28 to said action, pro rata in the proportions named and set forth  
29 in paragraph 4 of said supplemental stipulation.

30 Twelfth: That the aggregate volume of the several  
31 amounts and quantities of water awarded and allotted to the parties named  
32 in said order of determination, which include all of the parties to said  
action and the said Moapa Indian Reservation, is the total available  
flow of the said Muddy River and consumes and

exhausts all of the available flow of the said Muddy River, its head waters, sources of supply and tributaries.

1                   Thirteenth: That the salary and the expenses of any  
2 water commissioner, who may be appointed to supervise, control  
3 and regulate the distribution of the waters of said Muddy River  
4 in accordance with the provisions of said order of determination  
5 and this decree, shall be paid pro-rata by the parties to the said  
6 stipulation supplemental to the stipulation of April 23rd, 1919,  
7 in the same proportion as for the sharing of abnormal losses set  
8 forth in paragraph 4 of said supplemental stipulation. If in the  
9 opinion of the State Engineer a suitable and competent water  
10 commissioner cannot be employed at the salary fixed by statute,  
11 the State Engineer is authorized to fix the salary of the Water  
12 Commissioner in such amount as he may determine to be reasonable,  
13 subject, in case of objection by any of the water users, to the  
14 approval of the Judge of the above entitled Court. The State  
15 Engineer may also allow such expenses of such water commissioner as  
16 he may deem necessary or proper to be incurred in the performance  
17 of the duties of such water commissioner, subject, also, in case of  
18 objection, to the approval of the Judge of said Court.

19                   That any money due or which may hereafter become due  
20 from any party for his, her or its pro rata share of such salary  
21 or such expenses of the water commissioner shall be paid by the  
22 party at the times and in the manner provided by law for the pay-  
23 ment of the salary of the water commissioner, and any neglect or  
24 failure of any party to make any such payment shall be deemed a  
25 violation of this decree and a contempt of Court, and shall be  
26 punished accordingly, or the same may be deemed a debt and collect-  
27 ed by civil process.

28                   Fourteenth: That each of the parties to this action his,  
29 her or its grantees and successors in interest and every person  
30 acting under his, her or its direction or control be and hereby  
31 is perpetually restrained and enjoined from in any way interfer-  
32 ing with or in any way impairing any right given or awarded or

1 decreed by this decree to any other party and from violating  
2 any of the provisions of this decree, and is also perpetually  
3 restrained and enjoined from opening, closing, changing or  
4 interfering with any headgate or water box established by or  
5 under the order of the State Engineer or Water Commissioner  
6 without the authority of said State Engineer or Water Commissioner,  
7 and also from using water or conducting water into or through his,  
8 her or its ditch which has not been awarded to such party by this  
9 decree.

10 Fifteenth: Each party shall pay his or its own  
11 costs in this action, but the costs and expenses of the adjudicat-  
12 ion by the State Engineer, including any surveys or maps made by  
13 him, shall be borne by the respective parties in accordance with  
14 the Statutes of this State. But in determining the water right  
15 and acreage, against which said expense shall be assessed the  
16 numerators in the fractions in said paragraph 4 of said supple-  
17 mental stipulation, shall, as between said parties, be deemed to be  
18 the number of acres to be irrigated by the said respective parties.

19 Done in open Court this 12th day of March, A. D. 1920.

20 /s/ Wm. E. Orr  
21 District Judge.

EXHIBIT "A"  
STATE OF NEVADA

ORDER OF DETERMINATION OF  
RELATIVE RIGHTS

TO THE

Waters of the Muddy River and  
Its Tributaries

J. G. SCRUGHAM, State Engineer



CARSON CITY, NEVADA

STATE PRINTING OFFICE : : : JOE FARNSWORTH, SUPERINTENDENT

1920

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## ORDER OF DETERMINATION

### In the Matter of the Determination of the Relative Rights in and to the Waters of the Muddy River and its Tributaries in Clark County, State of Nevada.

In accordance with stipulated agreement entered into by the Muddy Valley Irrigation Company, et al., v. Moapa and Salt Lake Produce Company, et al., on the 23d day of April, 1919, an order was entered in the Tenth Judicial District Court of the State of Nevada referring the above-entitled action to the State Engineer for an adjudication of the water rights on the Muddy River stream-system as provided for in Chapter 140, Statutes of 1913, and all Acts amendatory thereof.

The tabulation of the allotments of the waters of the Muddy River stream-system, as attached hereto, covers all claims filed in the office of the State Engineer as provided for by law, and also an allotment to the Moapa Indian Reservation. Although duly notified of the pending adjudication proceedings in the statutory manner, the United States Indian Service authorities did not file a claim and state that they refuse to recognize the authority of the State of Nevada to determine the water rights of the Moapa Indian Reservation. In the absence of any showing on part of the United States Indian Service, the State Engineer has based the Moapa Indian Reservation allotment on the official investigations and reports made in the year 1906 by Henry Thurtell, at that time State Engineer of Nevada. These reports gave the Moapa Indian Reservation an allotment of water sufficient to properly irrigate an area of 87 acres, which was found to be the full area on the Reservation entitled to a vested water right under the law of the State.

(a) *Duty and point of diversion defined.*

The duty of water allowed for all land in the Muddy River Valley shall be 1 c.f.s. flow to 70 acres for the summer irrigation season from April 1 to October 1 and 1 c.f.s. flow to 100 acres for the winter irrigation season from October 1 to April 1.

The volumes or amounts of water allotted and to which it is agreed the respective parties are entitled shall be understood to include and define the amount of all the waters now or heretofore rightfully used on the lands given in the tabulation whether diverted directly from said Muddy River or from its tributaries, springs, headwaters or other sources of supply, including water claimed to have been developed heretofore by any of the said parties. All measurements of amounts diverted are to be made at the point where the main ditch enters or becomes adjacent to the land to be irrigated or as near thereto as practicable, as the State Engineer or water commissioner may select or approve.

(b) *Baldwin Spring flow defined.*

The maximum flow of .8298 c.f.s. of water of the George Baldwin Spring now and heretofore used by George Baldwin and Aletha L. Baldwin, his wife, is water which has been developed by said parties.

c.f.s. signifies cubic foot per second.

Such development and use of this amount of water has not and does not diminish the flow or volume of the Muddy River, or interfere with the rights of any other water users on the stream-system. No further development of water on the head of the Muddy River stream-system shall be made which in any way diminishes the flow of the waters of the Muddy River or impairs rights defined and referred to in this order.

*(c) Method of use.*

The parties named in this order shall not be required to take or use the water of said river in continuous flow, but may cumulate same or any part thereof in rotation and in periodic turn, with the approval of the water commissioner, subject to his control and direction and under such rules and regulations as are prescribed by the State Engineer and the statutes of the State of Nevada.

The whole amount of water diverted from the river at any one time by all the parties allotted water for use above the "narrows" is not to exceed in the aggregate the total amount of water allotted to the several parties resident in the Upper Muddy Valley. Below the lowest diversion of Knox and Holmes the flow in the stream shall be maintained substantially constant subject to seasonal variation. The whole of said river system shall be under supervision of the rules and regulations of the State Engineer and the direction and control of the water commissioner, to be appointed as provided by law. Substantial headgates, weirs, and sand-boxes, as the State Engineer through the water commissioner may order, shall be installed and maintained in good order by all who divert or use the waters of said stream-system.

*(d) Channel upkeep, responsibility for.*

The owners of land on that part of said river above the "narrows" shall keep the channel through their respective lands cleared of all ordinary obstructions, but in case of extraordinary obstruction, such as the formation of lime deposits in the channel of the stream, the same shall be removed under the direction of the water commissioner and the expenses thereof paid pro rata by all parties to this determination in proportion to the acreage owned or controlled by them as defined in this order.

*(e) Priority—Vested and granted rights.*

All the water rights enumerated in this order of determination, except those held under permit from the State Engineer's office, shall be deemed and held to be vested rights acquired by valid appropriation and beneficial use prior to March 1, 1905, and by continued uninterrupted use since said date and shall be considered as equal in rank without having any priority over one another.

Permits Nos. 31 and 1372, which are the basis for certificates Nos. 58, 59, and 60, granted by the State Engineer, cover certain water rights which are enumerated in the appended tabulation of allotments. These granted rights are next in priority to the vested rights on the Muddy River stream-system.

*(f) Losses, apportionment of.*

All abnormal losses from the flow of said stream shall be pro-rated and shared among the parties holding water rights on the stream. Abnormal losses shall include any substantial loss from the permanent



flow of the stream, such as a cloudburst destroying or obstructing the channel thereof or an opening up of a fissure in the bed of the stream or in one of the sources of supply and the disappearance therein of a substantial amount of the waters, thereby causing a diminution in the available flow.

If any such abnormal loss occurs at any time, the pro-rata share of such loss to be borne by each party to this order shall be as follows:

George Baldwin and Aletha Baldwin, his wife.....	16/2839
Moapa & Salt Lake Produce Co.....	155/2839
Livingston & Smith.....	160/2839
Joseph Perkins and wife.....	30/2839
Knox and Holmes.....	95/2839
Isalah Cox and wife.....	10/2839
W. J. Powers and wife.....	29/2839
Sadie George.....	2.1/2839
Jacob Bloedel.....	2/2839
J. H. Mitchell.....	3/2839
U. S. Indian Service, Moapa Reservation.....	87/2839
John F. Perkins.....	2/2839
Muddy Valley Irrigation Co.....	2244.80/2839

(g) *Expense of commissioner.*

The salary and expenses of the water commissioner shall be paid pro rata by all parties to this adjudication in the proportion of acreage owned and controlled by them as defined in this order.

**SUMMARY OF ALLOTMENTS AND CERTIFICATES**

<i>Claimant</i>	<i>Acreage</i>	<i>C.F.S. Flow</i>	
		<i>Summer</i>	<i>Winter</i>
Jacob Bloedel.....	2	.0286	.02
Moapa & Salt Lake Produce Co.....	155	2.215	0
Isalah Cox and wife.....	10	.143	0
J. H. Mitchell.....	3	.043	0
George Baldwin.....	16	.2286	0
Sadie George.....	2.1	.0300	0
John F. Perkins.....	2	.0286	.02
Los Angeles & Salt Lake Ry.....		.04646	.04646
Livingston and Smith.....	160	2.286	0
Knox and Holmes.....	95	1.357	0
W. J. Powers.....	29	.4143	.29
Muddy Valley Irr. Co.....	2244.80	32.0068	22.448
Muddy Valley Irr. Co. (Cert. 58).....	398.11		3.98
Muddy Valley Irr. Co. (Cert. 59).....	425.2	4.252	
	846.6		8.466
Muddy Valley Irr. Co. (Cert. 60).....	80		.8
Joseph Perkins.....	30	.428	0
Moapa Indian Reservation.....	87	1.242	.87

**Appropriator—Jacob Bloedel.**

**Source—Muddy River Tributary (Bloedel Spring).**

01625

<i>Ditch Title</i>	<i>Date when construction commenced</i>	<i>Date when land first irrigated</i>	<i>Number of acres irrigated</i>	<i>Sec.</i>	<i>Subdivision</i>	<i>Tp.</i>	<i>S.</i>	<i>R.E.</i>
Morris & Jones Ditches.....	1896		2.00	21	NE1NE1	14	65	

Domestic use allowed.  
2/70 c.f.s. allowed for irrigation.

**Appropriator—Moapa and Salt Lake Produce Co.**

**Source—Muddy River and Tributaries.**

Big Spring, Jones Spring, High Springs, and Rock Cabin Spring Ditches.	14				W1SW1	14	65	
	15				S1	14	65	
	15				S1N1NW1	14	65	
	15				S1N1	14	65	
	16				NE1	14	65	
	16				E1SE1	14	65	
Excepting and excluding from the above description the.....	16				NE1			
					NW1NE1	14	65	
	16				NW1			
					NE1NE1	14	65	

Domestic use allowed.  
Total acreage allotted water, 155 acres.  
2 and 15/70 c.f.s. allowed for irrigation.

**Appropriator—Isaiah Cox and Anna Cox, His Wife.**

**Source—Muddy River and Tributaries.**

Cox Ditch and Cox Spring Ditch.	10.00		16		NE1			
					NW1NE1	14	65	

Domestic use allowed.  
10/70 c.f.s. allowed for irrigation.

**Appropriator—J. H. Mitchell.**

**Source—Muddy River.**

Mowry & Mitchell or Cox Ditch...	3.00		16		NW1			
					NE1NE1	14	65	

Domestic use allowed.  
3/70 c.f.s. allowed for irrigation.

**Appropriator—U. S. Indian Service (Moapa Indian Reservation).**

**Source—Muddy River.**

Indian Ditches.....	87.00		36			14	65	
			35			14	65	
			31			14	66	
			1			15	65	
			4			15	66	

**Total**..... **87.00**

This allotment is based on the Thurtell findings as covered in Certificate No. 479, issued by Henry Thurtell on March 30, 1907.

Domestic use allowed.  
87/70 c.f.s. allowed for irrigation.

Appropriator—George Baldwin.

Source—Muddy River and Tributaries.

Ditch Title	Date when construction commenced	Date when land first irrigated	Number of acres irrigated	Sec.	Subdivision	Tp.S.	R.E.
George A. Davis and Dry Ditch...			16.00	25	SE1SW1	14	65
				25	SW1SE1	14	65
				36	Lots 2 and 3 NE1	14	65

Domestic use allowed.  
16/70 c.f.s. allowed for irrigation.

Appropriator—Sadie George.

Source—Muddy River and Tributaries.

Indian Ditch.....			2.10	1	SE1NE1	15	66
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Domestic use allowed.  
21/700 c.f.s. allowed for irrigation.

Appropriator—Joseph Perkins.

Source—Muddy River and Tributaries.

Barnes & Harris Ditch and Bradfute Ditch.			30.00	6	Lots 4 and 5 NW1	15	66
				6	Lot 6 SW1	15	66
				6	SE1NE1	15	66
				6	SW1NE1	15	66
				6	Lots 2 and 3	15	66

Domestic use allowed.  
30/70 c.f.s. allowed for irrigation.

Appropriator—Los Angeles and Salt Lake Ry. Co.

Source—Muddy River.

Pipe Line.....			equiv. to .0322	32	NE1	14	66
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NOTE—Water used for locomotives, cars, depot, stock yards, and town supply.  
.04646 c.f.s. allowed.

Appropriator—D. H. Livingston and Richard Smith.

Source—Muddy River and Tributaries.

White, Livingston, and Crosby Ditches.				5	S1SE1	15	66
				8	N1NE1	15	66
				9	N1NW1	15	66
				9	NW1NE1	15	66
				4	SW1SE1	15	66
				4	SE1SW1	15	66
			20.00	4	N1SE1	15	66
				9	NE1NE1	15	66
				4	SE1SE1	15	66
				3	W1SW1	15	66
				8	N1NW1	15	66
				6	S1SW1	15	66
All that portion of.....				6	S1SE1	situated east of the R. R. track	
Total.....			160.00				

Domestic use allowed.  
2 and 20/70 c.f.s. allowed for irrigation.

Appropriator—G. S. Holmes and Julia May Knox.  
Source—Muddy River and Tributaries.

Ditch Title	Date when construction commenced	Date when land first irrigated	Number of acres	Sec.	Subdivision	Tp.	S.	R.	E.
Weiser Ditch.....			95.00	1	SE1SW1	15	66		
				1	S1SW1	15	66		
				1	S1SE1	15	66		
				12	NE1	15	66		
				12	NE1SE1	15	66		
				7	SW1NW1	15	67		
				7	NE1SW1	15	67		
				7	Frac. 1SW1	15	67		

Domestic use allowed.  
1 and 25/70 c.f.s. allowed for irrigation.

Appropriator—W. J. Powers.  
Source—Muddy River.

Cook Ditch.....			29.00	4	NW1SE1	15	66		
				4	NE1SE1	15	66		
				4	NW1SE1	15	66		
				4	NE1SW1	15	66		
				4	NE1SE1	15	66		
				4	SE1NE1	15	66		
				3	NW1SW1	15	66		

Domestic use allowed.  
22/70 c.f.s. allowed for irrigation.

Appropriator—Muddy Valley Irrigation Co.  
Source—Muddy River.

St. Joe Ditch.....	20.00	15	SE1SW1						
	14.00	15	SW1SW1						
	34.00	15				15	67		
	20.00	21	SE1NE1						
	7.25	21	NE1NE1						
	27.25	21				15	67		
	20.00	22	NE1NW1						
	24.00	22	SE1NW1						
	14.00	22	NW1NW1						
	14.00	22	SW1NW1						
	14.00	22	NW1SW1						
	14.00	22	NE1SW1						
	15.00	22	SW1SW1						
	20.00	22	NW1NE1						
	20.00	22	SW1NE1						
	15.00	22	NW1SE1						
	14.00	22	SE1SW1						
	184.00	22				15	67		
	14.00	27	NE1NW1						
	14.00	27	NW1NE1						
	16.50	27	SW1NE1						
	30.00	27	SE1NE1						
	26.00	27	NE1SE1						
	10.00	27	SE1SE1						
	110.50	27				15	67		
	2.50	26	SW1NW1						
	24.40	26	NW1SW1						
	3.00	26	SW1SW1						
	30.00	26				15	67		
	17.50	35	SE1NW1						
	40.00	35	NW1NW1						
	20.00	35	NE1NW1						
Total.....	77.50	35				15	67		
	463.25								

46325/7000 c.f.s. allowed for irrigation.

**Appropriator—Muddy Valley Irrigation Co.**

**Source—Muddy River.**

<i>Ditch Title</i>	<i>Date when construction commenced</i>	<i>Date when land first irrigated</i>	<i>Number of acres irrigated</i>	<i>Sec.</i>	<i>Subdivision</i>	<i>Tp.S. R.E.</i>
Sprole-Averitt.....			22.25	27	NW1NW1	
			25.00	27	SW1NW1	
			10.00	27	SE1NW1	
			35.50	27	NE1SW1	
			22.50	27	SE1SW1	
			28.00	27	SW1SE1	
			<u>143.25</u>	27		15 67
			6.00	34	NE1NW1	
			15.00	34	SE1NW1	
			17.75	34	NE1NE1	
		40.00	34	NE1NE1		
		13.75	34	SW1NE1		
		6.50	34	SE1SE1		
		<u>99.00</u>	34		15 67	
<b>Total.....</b>			<b>242.25</b>			

24225/7000 c.f.s. allowed for irrigation.

**Appropriator—Muddy Valley Irrigation Co.**

**Source—Muddy River.**

Kapalapa Ditch.....			10.00	2	NW1NW1	
			20.00	2	NE1NW1	
			20.00	2	SE1NW1	
			20.00	2	NW1NE1	
			7.50	2	NE1NE1	
			20.00	2	SE1NE1	
			20.00	2	SW1NE1	
			20.00	2	NW1SE1	
			20.00	2	NE1SW1	
			<u>157.50</u>	2		16 67
<b>Total.....</b>			<b>157.50</b>			

15750/7000 c.f.s. allowed for irrigation.

**Appropriator—Muddy Valley Irrigation Co.**

**Source—Muddy River.**

Stringtown Ditch.....			17.80	12	NE1NW1	
			12.50	12	SW1NW1	
			12.50	12	SE1NW1	
			7.50	12	SW1NE1	
			12.00	12	NE1SE1	
			30.00	12	NW1SE1	
			36.20	12	SW1SE1	
			24.10	12	SE1SE1	
			7.00	12	NE1SW1	
			15.00	12	SE1SW1	
			8.00	12	SW1SW1	
			<u>182.60</u>	12		16 67
			21.40	13	NW1NE1	
		25.80	13	NE1NE1		
		<u>47.20</u>	13		18 67	
		5.00	18	SW1NW1		
		5.00	18	NW1NW1		
		<u>10.00</u>	18		18 68	
<b>Total.....</b>			<b>239.80</b>			

23980/7000 c.f.s. allowed for irrigation.

**Appropriator—Muddy Valley Irrigation Co.  
Source—Muddy River.**

Ditch Title	Date when construction commenced	Date when land first irrigated	Number of acres irrigated	Sec.	Subdivision	Tp.S.	R.E.
Sparks Canal			13.00	1	SE1SW1	16	67
			21.80	7	SW1SW1		
			1.20	7	NW1SW1		
			23.00	7		16	68
			1.80	12	NE1SE1		
			8.20	12	SE1SE1		
<b>Total</b>			10.00	12		16	67
			46.00				

46/70 c.f.s. allowed for irrigation.

**Appropriator—Muddy Valley Irrigation Co.  
Source—Muddy River.**

Overton Canal			18.00	2	SW1SE1		
			20.00	2	SE1SW1		
			12.00	2	SW1SW1		
			50.00	2		16	67
			7.00	3	SE1SE1	16	67
			5.00	10	NE1NE1	16	67
			10.00	11	NW1NW1		
			20.00	11	NE1NW1		
			20.00	11	NW1NE1		
			13.475	11	NE1NE1		
			7.50	11	SE1NE1		
			7.50	11	SW1NE1		
			10.00	11	NE1SE1		
			10.00	11	NW1SE1		
			27.625	11	SE1SE1		
			126.00	11		16	67
			13.00	13	NW1NW1		
			5.00	13	NE1NW1		
			20.00	13	SW1NW1		
			15.00	13	SE1NW1		
			4.50	13	SW1NE1		
			7.60	13	SE1NE1		
			24.50	13	NW1SE1		
			22.75	13	NE1SE1		
			26.40	13	SE1SE1		
			21.35	13	SW1SE1		
			24.50	13	NE1SW1		
			12.00	13	SE1SW1		
			218.50	13		16	67
			7.50	14	NE1NE1	16	67
			5.00	18	SW1SW1	16	68
			3.00	19	SW1SE1		
			6.00	19	NE1SW1		
			5.00	19	SE1SW1		
			14.00	19		16	68
			3.00	24	NW1NE1		
			20.00	24	NE1NE1		
			5.00	24	SW1NE1		
			4.00	24	SE1NE1		
			22.00	24		16	67
			3.00	30	NW1NE1	16	68
<b>Total</b>			466.00				

466/70 c.f.s. allowed for irrigation.

**Appropriator—Muddy Valley Irrigation Co.**

**Source—Muddy River.**

<i>Ditch Title</i>	<i>Date when construction commenced</i>	<i>Date when land first irrigated</i>	<i>Number of acres irrigated</i>	<i>Sec.</i>	<i>Subdivision</i>	<i>Tp.S R.E.</i>
Kaolin Ditch.....			28.00	19	SE1SE1	16 68
			20.00	30	SW1NE1	
			20.00	30	NW1SE1	
			7.00	30	NE1NE1	
			47.00	30		16 68
			20.00	32	NE1SE1	
			20.00	32	NW1SE1	
			40.00	32		16 68
			4.00	29	NE1NW1	16 68
<b>Total</b> .....			<b>119.00</b>			

119/70 c.f.s. allowed for irrigation.

**Appropriator—Muddy Valley Irrigation Co.**

**Source—Muddy River.**

St. Thomas Ditch.....	15.00	10	SE1NW1		
	20.05	10	NW1NE1		
	19.00	10	NE1NE1		
	23.00	10	SW1NE1		
	13.50	10	SE1NE1		
	17.25	10	NE1SE1		
	2.50	10	SE1SE1		
	110.30	10		17	68
	5.00	11	NW1NW1		
	28.00	11	SW1NW1		
	30.25	11	NW1SW1		
	20.25	11	NE1SW1		
	34.00	11	SW1SW1		
	37.75	11	SE1SW1		
	20.80	11	SW1SE1		
	176.05	11		17	68
	17.80	14	NW1NW1		
	37.00	14	NE1NW1		
	25.20	14	NW1NE1		
	24.20	14	NE1NE1		
	10.50	14	SW1NE1		
	19.40	14	SE1NE1		
	134.10	14		17	68
<b>Total</b> .....	<b>420.45</b>				

42045/7000 c.f.s. allowed for irrigation.

**Appropriator—Muddy Valley Irrigation Co.**

**Source—Muddy River.**

East St. Thomas Ditch.....	4.00	2	SW1SW1	17	68
	17.00	3	SE1SE1		
	7.00	3	NE1SE1		
	24.00	3		17	68
	15.85	11	NW1NW1		
	16.10	11	NE1NW1		
	8.00	11	SW1NW1		
	12.00	11	SE1NW1		
	10.60	11	NW1SE1		
	62.55	11		17	68
<b>Total</b> .....	<b>90.55</b>				

Domestic use allowed from all Muddy Valley Irrigation Company Ditches.  
9055/7000 c.f.s. allowed for irrigation.

**Appropriator—John F. Perkins.**

**Source—Muddy River.**

Ditch Title	Date when construction commenced	Date when land first irrigated	Number of acres irrigated	Sec.	Subdivision	Tp.S.R.E.
St. Thomas Ditch			2.00	19	E part of NE1/4	
				11	W part of NW1/4	17 68

Domestic use allowed.  
2/70 c.f.s. allowed for irrigation.

**Appropriator—Muddy Valley Irrigation Co., Assignee of Nevada Land and Livestock Co., Under Certificate No. 58.**

**Source—Muddy River.**

Overton Canal	20.00	2	W1/4		
	5.00	2	NW1/4 SW1/4 and SE1/4		
	115.00	11	NE1/4 and SE1/4		
	40.00	12	W1/2 SW1/4		
	25.00	12	E1/2 SW1/4		
	40.00	13	NW1/4 NW1/4		
	6.50	13	NW1/4 SW1/4		
	25.36	13	NW1/4		
	7.09	13	NW1/4 SE1/4		
	16.00	14	NE1/4	18	68
	27.36	19	SW1/4		
	34.00	30	SW1/4 NE1/4		
	20.00	30	NE1/4		
	16.80	30	SE1/4	18	68
<b>Total</b>	<b>398.11</b>				

2.98 c.f.s. allowed for irrigation.

The use of this water is determined as a winter use; diversion to commence October 1 of each year and to extend to April 1 of the year following. The use is limited to irrigation, stockwatering, and domestic purposes.

**Appropriator—Muddy Valley Irrigation Co., Assignee of Nevada Land and Livestock Co., Under Certificate No. 59.**

**Source—Muddy River.**

Kaolin Ditch	WINTER USE					
	Acres	Sec.	Subdivision	Tp.	S.	R.E.
	40.00	20	SW1/4 SW1/4	16		68
	150.00	29	SW1/4	16		68
	210.00	32	N1/4	16		68
	35.20	32	N1/4 SW1/4	16		68
	111.61	32	SE1/4	16		68
	70.00	33	S1/2 SW1/4	16		68
	36.36	33	NW1/4 SW1/4	16		68
	24.43	31	E1/2 NE1/4	16		68
	82.70	3	W1/2 SW1/4	17		68
		4	SE1/4	17		68
	16.35	4	NE1/4 NW1/4	17		68
	<b>SUMMER USE</b>					
	140.00	29	SW1/4	16		68
	250.00	32	N1/4	16		68
	35.20	32	N1/4 SW1/4	16		68
<b>Total summer use</b>	<b>425.20</b>					
<b>Total winter use</b>	<b>846.65</b>					

Summer use—4.252 c.f.s.

Winter use—8.466 c.f.s.

The use is limited to irrigation, stockwatering, and domestic purposes.



Appropriator—Muddy Valley Irrigation Co., Assignee of Nevada  
Land and Livestock Co., Under Certificate No. 60.

Source—Muddy River.

<i>Ditch Title</i>	<i>Date when construction commenced</i>	<i>Date when land first irrigated</i>	<i>Number of acres irrigated</i>	<i>Sec.</i>	<i>Subdivision</i>	<i>Tp.S. R.E.</i>
St. Joe or Logan Ditch.....			20.00	26	SE½SW¼	
			20.00	35	E½NE¼	
			40.00	35	SE½NW¼	15 67
Total.....			80.00			

The use of this water is determined as a winter use; diversion to commence October 1 of each year, and to extend to April 1 of the year following. Use limited to irrigation, stock-watering and domestic purposes.

0.8 c.f.s. allowed for irrigation.

**STATE OF NEVADA  
STATE ENGINEER'S OFFICE**

I, J. G. Scrugham, State Engineer of the State of Nevada, duly appointed and qualified, having charge of the records and files of the office of the State Engineer, do hereby certify that the foregoing is a full, complete and true copy of the Order of Determination of the Relative Rights in and to the Waters of Muddy River and its Tributaries in Clark County, Nevada, prepared and filed in said office on the 21st day of January, 1920, as appears by the records and files of the office of the State Engineer of Nevada, and nothing more or less.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal of office at the City of Carson, State of Nevada, this 21st day of January, A. D. 1920.

[SEAL]

J. G. SCRUGHAM,  
*State Engineer.*

EXHIBIT "B"

1 IN THE MATTER OF THE DETERMINATION OF THE RELATIVE  
2 RIGHTS IN AND TO THE WATERS OF THE MUDDY RIVER AND  
3 ITS TRIBUTARIES IN CLARK COUNTY, STATE OF NEVADA.

4 -----0-----

5 FURTHER AND SUPPLEMENTAL ORDER OF DETERMINATION.  
6

7 In accordance with a stipulated agreement entered into  
8 by the parties in the suit of Muddy Valley Irrigation Company, et al,  
9 Vs. Moapa and Salt Lake Produce Company, et al, on the 23rd day of  
10 April, 1919, an order was entered in the Tenth Judicial District  
11 Court of the State of Nevada, in and for the County of Clark referring  
12 the above entitled action to the State Engineer for an adjudication  
13 of the water rights on the Muddy River stream system as provided  
14 for in Chapter 140, Statutes of 1913, and all Acts amendatory thereof.

15 On the 10th day of March, 1920, the matter having come  
16 on for hearing before the Court upon exceptions duly filed with the  
17 Clerk of the Court and served as required by law on the State  
18 Engineer, said exceptions having been filed by various parties to  
19 the said suit of Muddy Valley Irrigation Company et al. Vs. Moapa  
20 and Salt Lake Produce Company, et al., and the Court having heard  
21 said exceptions and proofs adduced by and on behalf of the excepting  
22 parties, the Court made and entered an order requiring the State  
23 Engineer to make a further determination of the waters of the said  
24 Muddy River and its tributaries subject to the Court's instructions  
25 which were set forth in said order, the said order being made by said  
26 District Court and entered in said suit.

27 In accordance with the said order of said Court and the  
28 said instructions the State Engineer makes the following:  
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1.

FURTHER AND SUPPLEMENTAL ORDER OF DETERMINATION.

1                   The tabulation of the allotments of the waters of the  
2 Muddy River stream system as set forth in the original order of  
3 determination with the changes herein made in this order, cover  
4 all claims filed in the office of the State Engineer as provided by  
5 law, and also an allotment to the Moapa Indian Reservation. Although  
6 duly notified of the pending adjudication proceedings in the  
7 statutory manner, the United States Indian Service authorities,  
8 did not file a claim and state that they refuse to recognize the  
9 authority of the State of Nevada to determine the water rights  
10 of the Moapa Indian Reservation. In the absence of any showing  
11 on the part of the United States Indian Service, the State Engineer  
12 has based the Moapa Indian Reservation allotment on the official  
13 investigations and reports made in the year 1906 by Henry Thurtell,  
14 at that time State Engineer of Nevada. These reports gave the  
15 Moapa Indian Reservation an allotment of water sufficient to  
16 properly irrigate an area of 87 acres, which was found to be the  
17 full area on the Reservation entitled to a vested water right  
18 under the law of this State.

19                   (a) DUTY AND POINT OF DIVERSION DEFINED.

20                   The duty of water allowed for all lands in the Muddy  
21 Valley, except on the Indian Reservation, shall be 1 c.f.s. flow  
22 to 70 acres for the summer irrigation season from May 1st to  
23 October 1st, and 1 c.f.s. flow to 100 acres for the winter irriga-  
24 tion season from October 1st to May 1st. On the Reservation, the  
25 duty of water allowed shall be 1 c.f.s. flow to 70 acres for the  
26 summer irrigation season from April 1st to October 1st, and  
27 1 c.f.s. flow to 100 acres for the winter irrigation season from  
28 October 1st to April 1st.

29                   The volumes or amounts of water allotted and to which  
30 it is agreed the respective parties are entitled shall be understood  
31 to include and define the amount of all the waters now or heretofore  
32

1 rightfully used on the lands given in the tabulation in the original  
2 order of determination whether diverted directly from said Muddy  
3 River or from its tributaries, springs, head-waters or other  
4 sources of supply, including waters claimed to have been developed  
5 heretofore by any of the said parties. All measurements of amounts  
6 except that awarded to the Indian Reservation shall be made at the  
7 places of diversion or as near thereto as practicable or convenient  
8 as the State Engineer or Water Commissioner may select or approve.  
9 On the Indian Reservation, all measurements of amounts diverted are  
10 to be made at the point where the main ditch enters or becomes ad-  
11 jacent to the land irrigated or as near thereto as practicable, as  
12 the State Engineer or Water Commissioner may select or approve.

12 (b) BALDWIN SPRING FLOW DEFINED.

13 The maximum flow of .8298 c. f. s. of water of the  
14 George Baldwin Spring now and heretofore used by George Baldwin and  
15 Aletha L. Baldwin, his wife, is water which has been developed by  
16 said parties. Such development and use of this amount of water  
17 has not and does not diminish the flow or volume of the Muddy River,  
18 or interfere with the rights of any other water users on the stream  
19 system. No further development of water on the head of the Muddy  
20 River stream system shall be made which in any way diminishes the  
21 flow of waters of the Muddy River or impairs rights defined and  
22 referred to in this order.

23 (c) METHOD OF USE.

24 The Muddy Valley Irrigation Company, subject to the  
25 supervision and general control of the State Engineer or Water  
26 Commissioner, shall distribute and control the distribution of the  
27 water allotted to it, and diverted and conveyed by its work to its  
28 stockholders and other persons obtaining water by means thereof.

29 All other parties named in this order shall not be  
30 required to take or use the water of said River in continuous flow but may  
31 cumulate the same or any part thereof in rotation and in periodic  
32 turn, with the approval of the water commissioner, subject to his

1 control and direction and under such rules and regulations as are  
2 prescribed by the State Engineer and the statutes of the State of  
3 Nevada.

4 The whole amount of water diverted from the river at  
5 any one time by all the parties allotted water for use above the  
6 "narrows" is not to exceed in the aggregate the total amount of  
7 water allotted to the several parties resident in the Upper Muddy  
8 Valley. Below the lowest diversion of Knox and Holmes the flow in  
9 the stream shall be maintained substantially constant subject to  
10 seasonal variation. The whole of said river system shall be under  
11 the supervision and the rules and regulations of the State Engineer  
12 and the direction and control of the Water Commissioner, to be  
13 appointed as provided by law, except as hereinbefore specified as to  
14 the Muddy Valley Irrigation Company. Substantial headgates, weirs  
15 and sand-boxes, as the State Engineer through the Water Commiss-  
16 ioner may order, shall be installed and maintained in good order  
17 by all who divert or use the waters of said stream system.

18 (d) Channel upkeep, responsibility for.

19 The owners of land on that part of said river above the  
20 "narrows" shall keep the channel through their respective lands  
21 cleared of all ordinary obstructions, but in case of extraordinary  
22 obstruction, such as the formation of lime deposits in the channel  
23 of the stream, the same shall be removed under the direction of the  
24 water commissioner and the expenses thereof paid pro rata by all  
25 parties to this determination in proportion to the acreage owned  
26 or controlled by them as defined in this order.

27 (e) Priority, vested and granted rights.

28 As between the parties to the above entitled suit and  
29 except against the rights awarded the Indian Reservation and the  
30 inhabitants thereof, all of the water rights enumerated as belonging  
31 to the parties to the suit shall be deemed and held to be vested  
32 rights acquired by valid appropriation and beneficial use prior to  
March 1, 1905, and by continued uninterrupted use since said date

1 and shall be considered as equal in rank without anyone having any  
2 priority over another; this shall apply to and include the rights  
3 held by the Muddy Valley Irrigation Company as grantee or assignee  
4 of Nevada Land & Live Stock Company under certificates Nos. 58, 59  
5 and 60 and to such permit or certificate as may be granted by the  
6 State Engineer to the Muddy Valley Irrigation Company under its appli-  
7 cation No. 1611. Against the right granted and allotted to the  
8 Indian Reservation, the rights held by the Muddy Valley Irrigation  
9 Company, under said certificates or permits, shall be deemed to be  
10 subsequent to the right by this order allotted to said Indian  
11 Reservation. The right allowed the Indian Reservation shall be  
12 deemed and held to be a vested right acquired by valid appropriation  
13 prior to March 1st, 1905, and uninterrupted use thereafter and  
14 shall to the extent allowed rank as of equal priority with all the  
15 other rights allotted and awarded to the various parties except those  
16 granted by the said certificates or permits.

17 (f) Losses, apportionments of.

18 All abnormal losses from the flow of said stream shall  
19 be pro-rated and shared among the parties holding water rights  
20 on the stream. Abnormal losses shall include any substantial loss  
21 from the permanent flow of the stream, such as a cloudburst destroy-  
22 ing or obstructing the channel thereof or an opening up of a fissure  
23 in the bed of the stream or in one of the sources of supply and the  
24 disappearance therein of a substantial amount of the waters, thereby  
25 causing a diminution in the available flow.

26 If and such abnormal loss occurs at any time, the pro-  
27 rata share of such loss to be borne by each party to this order shall  
28 be as follows:

29	George Baldwin and Aletha L. Baldwin, his wife	16/2839
30	Moapa & Salt Lake Produce Co.	155/2839
31	Livingston and Smith	160/2839
32	Joseph Perkins and wife	30/2839
	Knox and Holmes	95/2839
	Issiah Cox and wife	10/2839
	W. J. Powers and wife	29/2839
	Sadie George	2.1/2839
	Jacob Bloedel	2/2839

J. H. Mitchell 3/2839  
U. S. Indian Service, Moapa Reservation 87/2839  
John F. Perkins 2/2839  
Muddy Valley Irrigation Company 2244.80/2839

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As between the parties to the said suit the definition of abnormal losses shall be as contained in paragraph 8 of a stipulation filed in said court and suit on April 23rd, 1919, and the stipulation supplemental thereto filed in said court and suit and dated March 10th, 1920; and as between the parties to said suit the pro rata share of such abnormal losses shall be as set forth in paragraph 4 of the said stipulation supplemental to the stipulation of April 23rd, 1919.

(g) Expense of Commissioner.

The salary and expenses of the Water Commissioner shall be paid pro rata by the parties to the stipulation supplemented to the stipulation of April 23rd, 1919, made and filed in said suit March 10th, 1920, in the same proportion as for the sharing of abnormal losses set forth in paragraph 4 of said supplemental stipulation.

(h) All the waters of the stream system appropriated and allotted.

The aggregate volume of the several amounts and quantities of water awarded and allotted to the parties named in this order of determination which includes all the parties to said suit and the Indian Reservation is the total available flow of the said Muddy River and consumes and exhausts all of the available flow of the said Muddy River, its headwaters, sources of supply and tributaries.

(i) Water allotted to Muddy Valley Irrigation Company.

In accordance with the said stipulation and supplemental stipulation filed in said suit and the instructions of the Court requiring a further order of determination, as between the parties of the suit, the Muddy Valley Irrigation Company is hereby declared to be entitled to divert and use upon its lands all the waters of the

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said stream except the amounts specifically awarded and allotted to the other parties to said suit and to the Indian Reservation. In addition to the certificate rights belonging to the Muddy Valley Irrigation Company set forth in the original order of determination the Muddy Valley Irrigation Company is entitled to such rights as have accrued to it under its water application No. 1611 and which will be specifically defined in the certificate or permit to be issued by the State Engineer upon said application No. 1611, which said permit will be for approximately 10 C. F. S. of water (more or less) for use upon approximately 1000 acres of land (more or less) during the winter season.

The summary of allotments and certificates, contained in the original order of determination is amended so as to allow winter use of water to the parties hereinafter named and for the amounts hereinafter specified:

<u>To</u>	<u>c. f. s. flow.</u>
Moapa & Salt Lake Produce Company	2.215
Isaiah Cox and wife	.143
Isaiah Cox and wife (as grantees of J. H. Mitchell)	.043
George Baldwin	.2286
Sadie George	.03
John F. Perkins	.0286
Livingston and Smith	2.286
Knox and Holmes	1.357
Joseph Perkins	.428
W. J. Powers and wife	.4143

The amount allowed for winter use is allowed under a duty of water of 1 c. f. s. for 100 acres.

There is also the additional allotment to the Muddy Valley Irrigation Company for winter use under its application No. 1611. Except as hereinbefore changed the summary of allotments and certificates shall be as stated in the original order of determination.

The names of the respective appropriators, the sources of their appropriation, the titles of the ditches, the number of acres irrigated and the description of the land to which the water



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is appurtenant, the uses allowed and the amounts of water allowed for irrigation shall be as set forth in the original order of determination, except that it is understood that the rights of J. H. Mitchell have been acquired by and conveyed to Isaiah Cox and Anna M. Cox, his wife, and except that the periods of winter and summer use, as between the parties to said suit, shall be as hereinbefore defined in this further and supplemental order of determination.

/s/ J. G. Scrugham  
State Engineer.

STATE OF NEVADA  
STATE ENGINEER'S OFFICE.

I, J. G. SCRUGHAM, State Engineer of the State of Nevada, duly appointed and qualified, having charge of the records and files of the office of the State Engineer, do hereby certify that the foregoing is a full, complete and true copy of the further and supplemental order of determination of the relative rights in and to the waters of Muddy River and its tributaries in Clark County, Nevada, made under order of the Tenth Judicial District Court of the State of Nevada in and for the County of Clark, and in accordance with the instructions of said Court and filed in said office on the 11th day of March, 1920, as appears by the records and files of the office of the State Engineer of Nevada, and nothing more or less.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal of office this 11th day of March, A. D. 1920,

/s/ J. G. Scrugham  
State Engineer.

SEAL

CERTIFICATION OF COPY

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STATE OF NEVADA, )  
                          ) SS.  
COUNTY OF CLARK, )

I, HARLEY A. HARMON, the duly elected, qualified and acting Clerk of Clark County, in the State of Nevada, and Ex-Officio Clerk of the District Court, do hereby certify that the foregoing is a true, full and correct copy of the original

JUDGMENT AND DECREE IN THE CASE ENTITLED  
MUDDY VALLEY IRRIGATION COMPANY ET AL.,  
Plaintiffs

VS.

MOAPA & SALT LAKE PRODUCE COMPANY, ET AL.  
Defendants.

and

IN THE MATTER OF THE DETERMINATION OF THE RELATIVE RIGHTS  
IN AND TO THE WATERS OF THE MUDDY RIVER AND ITS  
TRIBUTARIES IN CLARK COUNTY, STATE OF NEVADA.

now on file and of record in this office.

IN WITNESS WHEREOF, I have hereunto set  
my hand and affixed the Seal of the Court at my of-  
fice, Las Vegas, Nevada, the 12th day of  
March, \_\_\_\_\_, A. D. 19 20.

(SEAL)

/s/ Harley A. Harmon  
CLERK.

/s/ Margaret Ireland  
DEPUTY CLERK.

STATE OF NEVADA )  
 ) ss.  
COUNTY OF CLARK )

I, Helen Scott Reed, the duly elected, qualified and acting County Clerk of the County of Clark, State of Nevada, and ex-officio Clerk of the District Court of the Eighth Judicial District of the State of Nevada, in and for the County of Clark, do hereby certify and attest the foregoing to be a full, true and correct copy of the original: "JUDGMENT AND DECREE" in the action entitled;  
MUDDY VALLEY IRRIGATION COMPANY, a corporation, NEVADA LAND & LIVESTOCK COMPANY, a corporation, SAMUEL H. WELLS, JOHN F. PERKINS and ELLEN C. PERKINS, his wife, Plaintiffs Vs.

MOAPA & SALT LAKE PRODUCE COMPANY, a corporation, GEORGE BALDWIN and ALETHA L. BALDWIN, his wife, ISAAH COX and ANNA M. COX, his wife, JOSEPH PERKINS and KATHRYN PERKINS, his wife, D.H. LIVINGSTON and RICHARD SMITH, G. S. HOLMES and JULIA MAY KNOX, W. J. POWERS and MARY A. POWERS, his wife, SADIE GEORGE, LOS ANGELES & SALT LAKE RAILROAD COMPANY, a corporation, and WALKER D. HINES, as Director General of Railroads, and JACOB BLOEDEL, Defendants, and IN THE MATTER OF THE DETERMINATION OF THE RELATIVE RIGHTS IN AND TO THE WATERS OF THE MUDDY RIVER AND ITS TRIBUTARIES IN CLARK COUNTY, STATE OF NEVADA

Case No. 377

together with the endorsements thereon, now on file in my office, and that I have carefully compared the same with the original.

IN WITNESS WHEREOF, I have hereunto set my hand and annexed the Seal of the District Court of the Eighth Judicial District of the State of Nevada, in and for the County of Clark, this 16th day of May, 19 56

*Helen Scott Reed*

COUNTY CLERK OF THE COUNTY OF CLARK, STATE OF NEVADA, AND EX-OFFICIO CLERK OF THE DISTRICT COURT OF THE EIGHTH JUDICIAL DISTRICT OF THE STATE OF NEVADA, IN AND FOR THE COUNTY OF CLARK.

STATE OF NEVADA )  
 ) ss.  
COUNTY OF CLARK )

I, Frank McNamee, Judge of the District Court of the Eighth Judicial District of the State of Nevada, in and for the County of Clark, do hereby certify that Helen Scott Reed is County Clerk of the County of Clark, State of Nevada, and ex-officio Clerk of the District Court of the Eighth Judicial District of the State of Nevada, in and for the County of Clark (which Court is a Court of Record having a seal); that the signature to the foregoing certificate and attestation is the genuine signature of the said Helen Scott Reed, as such officer; that the seal annexed thereto is the seal of said District Court; that said Helen Scott Reed, as such clerk, is the proper officer to execute the said certificate of attestation, and that such attestation is in due form according to the laws of the State of Nevada.

IN WITNESS WHEREOF, I have hereunto set my hand in my official character as such Judge, at the City of Las Vegas, County and State aforesaid, this 16th day of May, A. D. 19 56

*Frank McNamee*

JUDGE OF THE DISTRICT COURT OF THE EIGHTH JUDICIAL DISTRICT OF THE STATE OF NEVADA, IN AND FOR THE COUNTY OF CLARK.

STATE OF NEVADA )  
 ) ss.  
COUNTY OF CLARK )

I, Helen Scott Reed, County Clerk of the County of Clark, State of Nevada, and ex-officio Clerk of the District Court of the Eighth Judicial District of the State of Nevada, in and for the County of Clark (which Court is a Court of Record, having a seal, which is annexed hereto) do hereby certify that Frank McNamee, whose name is subscribed to the foregoing certificate of due attestation was, at the time of signing the same, Judge of the District Court aforesaid, and was duly commissioned, qualified and authorized by law to execute said certificate. And I do further certify that the signature of the Judge above named to the said certificate of due attestation is genuine.

IN WITNESS WHEREOF, I have hereunto set my hand and annexed the Seal of the District Court of the Eighth Judicial District of the State of Nevada, in and for the County of Clark, this 16th day of May, 19 56

*Helen Scott Reed*

COUNTY CLERK OF THE COUNTY OF CLARK, STATE OF NEVADA, AND EX-OFFICIO CLERK OF THE DISTRICT COURT OF THE EIGHTH JUDICIAL DISTRICT OF THE STATE OF NEVADA, IN AND FOR THE COUNTY OF CLARK.



July 3, 2019

Tim Wilson, Acting State Engineer  
Nevada Division of Water Resources  
901 S. Stewart St., Suite 2002  
Carson City, NV 89701

Mr. Wilson,

The Center for Biological Diversity is pleased to submit the attached technical memorandum from hydrologist Dr. Tom Myers, regarding the questions raised by Interim Order 1303.

As the Center has stated from the beginning of this process, our primary concern is ensuring long-term sustainable flows in the Muddy River Springs Area (MRSA) to ensure adequate habitat for the survival and recovery of the federally protected endangered Moapa dace. Protecting the dace is a legal obligation for the Division of Water Resources, in order to ensure compliance with the federal Endangered Species Act, and acting in compliance with NRS 533.370(2) to ensure that water right applications are not “detrimental to the public interest.”

Dr. Myers’ report contains three primary conclusions:

- The Division should not allow any pumping of the carbonate aquifer if the continued decrease in spring flow in the MRSA is to be avoided.
- The Kane Springs Valley should be managed as a part of the LWRFS.
- Some basin-fill pumping could occur without significantly affecting MRSA spring flow, with a preliminary estimate of 4,000 afa as a sustainable yield.

We appreciate this opportunity for engagement and look forward to further discussions on this issue.

Sincerely,

Patrick Donnelly  
*Nevada State Director*  
**Center for Biological Diversity**  
7345 S. Durango Dr.  
B-107, Box 217  
Las Vegas, NV 89113  
702.483.0449  
[pdonnelly@biologicaldiversity.org](mailto:pdonnelly@biologicaldiversity.org)

Tom Myers, Ph.D.  
Hydrologic Consultant  
P.O. Box 177  
Laporte, PA 18626  
775-530-1483  
tommyers1872@gmail.com

## **Technical Memorandum**

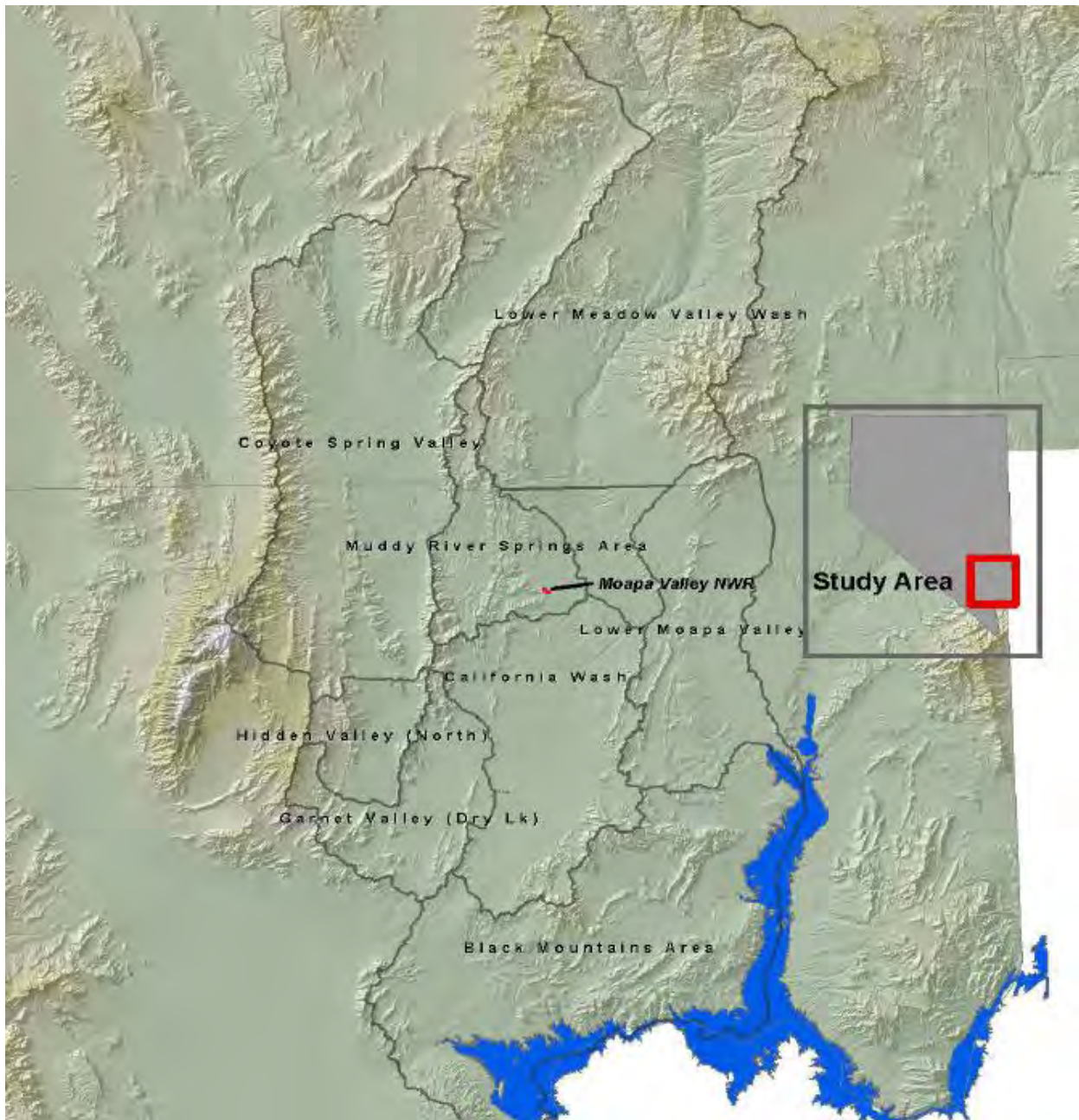
### **Groundwater Management and the Muddy River Springs, Report in Response to Nevada State Engineer Order 1303**

**June 1, 2019**

**Prepared for: Center for Biological Diversity**

The Nevada State Engineer (NSE) is planning to establish a plan to conjunctively use groundwater and surface water in the Lower White River Flow System (LWRFS). The NSE has established the LWRFS as the valleys shown in Figure 1, except that only the northern portion of Black Mountains Area would be included. The basis for his planning is the Order 1169 aquifer test results and observations ongoing since the end of the test. The NSE in order 1303 requested that stakeholders provide reports with “further analysis of the historic and ongoing groundwater pumping data, the relationship of groundwater pumping within the LWRFS to spring discharge and flow of the fully decreed Muddy River, the extent of impact of climate conditions on groundwater levels and spring discharge, and the ultimate determination of the sustainable yield of the LWRFS” (NSE Order 1303, p 11). This report addresses the four points the NSE requests stakeholders to address, although in a different order:

1. The report summarizes the Order 1169 aquifer test, specifically regarding groundwater levels throughout the LWRFS and spring flows at Muddy River Springs, and extends the interpretations through the recovery period of 2013 through the present,
2. The report considers the reasons to consider Kane Springs Valley (KSV) as part of the LWRFS (the water level is just five feet higher than in Coyote Springs Valley (CSV), and pumping in KSV could reverse the gradient pulling water from CSV,
3. The report addresses the long-term quantity of water that could be pumped from the LWRFS without harming any Muddy River Springs. (Because of the flat gradient over the 1100 sq miles of the joint management area, there can be no location for pumping within the LWRFS that is safe meaning it would not affect Muddy River Springs),
4. Finally, the report also considers the relationship between alluvial and carbonate wells and how that could affect senior decreed rights to the Muddy River.



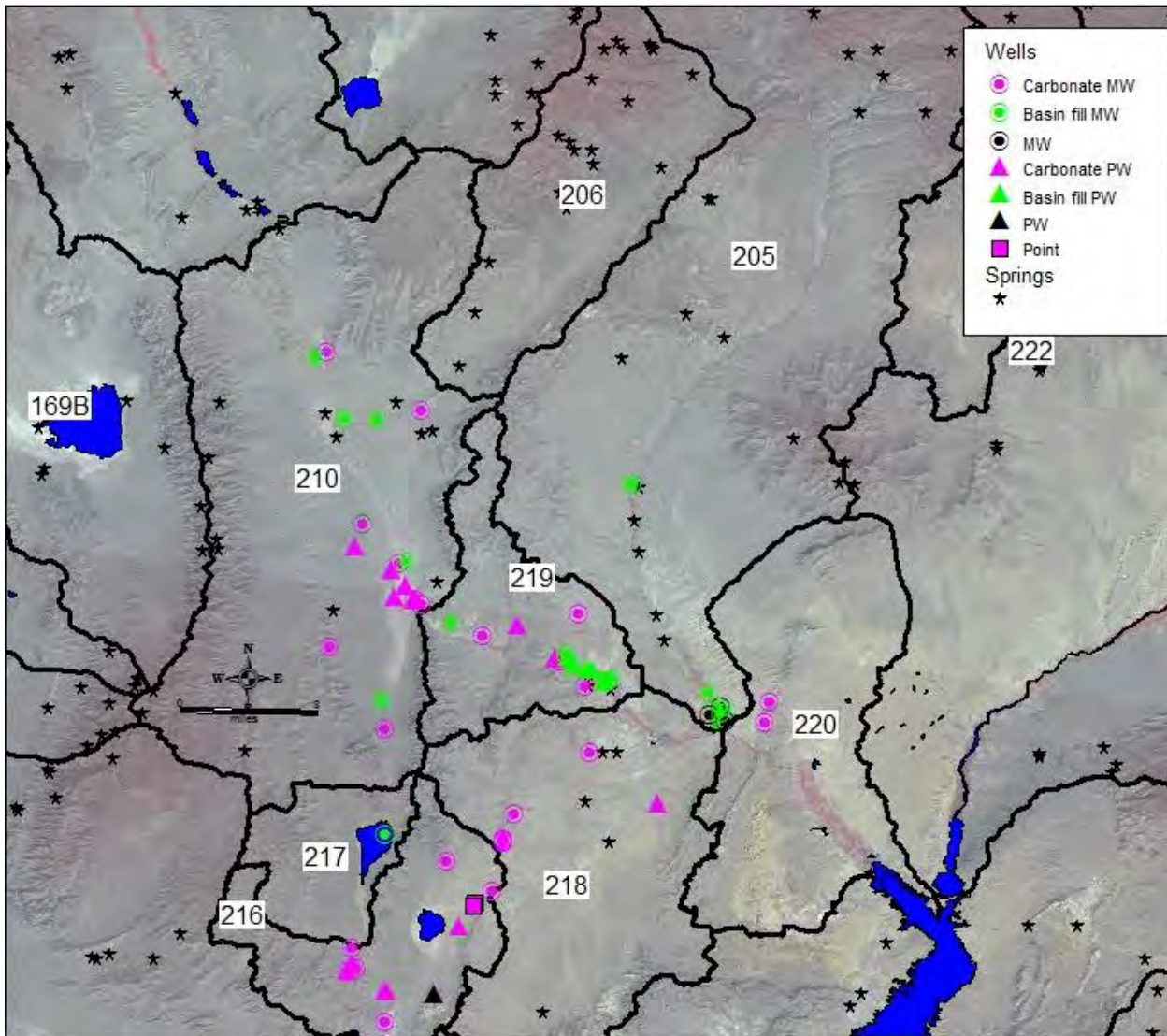
**Figure 1: Study area showing the Lower White River Flow System. Kane Springs Valley is northeast of Coyote Spring Valley. Source: USDOJ (2013).**

**Order 1169 Aquifer Test and the Period 2013 to 2019**

NSE Ruling 6254 summarizes the finding of the 1169 aquifer test as reported on by various stakeholders including SNWA (2013), US DOI (2013), Myers (2013), and Johnson and Mifflin (2013). The 1169 aquifer test had been required by NSE Order 1169 to determine the effects of developing the carbonate aquifer in CSV. The order had required the participants to pump 8050

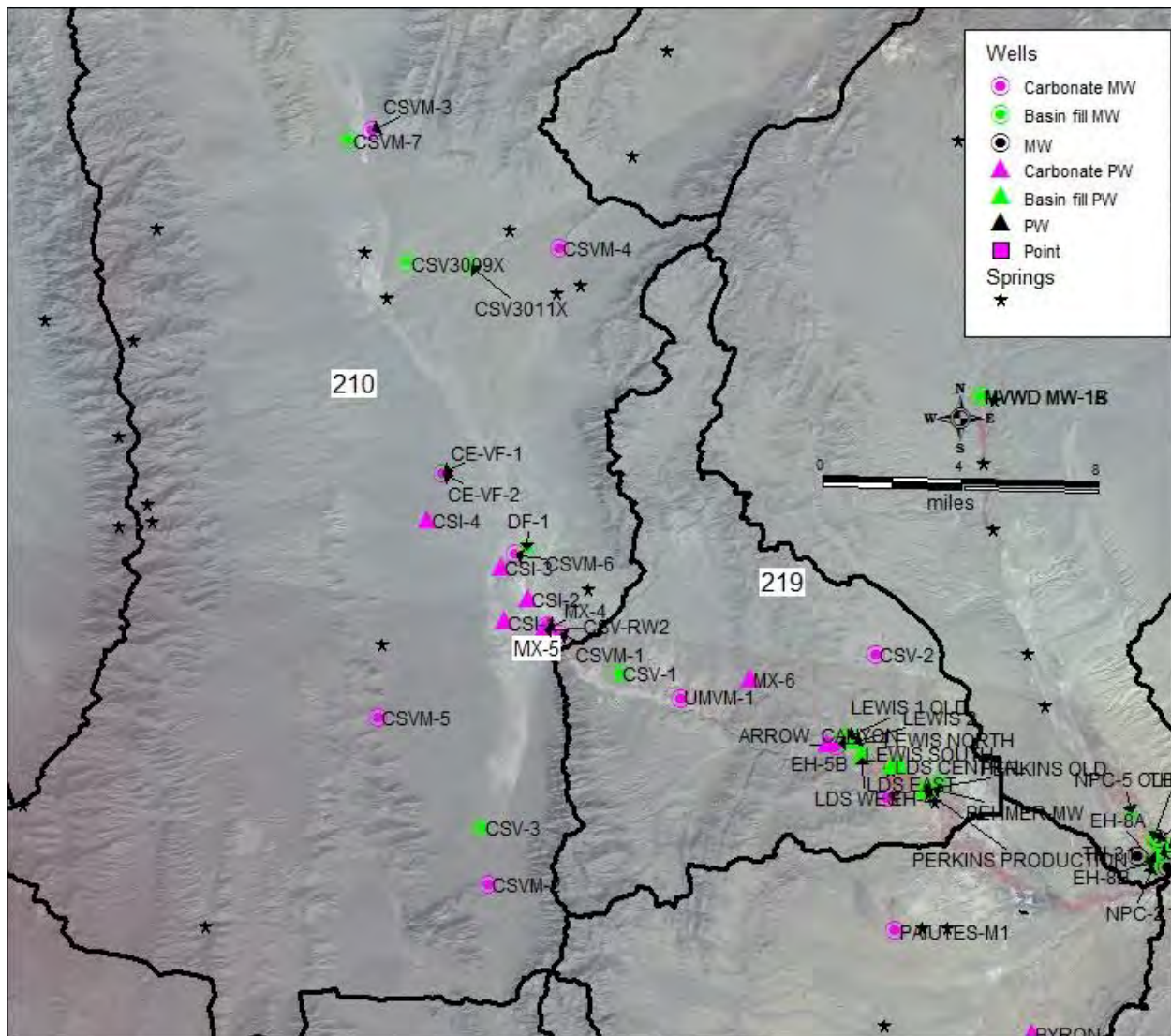
acre-feet per year (afa) from wells in CSV for two years. However, for the duration of the test, from November 15, 2010 to December 31, 2012, the total pumpage from the CSI wells and MX-5 well was 11,249 af, or only 5290 afa. During the test period, 79 monitoring and pumping wells (MWs and PWs) monitored water levels throughout the area (Figures 2 and 3). The CSV carbonate PWs lie on the east side of the valley near the boundary with Muddy River Springs Area (MRSA) and basin fill and carbonate MWs lie throughout the valley (Figures 2 and 3). MRSA wells concentrate along a trend along a wash running southeast through the middle of the valley (Figures 2, 3 and 4). The Arrow Canyon wells (Figure 3) are high-producing carbonate wells. The basin fill pumping wells on the southeast portion of MRSA are commonly called the Lewis Well field. The Muddy River Springs also lie in the far southeast portion of MRSA. The clastic rocks just east of the MRSA (Figure 4) may provide a structural boundary that partly controls flow and the location of the Muddy River springs (Johnson and Mifflin 2013).

Southern Nevada is generally very dry and average recharge over the LWRFS is very low (NSE Ruling 6254). But some years can be relatively very wet and the runoff that occurs during those years can cause recharge into washes and into outcrops of conductive rock. The twelve-month moving average of monthly precipitation ranges averages near half an inch but was close to zero in 2002 and approached 1.3 inches in 2005 (Figure 5). These monthly values correspond with an annual average of about 1 inch and 14 inches per year in those years, as reported by USDOJ (2013). Several years in the 1990s have monthly average precipitation near an inch. During the aquifer test, the first year, 2011, appears to be slightly wetter than the average and 2012 became dry relative to most years.



**Figure 2: General layout and type of wells in the Coyote Spring Area. Basin 210 is Coyote Spring Valley, 219 is Muddy River Spring Area, 220 is Lower Moapa Valley, 218 is California Wash, 217 is Hidden Valley, 216 is Garnet Valley, 205 is Lower Meadow Valley Wash, and 206 is Kane Springs Valley. MW is monitoring well; PV is production well. See Figure 3 for the names for some of the wells. Source of well data: NVSE website.**





**Figure 3: Detailed well layout and names for Coyote Spring Valley (210) and Muddy River Springs Area (219). Source of well data: NVSE website.**

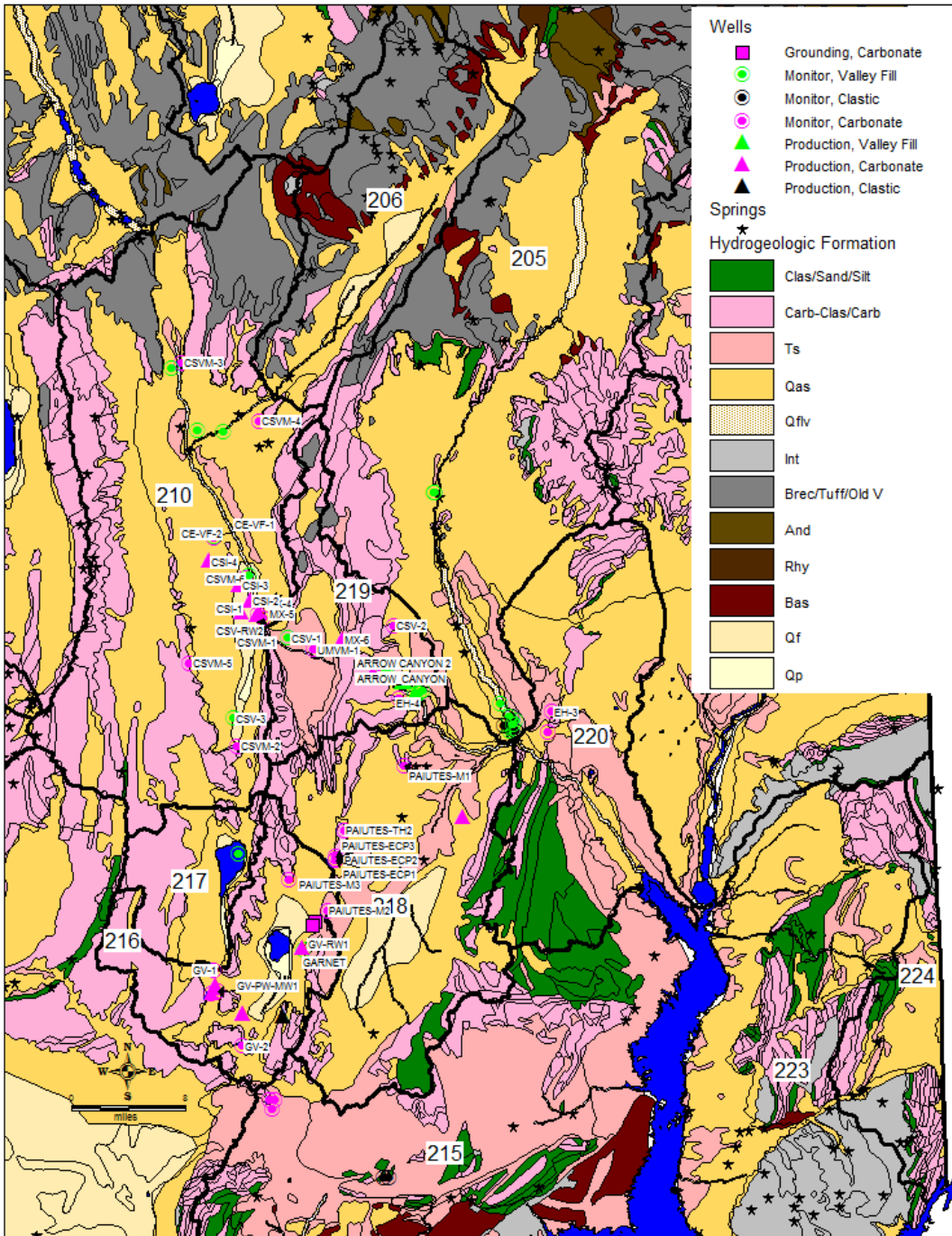
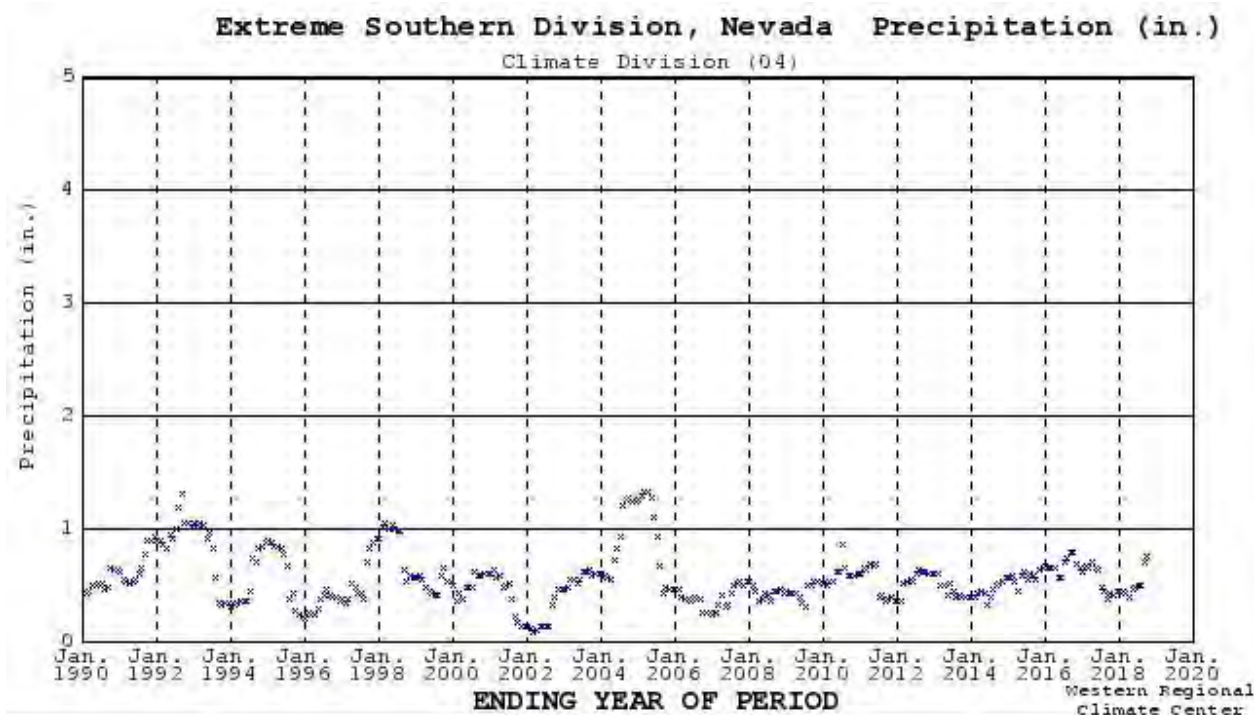


Figure 4: Lower White River Flow System wells and hydrogeology.



**Figure 5: Twelve-month running average of precipitation for the southern zone of Nevada. Data from the Western Regional Climate Center, <https://wrcc.dri.edu/spi/divplot2map.html>**

The NSE found that even the reduced pumping completed during the aquifer test satisfied its goals and that pumping in CSV caused impacts north in CSV “at least to Kane Springs Valley, south to Hidden Valley and Garnet Valley, and southeast to Muddy River Springs Area and California Wash” (NSE Order 6254, p 20-21). There was no monitoring for the test in Kane Springs Valley, so it is not possible to assess whether the impacts extended into that valley. USDOJ (2013) concluded the impacts covered 1100 square miles. NSE summarized that groundwater level declines attributable to MX-5 pumping ranged from less than one foot in northern CSV to more than two feet in central CSV to more than a foot in central MRSA and California Wash (NSE Order 6254, p 21). The following paragraphs detail the water levels before, during, and after the aquifer test.

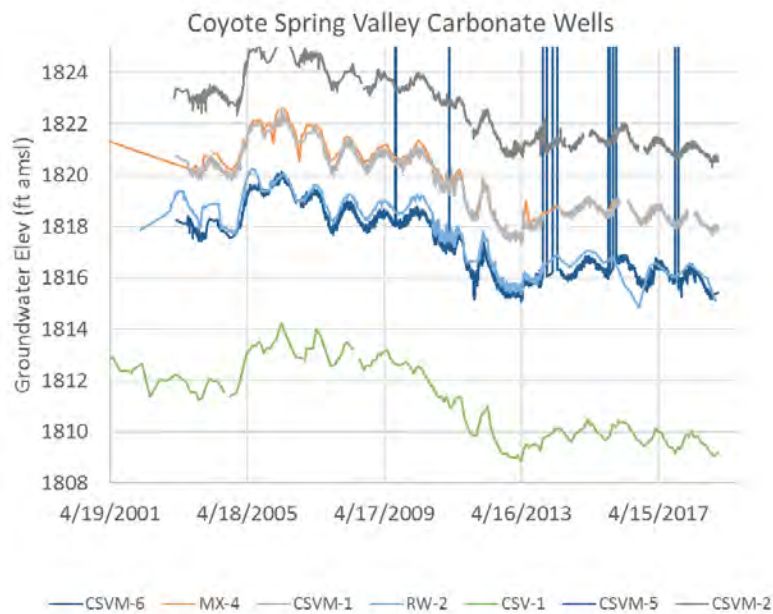
Carbonate MWs in central and southern CSV have varied in parallel since the early 2000s (Figure 6). The trend has been downward except for the increase during the wet period around 2005. All the carbonate MWs in central and southern CSV decreased more than two feet during the pump test period and all have recovered less than half the pump-test decrease by 2019 (Figure 6). The lack of recovery indicates the increased gradient, caused by the 2-foot drawdown, does not draw substantially more water from beyond the boundaries of the high-transmissivity area. Drawdown in northern CSV was much less (not shown). Basin fill well groundwater levels in the southern portion of CSV have also trended downward since the late

1990s, with an exception being during the wet period around 2005 (Figure 7). Well CSV3011M water levels increased from its installation in 2008 until the aquifer test. Well DF-1, a basin fill well in the middle of southern CSV, has water levels about 200 feet higher than other wells in the area.

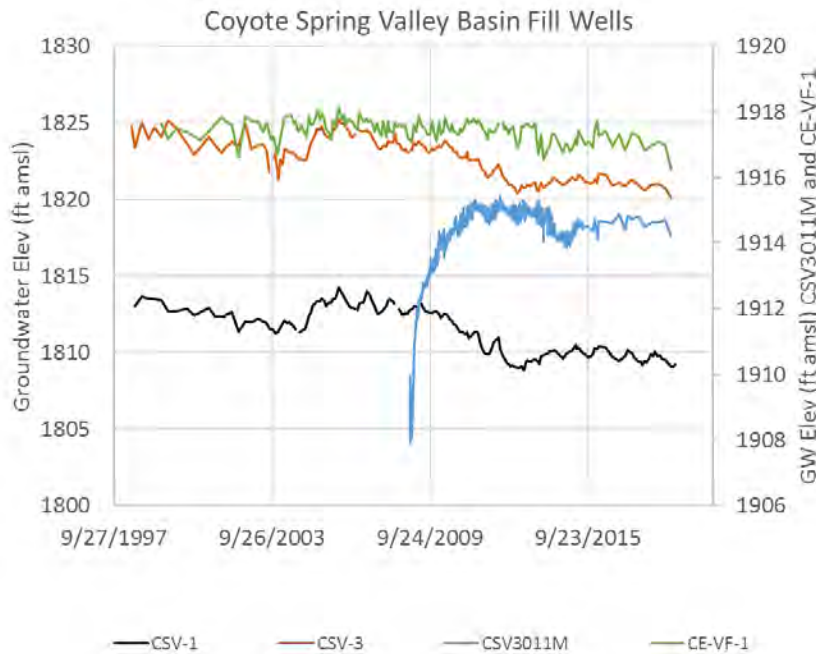
Carbonate MWs in the MRSA also show a long-term downward trend commencing in the 1990s with an uptick in 2005 (Figure 8). USDOJ (2013, p 11) identified several wet year responses in the groundwater levels, including in 1992, 1993, 2005, and to a lesser degree in 1998 and 2011. The small seasonal fluctuation may relate to pumping in the basin fill (Id.), which would reflect the connection between aquifers. The 1169 aquifer test accelerated the decline in the MWs in the MRSA with a decrease of as much as 2.5 feet. Recovery since the decline was as much as a foot in the first year, but levels have remained steady since.

Basin fill MWs in the Lewis Field portion of the MRSA have been steady since the 1990s except for a three-foot decline in the Lewis North MW (Figure 9). Lewis South and Lewis 1 Old have declined a couple feet since the 1990s, but with an almost ten-foot seasonal variation. Seasonal variation in Lewis North was much less. All wells in the Lewis Field portion of the MRSA exhibited a substantial drawdown of several feet during and for two years after the pump test (Figure 9).

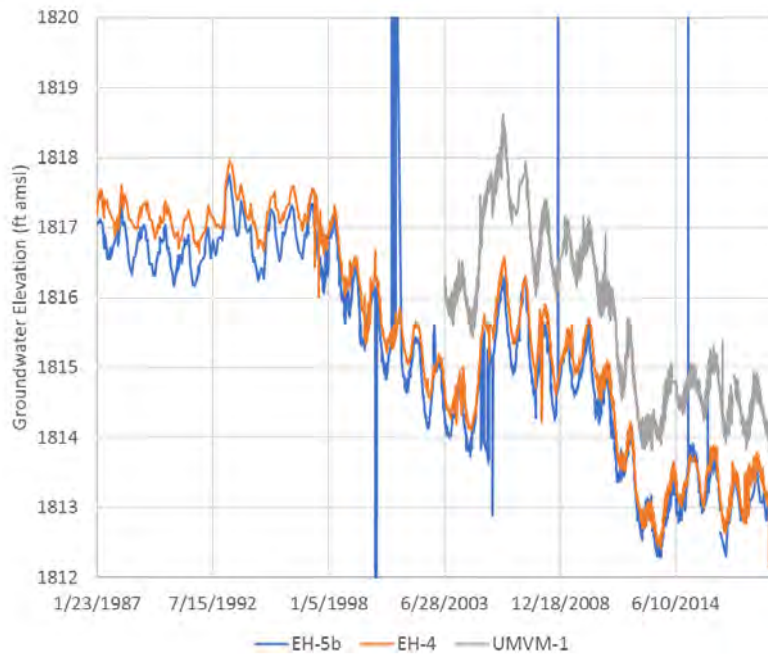
Basin fill MWs near the springs have declined, other than the uptick in 2005, since the 1990s much more than the Lewis Field wells (Figure 10). The decline accelerated through the aquifer test period, although, in contrast to the carbonate wells, these basin fill wells have mostly recovered since the aquifer test. Seasonal variations are as much as ten feet. The downward trend probably reflects the trend in the carbonate wells, the source for most basin fill water. Recovery however could be due to decreased pumpage in the Lewis Field, as discussed below.



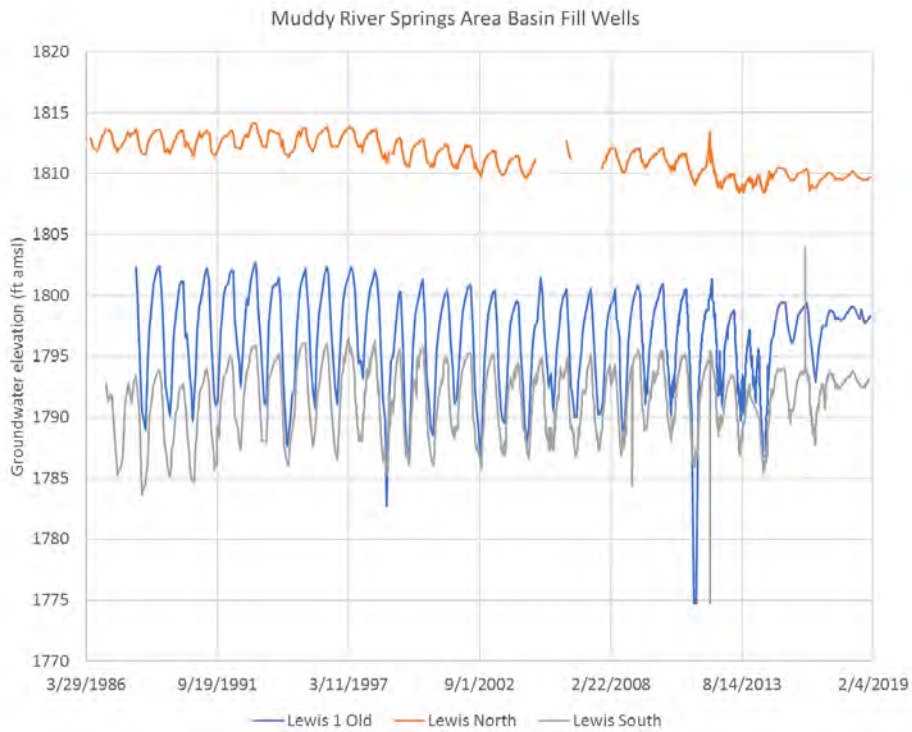
**Figure 6: Hydrograph of carbonate monitoring wells in Coyote Spring Valley, through the Order 1169 pump test and to 2019. Source of data-NSE web page.**



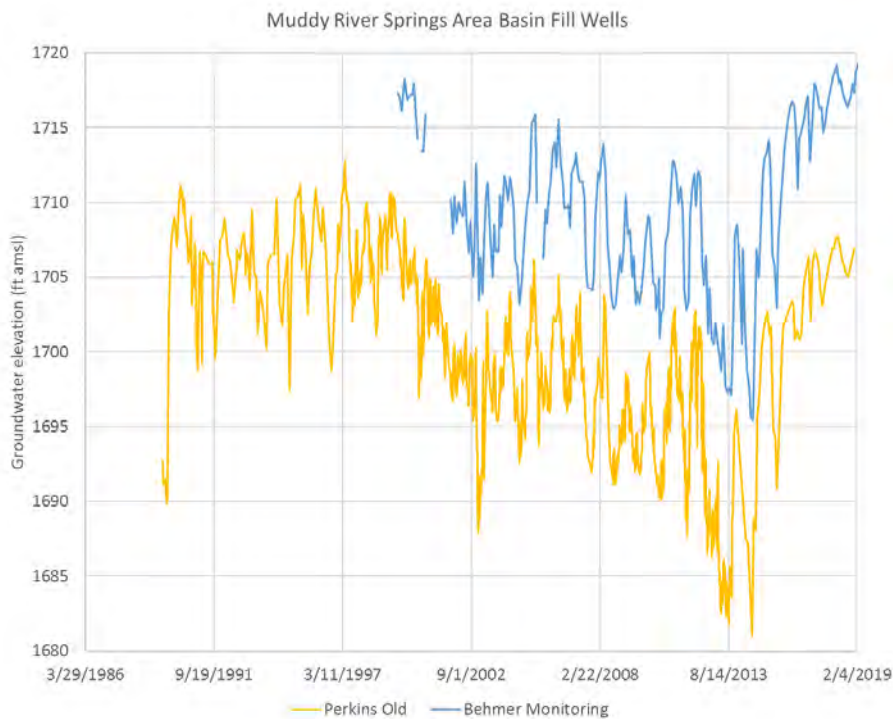
**Figure 7: Hydrograph of basin fill monitoring wells in the south half of Coyote Spring Valley. Source of data - NSE web page.**



**Figure 8: Muddy River Springs Area carbonate monitoring wells.**



**Figure 9: Hydrographs of basin fill wells in the Lewis Field portion of the Muddy River Springs Area. Perforations are from 28 to 68 feet bgs for Lewis North and are unknown for the other wells. Source of data - NSE web page.**



**Figure 10: Hydrographs of basin fill wells in the Muddy River Springs portion of the Muddy River Springs Area. The Perkins Old well is screened from 20 to 60 ft bgs. Source of data -NSE web page.**

The groundwater levels recorded at the end of the pump test throughout the CSV and MRSA show the very flat potentiometric surface from midway up CSV through the MRSA. The groundwater gradient through the area affected by the pump test is very flat because of the likely very high transmissivity from about the southern half of Coyote Spring Valley through the Muddy River Springs and further downstream to the Lower Moapa Valley (Figure 11). The groundwater elevation ranges from about 1815 ft above mean sea level (amsl) at CSVM-6 almost three miles northwest of MX-5 to about 1814 at UMVM-1 about 4 ½ miles southeast of MX-5. Interestingly, the groundwater elevation is 1817 at CSVM-1 which is very near MX-5, which itself is at 1813. In other words, there is a small rise in the potentiometric surface of the carbonate aquifer southeast of MX-5. The minor groundwater divide may be slightly southwest of the direct flow path, thereby partly bounding the divide. During pumping, water levels throughout this highly transmissive aquifer responded as if the aquifer water is a pond with water level changes transmitted quickly throughout.

Carbonate water levels in northern CSV are several tens to almost 400 feet higher than near the southeast portion of CSV, but the water levels did decline during the aquifer test (USDOI 2013). The groundwater level in MW CSVM-4, in CSV but near the southern end of Kane Springs Valley,

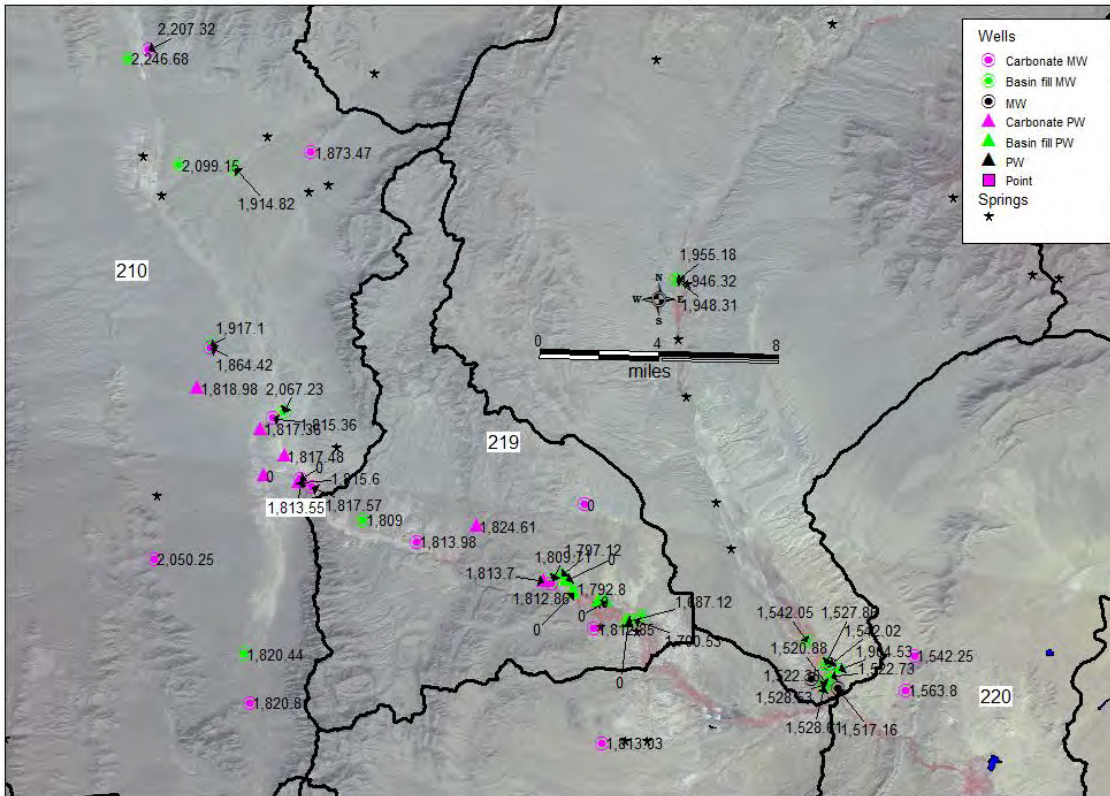
is just six feet lower than well KMW-1 (206 S11 E64 06CACC1) further north in Kane Springs Valley. This suggests the high transmissivity carbonate rock extends into that valley.

Carbonate groundwater levels drop almost 250 feet between the MRSA and the southeast portion of the Lower Meadow Valley Wash valley. The carbonate groundwater levels in the MRSA are several tens of feet above the levels in the basin fill, which drives upward flow into the basin fill. Both observations support the idea of a flow impedance in the carbonate aquifer near the southeast boundary of MRSA which could be a major cause of the springs.

Basin fill water levels in Coyote Spring are substantially higher than the carbonate water levels. Most apparent is CE-VF-2 for which the water level is more than 50 feet lower in the carbonate (Figures 2 and 11). Basin fill well DF-1 groundwater levels exceed 2000 ft amsl while underlying carbonate wells have levels 200 feet lower. Because of the aridity of the area and because of the likely confining unit between the aquifers, it is unlikely the higher basin fill levels reflect substantial recharge to the carbonate. Rather it suggests a hydrologic disconnect. Groundwater levels in basin fill wells CSV3009M and DF-1 have been trending upward, with no signal from the aquifer test; this also indicates there is no connection between carbonate and basin fill.

Downgradient in the Muddy River Springs Area, the carbonate water levels exceed those in the basin fill, which reflects the discharging springs in the area. In the Lower Meadow Valley Wash area, outside of the pump test study area, at wells MW-1 there is a substantial upward gradient from depth in a very thick basin fill aquifer.



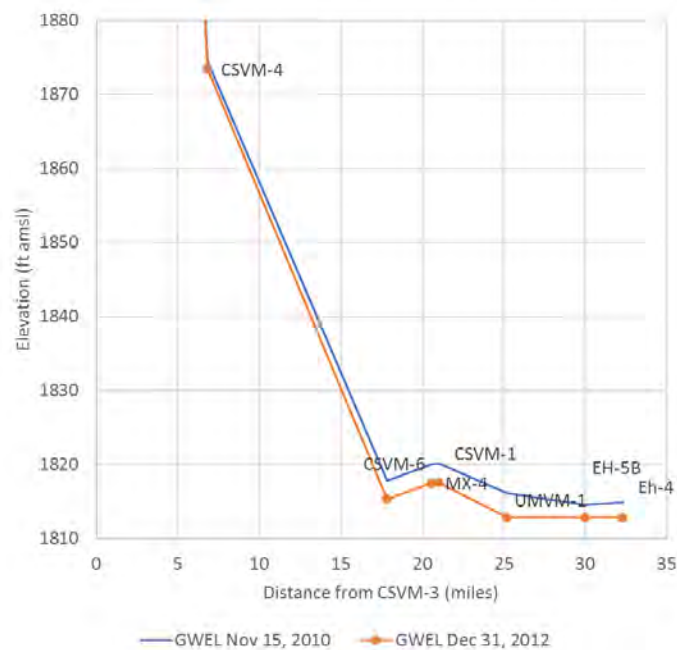


**Figure 11: Groundwater level at various wells throughout the study area. See Figure \* for the well names. The label 0 means either the data is not available or the well is a production well and the water level is very low.**

A profile of the carbonate groundwater levels through CSV and MRSA at the beginning and ending of the aquifer test demonstrates the flatness of the potentiometric surface in the high transmissivity zone through the area and how the response decreases to the north (Figure 12). For almost 20 miles, the carbonate water level is between 1820 and 1813 feet amsl. During the aquifer test, the level consistently dropped about 2 feet. The small rise at CSVM-1 may reflect a slightly higher groundwater ridge south in CSV, as seen at well CSVM-2 where the groundwater levels exceed 1820 feet amsl about five miles south of the profile line (Figure 11). This slight rise suggests there is no flow south from CSV but the groundwater levels in southern CSV did decline during the aquifer test.

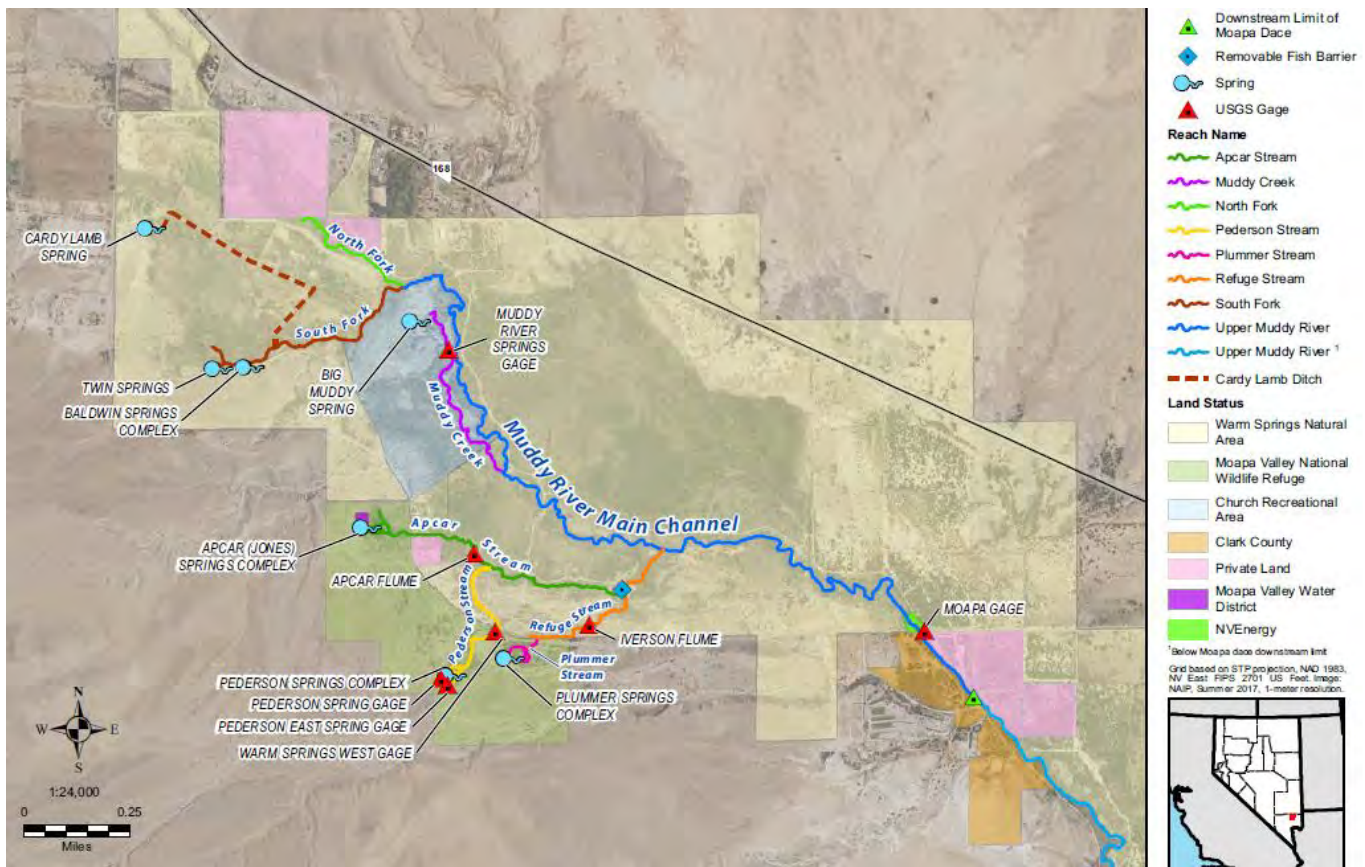
Further north at CSVM-4, the groundwater level change was less than a foot. Groundwater levels at well CSVM-4 are also several tens of feet higher than further south. As noted, groundwater levels rise about six feet into Kane Springs. Even further north, carbonate

groundwater levels are about 200 feet higher and there was little effect from the aquifer test. Transmissivity is probably lower in northern CSV as reflected by the steeper gradient. Inflow to CSV from Pahranaagat or Delamar Valley flows through the lower transmissivity area to reach southern CSV and well MX-5.



**Figure 12: GW elevation from northern Coyote Spring Valley to well EH-4 at the beginning and end of the Order 1169 pump test.**

The changes in groundwater levels in the carbonate aquifer manifests in the Muddy River Springs Area (Figure 13) spring flows. Pederson Springs and Warm Springs West provide most of the flow to one of the channels that is tributary to the Refuge Stream, which is then tributary to the Muddy River Channel (Figure 13). The Pederson Springs are the highest elevation springs on the site.



**Figure 13: Muddy River Springs area. Source, SNWA (2018) Figure 2-1.**

Discharge from the Warm Spring West decreased from about 4.0 cfs to as low as 3.4 cfs between the 1990s and mid-2000s, then after an uptick in flows in the wet period in 2005 (Figure 14) and during the Order 1169 pump test dropped to almost 3.2 cfs (Figure 14). It has recovered only to a little more than 3.4 cfs since 2012. At the Pederson springs, flow is about half of what it was in the mid-2000s, with much of the decrease occurring during the Order 1169 pump test (Figure 15). Flows recovered some after the test, but for about four years flows have been steadily low. At the Pederson Springs East gage, flows had fluctuated around 0.2 cfs prior to the pump test during which the flow decreased to about 0.14 cfs (Figure 15). The flow has not recovered at these springs.

USDOI (2013) determined that the flow rate at Pederson Springs had declined about 63% and at Pederson East Spring about 45% during the test. Flow at Warm Springs West (Figure 14) declined about 9% during the test. USDOI (2013) correlated spring flows to carbonate groundwater level drawdown and found that if the rate of drawdown observed during the aquifer test continued, Pederson Spring, the highest elevation spring in the MRSA, would have gone dry in 1.5 years. USDOI also estimated that Pederson East Spring would have gone dry in another 2.5 to 3 years if pumping continued. In other words, if the trend observed on Figure 15

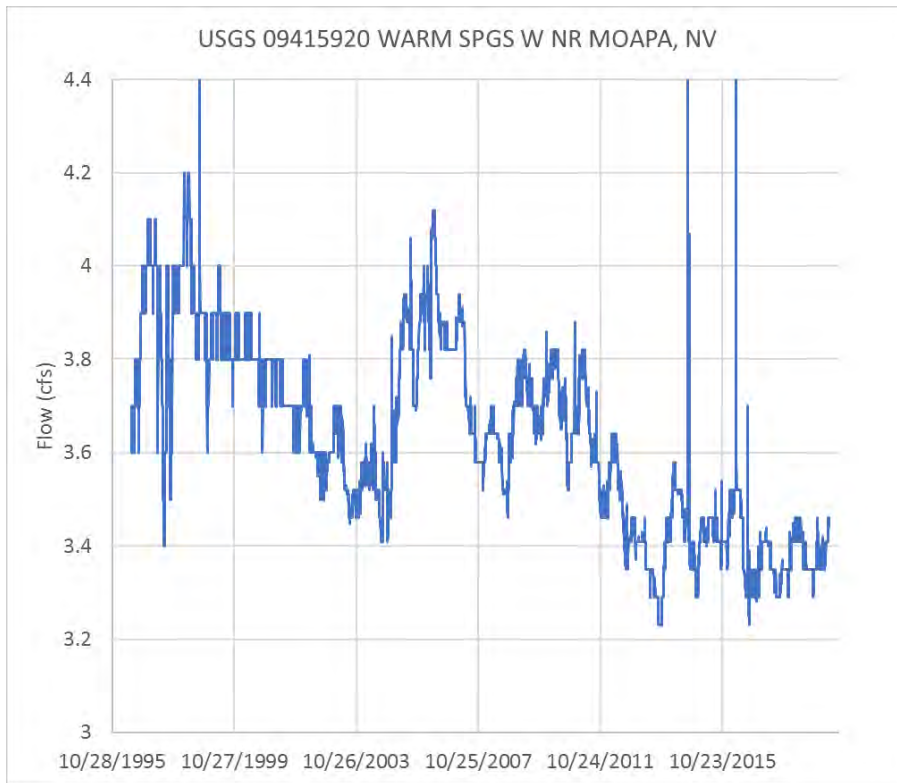
had continued, the springs would be dry. Flow at Jones and Baldwin Springs (Figure 13) declined about 4%. Curiously, the flow at Muddy Springs increased by 19% per year, possibly due to decreased evapotranspiration (ET) resulting from a fire in July 2010.

USDOI also estimated that 80 to 90% of the groundwater pumped during the aquifer test was drawn from groundwater storage (USDOI 2013, p 4) which means that the groundwater system is far from being in equilibrium, which occurs when inflow (recharge and groundwater flow from adjoining basins) equals the outflow. Although several ecologically important springs had their flow reduced substantially during the aquifer test, those flow reductions represent only a small portion of the outflow from the LWRFS. Continued pumping at those rates would have continued to decrease spring flow as the pumping removed additional groundwater storage and decreased the groundwater level controlling discharge from the springs. Even after pumping ceases, groundwater discharge would continue to reduce as it is diverted to replenish the groundwater storage (make up drawdown).

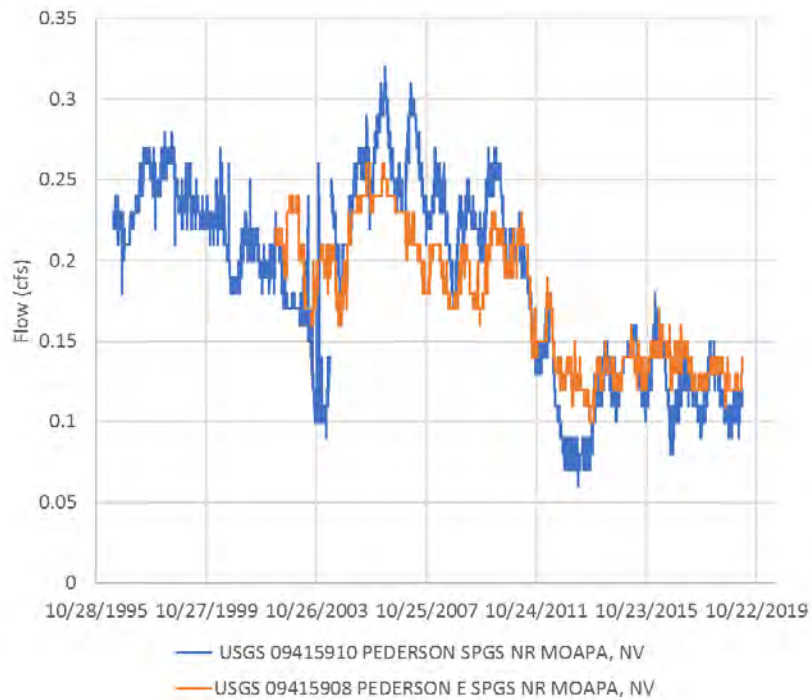
The discharge before the aquifer test was spring discharge and existing pumpage. As pumpage increased, the spring discharge would decrease until the sum equals the inflow. Because of the extremely flat gradient through the carbonate system, the pump test has essentially reset steady state conditions. A major recharge event may eventually allow some temporary recovery, as was seen in 2005, but the ongoing pumping would resume the drawdown trend.

The limited recovery in carbonate groundwater levels and springs indicates there is a steady state inflow to the system. Inflow from upstream would not increase due to drawdown in CSV because the controlling gradient is quite high due to the drop from Delamar and Pahranaagat Valley into CSV. Between Hoyt Spring in Pahranaagat Valley and MW CSVM-3, a distance of 11.47 miles, the water level drops from 3195 to 2207 ft amsl for a gradient of 0.0163. This assumes the water level in Hoyt Springs is that of the carbonate aquifer. Between Delamar Valley and Coyote Spring Valley, the gradient would be the difference in water level between well 182 S07 E64 19ACDB1 at about 3480 ft amsl and CSVM-3 over 20 miles, or be 0.012. Between groundwater levels in Kane Springs Valley at well 206 S11 E64 06CACC1 at 1878 ft amsl and CSVM-4 at 1873 ft amsl over about 6 miles, the gradient is about 0.00016. The flat gradient through the Coyote Spring Valley apparently extends into Kane Springs Valley, so it is possible that some flow could be induced from Kane Springs Valley by pumping in CSV.

The drawdown in the MRSA alluvial wells suggests that lowering the water levels in the carbonate is decreasing the inflow from below into the alluvium. Spring flow has decreased but it is doubtful this has been sufficient to decrease secondary recharge.



**Figure 14: Daily flow at Warm Springs W near Moapa.**



**Figure 15: Daily flow at the Pederson gages**

## **Boundary of the Lower White River Flow System**

NSE Order 1303 requests the reports filed in response to the order address the “geographic boundary of the hydrologically connected groundwater and surface water systems comprising the Lower White River Flow System” (NSE Order 1303, p 13). The NSE has already outlined reasons for including CSV, MRSA, Garnet Valley, Hidden Valley, a portion of the Black Mountains Area, and the Lower Moapa Valley. The analysis herein and the analyses of USDOI (2013), SNWA (2013), Myers (2013), and NSE Order 5462 found a large high transmissivity area within the carbonate aquifer of these areas and basin fill aquifers within CSV, MRSA and Lower Moapa Valley that should be managed as one basin.

Information presented herein suggests that Kane Springs Valley should be added to the LWRFS. Because water levels in that basin are just a few feet higher than in adjoining portions of CSV, the gradient between them is very low. Pumping in Kane Springs Valley that decreases that gradient would decrease flow into CSV in a time frame likely measured in less than a few years. I base the time frame estimate on the rapid response observed in the aquifer in CSV and the assumption that a carbonate aquifer extending into Kane Springs Valley would also have a high transmissivity. Because of the very low perennial yield in Kane Springs Valley and lack of inflow to the valley from upgradient valleys, pumpage in Kane Springs Valley could reverse the gradient and draw water from CSV. Considering how fast MX-5 pumping manifest through the carbonate aquifer, a decreased flow into or reversed flow from the high transmissivity portion of the CSV carbonate aquifer would also spread through the system and lower the groundwater levels. It would have a significant effect on water rights through the LWRFS. Lowering the water table in CSV could increase the gradient between CSV and Kane Springs and draw a small amount of groundwater into the CSV. Because groundwater at the source in Kane Springs is limited, inducing flow from Kane Springs Valley is not a sustainable means of increasing the available water in LWRFS. Kane Springs should be managed as part of LWRFS.

Groundwater levels in northern CSV were several hundred feet higher than in southern CSV and there was no apparent effect of the drawdown reaching MW CSVM-3. Transmissivity in northern CSV is likely lower than further south. There is no evidence of an impedance caused by a fault structure isolating north CSV because a fault would prevent groundwater from flowing south through CSV. The pump test did not propagate to that point during the test but there is no evidence suggesting it would not do so if the pumping continued. Developing groundwater in this area would intercept groundwater flowing into southern CSV and have the same effect as diverting from Kane Springs Valley; it would decrease flow to the springs and downgradient water rights.

The ultimate source of groundwater for the LWRFS is upgradient in Pahranaagat and Delamar Valley. Recharge in each of these valleys could combine with interbasin flow from upstream to provide the inflow to CSV. Groundwater developed upstream, especially in Delamar, Dry Lake or Cave Valleys, would ultimately decrease flow to CSV. The only question is timing. Once depletions upstream reach CSV, they will manifest as a loss of flow to the LWRFS. The inflow of approximately 47,900 afa will begin decrease<sup>1</sup>. As shown by the Order 1169 aquifer test, this reduced flow will propagate through the system and manifest as reduced carbonate water levels and spring flows. The Judge Esty order<sup>2</sup> properly requires that the NSE not grant any water rights above CSV in order to protect water rights and spring flows in the LWRFS in perpetuity.

The White River Flow System above CSV does not have to be added to LWRFS boundary in order to manage it properly. Developing groundwater in the LWRFS will not propagate impacts north of CSV.

### **Long-term Quantity of Water that Could be Pumped from LWRFS**

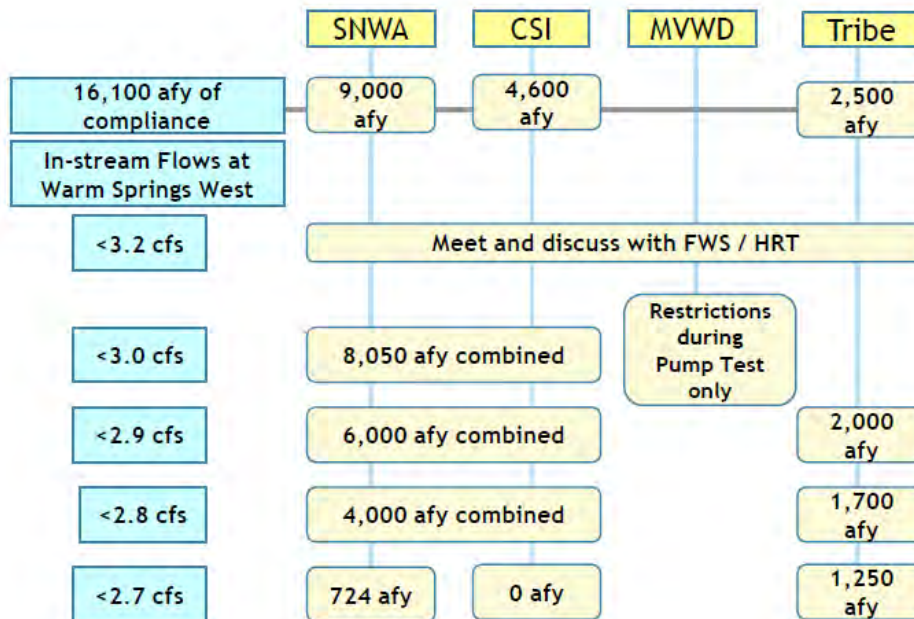
One limit on pumping water in the LWRFS are the impacts caused by that pumping on spring flow necessary to support the Moapa Dace and water rights to flow from the springs and in the Muddy River. The recovery plan for the Moapa Dace requires that existing instream flow and historical habitat be protected in three of five channels supported by springs in order to reclassify the dace. The five channels are Aparcar, Baldwin, Cardy Lamb, Muddy Spring, and Refuge (Figure 13) (USFWS 1996, p 33, 34). According to the recovery plan, all five must be protected for delisting. USFWS does not specify a required flow rate for each channel, but a Memorandum of Agreement (MOA) signed by Southern Nevada Water Authority, Coyote Springs Investment, Moapa Valley Water District, and the Moapa Valley Paiute Tribe, established trigger ranges for flows at Warm Springs West. Figure 16, sourced from the NSE

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<sup>1</sup> The DEIS groundwater model (SNWA 2009) simulated that all flow went from Delamar Valley to Pahranaagat Valley and then to CSV (as shown in a data file accompanying the original reference: folder/file deis groundwater model/simulation files/3\_Detailed\_Results/Interbasin-Flow-Tables/IBF\_rev2\_1b\_NoAction.xls). The estimated flow was 41,900 afa. The value did not vary due to project development. There was also 1900 afa flow from Kane Springs Valley to CSV. NSE Ruling 6167 concluded that inflow from Tikaboo South Valley to CSV is 4100 afa. This brings the total inflow to 47,900 afa. In his presentation on LWRFS of July 24, 2018, the NSE estimated inflow equaled 47,502 afa. He also estimated CSV LWRFS recharge at approximately 3000 afa, so the total supply is 50,500 afa, which the NSE stated was "50,000 afa or less" (NSE July 24, 2018 LWRFS Presentation, p 41).

<sup>2</sup> White Pine County and Consolidate Cases, Et al, v Jason King, P.E., Nevada State Engineer, State of Nevada Division of Water Resources. In the Seventh Judicial District Court of the State of Nevada in and for the County of White Pine. Case No. CV1204049. The ruling required the NSE to recalculate "appropriations from Cave Valley, Dry Lake and Delamar Valley to avoid over appropriation or conflicts with downgradient, existing water rights". (NSE Ruling 6446, p 109)

July 24, 2018 presentation regarding the LWRFS, describes the trigger ranges and pumping limitations for the MOA. Warm Springs West is on the Pederson Stream which is not listed as one of the channels for protection in the recovery plan but does contribute to the Aparcar Channel (Figure 13). Warm Springs West flows almost dropped to 3.2 cfs during the aquifer test (Figure 14).



**Figure 16: Description of trigger flows and pumping limits for those trigger flow for the Memorandum of Agreement described in the text.**

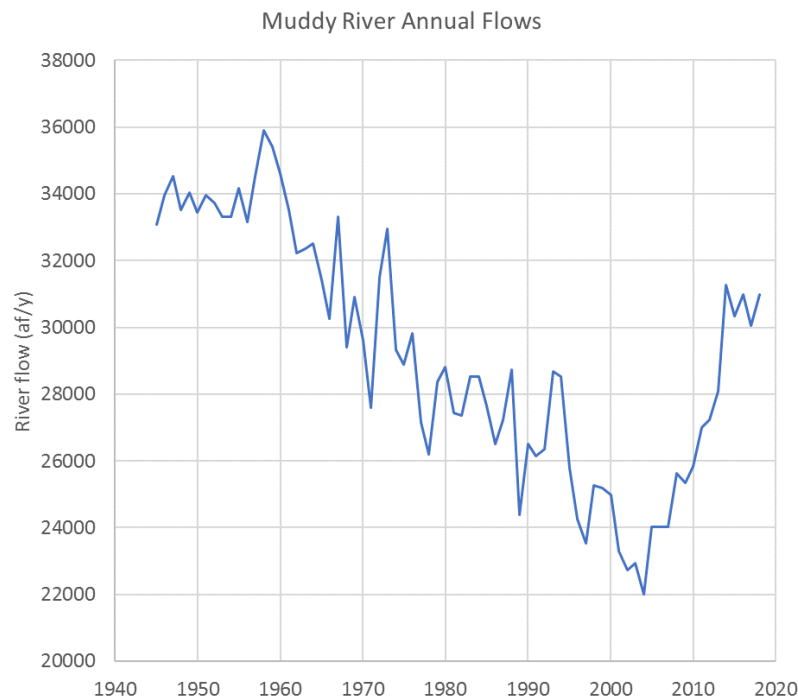
The 1920 Muddy River Decree has total rights of 37,000 afa, as noted by NSE Order 1169. There are other stream and spring rights listed in the hydrographic abstract that could be in addition to Muddy River Decree rights.

The best way to determine the effect of pumping on the LWRFS is to consider the water balance of the system that feeds the Muddy River Springs. Ignoring local recharge which is probably to basin fill, the inflow through CSV is about 50,500 afa. The Muddy River Springs represent most of the outflow from the area, although estimating that outflow is complicated by the irrigation in the area and ET from the basin fill. The gaging station Muddy River near Moapa (#9416000) is downstream of and therefore includes flow for all area springs (Figure 13) but the gaging station description notes irrigation diversions above the gage. Based on the gage, discharge from the LWRFS had been estimated to be about 36,000 afa from springs that supply the MRSA (Eakin 1964, p 24). However, none of the recorded flows since 1943 have been that



high (Figure 17). From about 1943 to 1960, the recorded flow was just less than 34,000 afa. After 1960, the flow rate decreased to less than 24,000 afa. After the wet year in 2005, it began to increase again to over 30,000 afa in 2012.

Trends at the Muddy River gage are likely due to surface and groundwater development upstream from the gage, including diversion of up to 9.2 cfs to the Reid-Gardner electrical generating station which began in 1968 (USFWS 1996). Decreasing spring flow likely began in the 1990s with carbonate pumping. The increase just after 2005 may be due to the high precipitation year and after 2010 could be due to the decreased ET after a fire in 2010 (Figure 17). Flows have been relatively constant at about 30,500 afa since 2014. Notwithstanding the portions of the decree satisfied by diversions upstream of the gage, flow at the gage has not been meeting the requirements of the Muddy River Decree because the flow has been less than 37,000 afa (Figure 17).

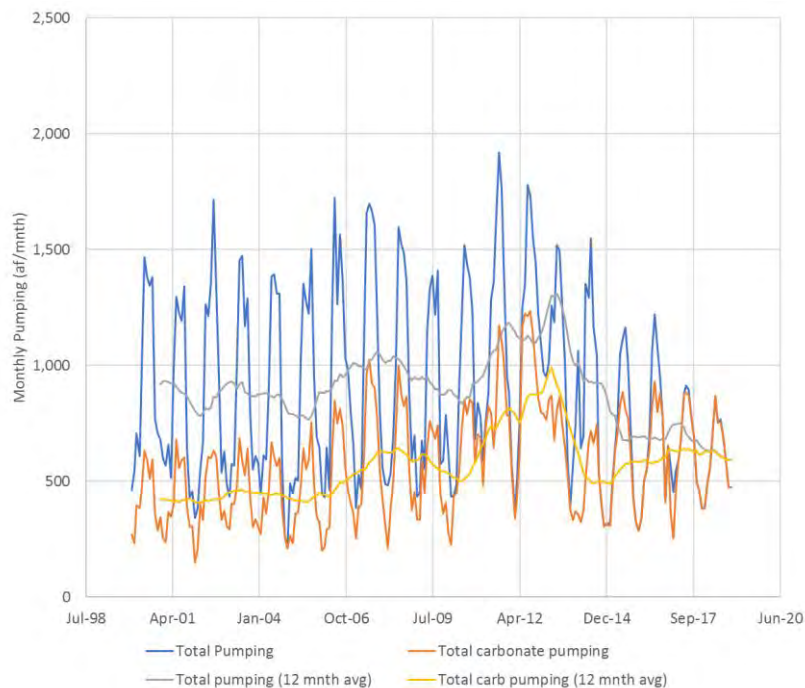


**Figure 17: Annual flows (cfs) at the Muddy River near Moapa, NV gage (09416000)**

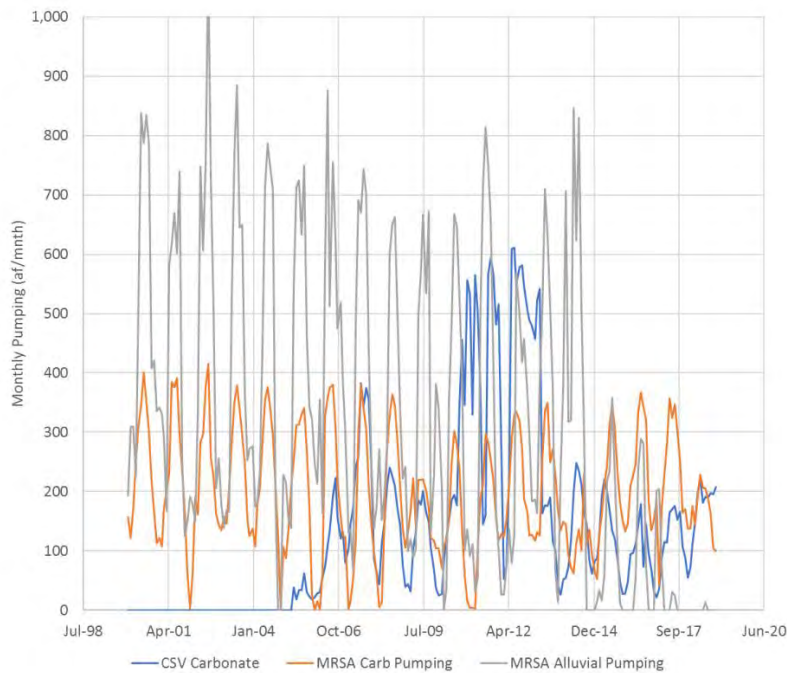
Pumpage since 2000 has been from variable sources. Monthly pumpage varied from 500 to 1600 af/mnth between 2000 and 2010, with the 12-month average ranging from 800 to a little more than 1000 af/mnth (Figure 18), which converts to annual pumping from about 9600 to 12,000 afa. Total carbonate pumping increased from about 400 to 600 af/mnth, or 4800 to 7200 afa between 2000 and 2010, so there was a decrease in alluvial pumping in MRSA (Figure 18). There was a substantial jump in pumping between 2010 and 2012 due to the 1169 aquifer

test. After the test and especially since 2014, total pumping has decreased to just over 8000 afa with carbonate pumping being most of it. Alluvial pumping has dropped to close to zero since 2015 (Figure 19).

Carbonate pumping in CSV first began in 2005, so flow in the carbonate system upstream from the springs has only been pumped for 14 years. MRSA carbonate pumping has been steady or slightly decreasing with ranges from 100 to 400 af/mnth (Figure 19). Production is primarily from the Arrow Canyon wells. During the aquifer test, CSV carbonate pumping dominated the pumping from the carbonate aquifer. Since the aquifer test, CSV carbonate pumping has been about half that in MRSA.



**Figure 18: Total pumping and total carbonate pumping, by month and by 12-month moving average, for the study area. Data from NSE Web page.**



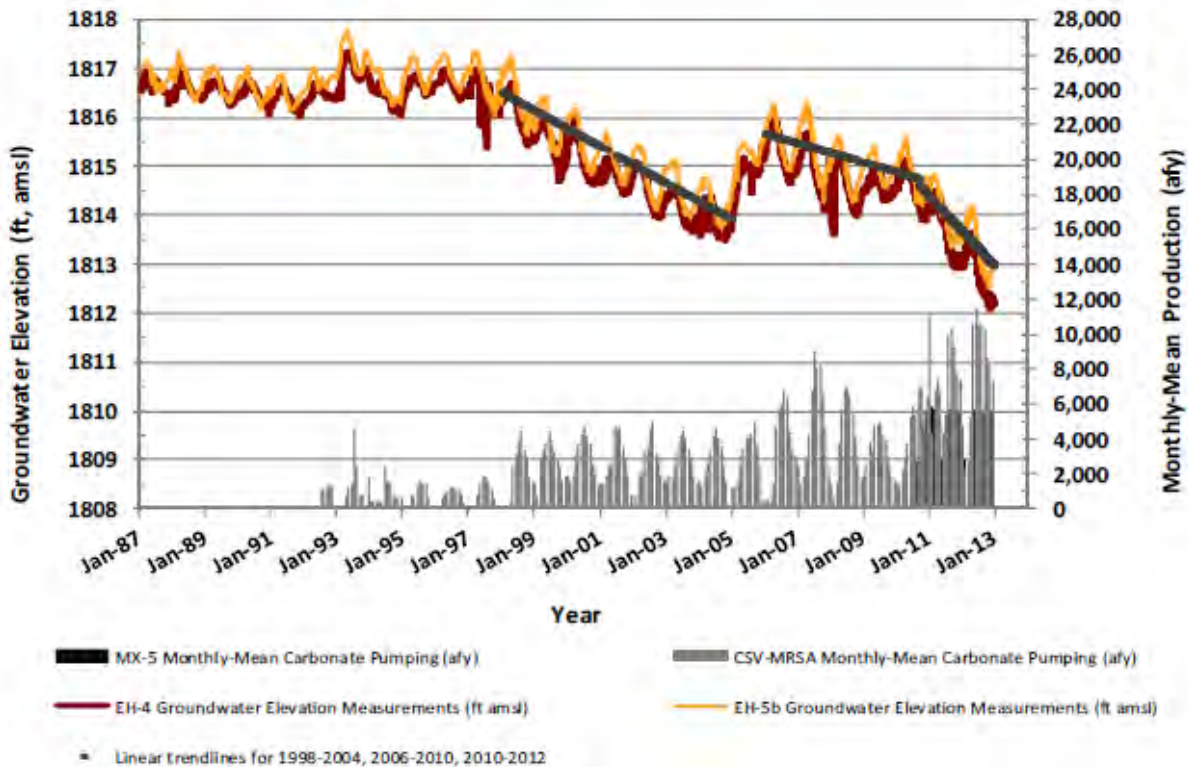
**Figure 19: Carbonate pumping for Coyote Spring Valley and the Muddy River Springs Area.**  
**Source of data: NSE web page.**

Prior to the pump test, the trend for water levels in most carbonate monitoring wells had been for them to decrease except during brief wet periods. This may be seen by plotting the carbonate groundwater levels with carbonate pumping, as done by the USDOI (Figure 20). Groundwater levels began to decrease as carbonate pumping commenced. Carbonate spring flow also began to decrease with pumping in the mid-1990s, also except during very wet years. The trend has been for the flows to decrease. At Warm Springs West, flow had been near 4.0 cfs in the 1990s and now is near 3.4 cfs, having recovered about 0.1 cfs since the aquifer test (Figure 14). Smaller, higher altitude springs are flowing at a little more than half of their 1990s flow.

Carbonate pumping as it occurred in the 1990s caused spring flow and groundwater levels to decline; total pumping was less than 10,000 afa and carbonate pumping was less than 5000 afa. Excepting those downstream of the springs, the basin fill wells were not experiencing a water level decline even with the alluvial pumping of near 5000 afa.

It is therefore apparent that any carbonate pumping removes water from the springs. Prior to the pump test, the small amount of carbonate pumping was causing a small but measurable decrease in spring flow. The decrease would occasionally be partially countered by extremely wet years, such as in 2005. As noted above, the majority of carbonate pumping was removed from storage, so the flow decreases would continue into the future as the storage recovers.

The conclusion therefore is that the NSE should not allow any carbonate pumping in the LWRFS to prevent further decreases and to allow recovery in the flow to Muddy River Area Springs. Pumping carbonate water intercepts spring flow and upward flowing groundwater recharge to the basin fill. With carbonate pumping, it is only a matter of time before the spring flow on which the Moapa dace depends decreases significantly or is completely lost. The next section addresses the potential for basin fill pumpage.



**Figure 20: Trends in carbonate water levels at MWs EH-4 and EH-5b with carbonate pumping in Coyote Spring Valley and Muddy River Springs Area. Source: USDOJ (2013) Figure 1.2.**

### Relation between Carbonate and Basin Fill Wells and the Potential for Conjunctive Use

The pumping and water level relations discussed in the previous section suggest that some water can be pumped if sourced from the basin fill aquifer. Except in the far southeast portion of MRSA, basin fill groundwater levels did not decline due to carbonate pumping. This is probably because carbonate water discharging into the basin fill supports the basin fill aquifer. Secondary recharge, probably including both direct spring flow and irrigation recharge, supports the basin fill water levels. Some basin fill pumping could be acceptable in MRSA because alluvial groundwater is partly secondary recharge from the springs. As secondary recharge, the water has already been used in the spring channels most important for the dace. The existing levels of pumping in MRSA basin fill, about 4000 afa, is probably acceptable.

Although there is no basin fill pumping in CSV, it is possible that some basin fill pumping there could be sustainable. The evidence for this is that basin fill water is likely disconnected from the carbonate and not responsible for substantial recharge. That basin fill water levels increased during the aquifer test exemplifies that. Prior to allowing basin fill pumping, it is essential to determine where the basin fill groundwater discharges. If ultimately it supports carbonate groundwater, it should not be pumped.

NSE Order 1303 requests reports address “effects of movement of water rights between alluvial wells and carbonate wells on deliveries of senior decreed rights to the Muddy River” (NSE Order 1303, p 14). This suggests that reports consider the change in the point of diversion from one to the other aquifer. As noted previously, carbonate pumping would eventually dry the Muddy River Springs, but carbonate groundwater flow also supports basin fill water through direct discharge from the carbonate to the basin fill and secondary recharge of springflow into the basin fill. The long-term decline of flow in the Muddy River indicates there is a limit to the amount of even basin fill groundwater that can be pumped without affecting Muddy River flows.

## **Conclusion**

The Order 1169 pump test made apparent that there is a broad highly transmissive carbonate aquifer underlying CSV, MRSA, Garnet Valley, Hidden Valley and California Wash. The aquifer is interconnected so much among basins that it is necessary to manage groundwater through all basins as if they were part of a whole basin. The primary conclusion of this analysis is that the NSE not allow any pumping of the carbonate aquifer if the continued decrease in spring flow in MRSA is to be avoided. This conclusion results from the direct correlation of carbonate pumping and carbonate water level and spring discharge decline. Because the spring flow is directly responsible for Muddy River flows, preventing any additional carbonate pumpage is also necessary for protecting downstream water rights.

Another conclusion is that Kane Springs Valley should be managed as part of LWRFS. This conclusion results from the flat carbonate water level extending into that valley and the likelihood that water pumped from Kane springs Valley would quickly contribute to the depletion of the carbonate aquifer in CSV and MRSA.

A third conclusion is that some basin fill pumping could occur without significantly affecting the spring flow. A preliminary estimate is the pumping that occurred prior to significant carbonate pumping, or about 4000 afa. It is probably not possible to increase that pumpage by transferring carbonate rights to basin fill wells because of the observed long-term decline in Muddy River flows.

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USFWS (US Fish and Wildlife Service, Region 1) (1996) Recovery Plan for the Rare Aquatic Species of the Muddy River Ecosystem, First Revision. Portland OR

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## **Technical Memorandum**

### **Groundwater Management and the Muddy River Springs, Rebuttal in Response to Stakeholder Reports Filed with Respect to Nevada State Engineer Order 1303**

**August 16, 2019**

**Prepared for: Center for Biological Diversity**

The Nevada State Engineer (NSE) is planning to establish a plan to conjunctively use groundwater and surface water in the Lower White River Flow System (LWRFS) under Order 1303. The NSE has established the LWRFS as the valleys shown in Figure 1, except that only the northern portion of Black Mountains Area would be included, and excluding Lower Meadow Valley Wash and Lower Moapa Valley. The bases for this planning are the Order 1169 aquifer test results and observations ongoing since the end of the test. The NSE requested reports from stakeholders be filed by July 3, 2018. This technical memorandum is a review and rebuttal of those stakeholder reports, as requested by the NSE.

Throughout the rebuttal, I contrast the reviewed reports to the evidence I prepared for the submission by the Center for Biologic Diversity (CBD) (Myers 2019). This rebuttal also endorses the letter provided by the Great Basin Water Network in its last section. I organize the reports by stakeholder.

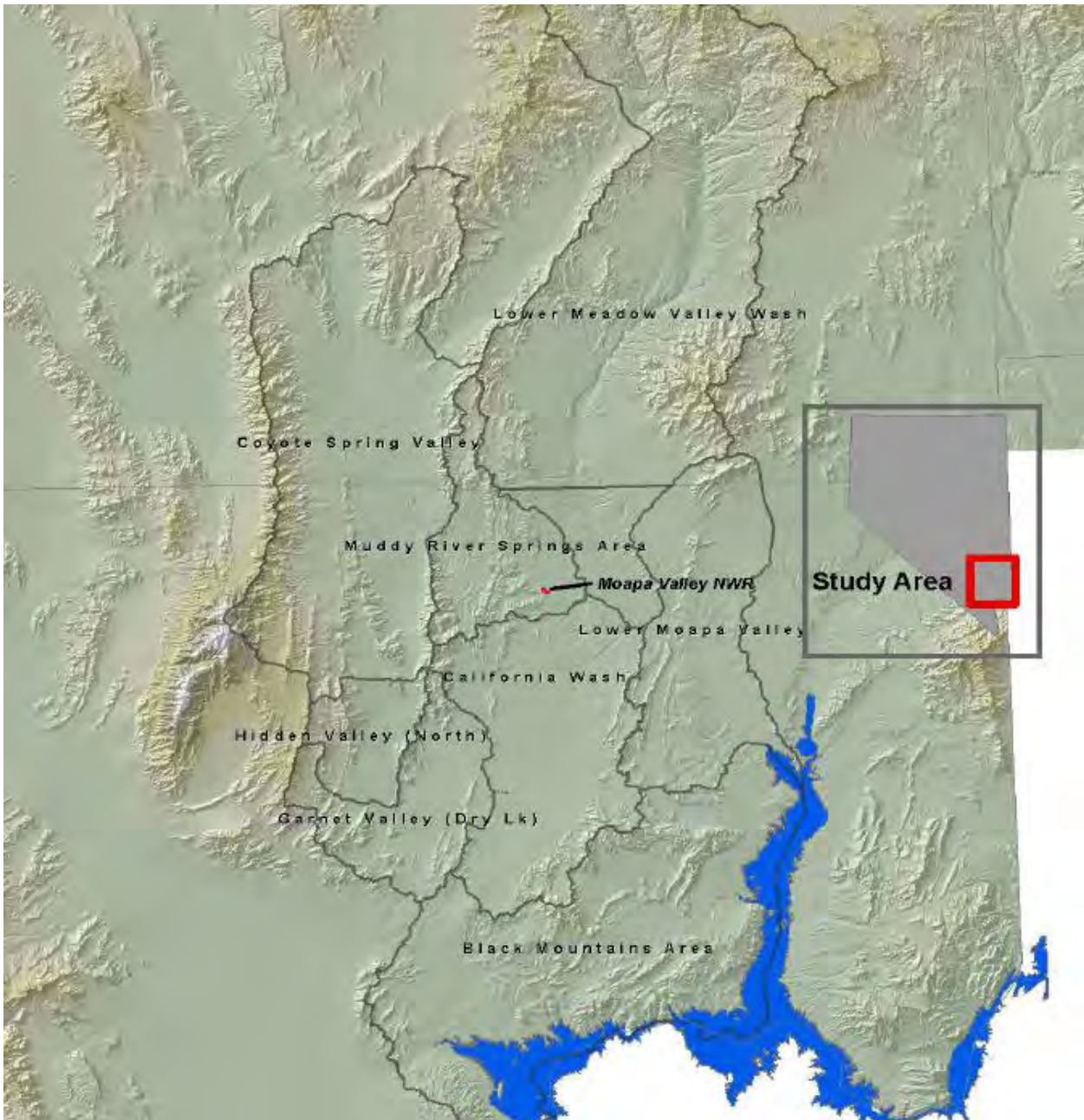


Figure 1: Study area showing the Lower White River Flow System. Kane Springs Valley is northeast of Coyote Spring Valley. Source: USDOl (2013).

**Rebuttal to Coyote Springs Investment Report**

Coyote Spring Investment (CSI) submitted a report prepared by Stetson Engineers (Stetson 2019) in support of its claim that up to 5280 acre-feet/year (af/y) can be pumped from Coyote Spring Valley (CSV) without harm to the Muddy River Springs Area (MRSA) (Stetson 2019, p 60).



The evidence presented by Stetson is faulty as presented herein and does not support the claim.

Stetson compares drawdown calculated using a Theis analysis of pumping all water from CSV from the MX-5 well on water levels at the Muddy River springs (Stetson 2019, p 7-12). Stetson claims that pumping could not cause drawdown as substantial as seen at the springs, which experience more drawdown than predicted using Theis. However, two of the assumptions that go into a Theis analysis, as properly listed by Stetson (p 8), that of an aquifer with infinite extent and no boundary effect, cannot be applied to the actual groundwater system here. Faults and unsaturated carbonate blocks, referenced by Stetson elsewhere in its report, provide a boundary that limits the size of the aquifer. As noted by Stetson, drawdown in aquifers with high transmissivity expands fast, and would encounter the boundary quickly. Boundaries limit the aquifer from which water can be drawn so drawdown is higher than predicted with Theis. Water is drawn to the well from all directions but the system between the pumping wells and springs is a relatively narrow interbasin connection through the Arrow Canyon Range, through which the discharge essentially squeezes, which could multiply the drawdown by many times over that estimated using the Theis solution.

Stetson (2019, p 47) incorrectly implies there is no effect of the aquifer test on water levels at EH-4 and that the response is due to climate effect: “What is most evident from the water level graphs is the long-term climatic impact of drying from 1998 through 2004, wetting in 2004 and 2005, drying from 2006 through 2013, and stable water levels from 2013 through 2018” (Stetson 2019, p 47). Stetson refers to its Figure 18 which compares water levels at EH-4 (the water level graphs referred to in the quote) to pumping in CSV and MRSA. Despite its claims in the previous quote, the lower half of Stetson Figure 18 shows clearly a decline at EH-4 with pumping in MRSA with the exception of an upward jump during the wet 2005 period. The decline steepens during the aquifer test period. Although Stetson claims the levels since 2013 are stable, it neglects to consider that precipitation during the period between 2014 and 2018 has trended upward.

Stetson’s interpretation of CSV-1 in its Figure 19 is mostly correct, except for the period since the pump test. CSV-1 water levels recovered about a foot between 2013 and 2014 which appears to correspond to substantial decrease in CSV pumping. As CSV pumping recovered to pre-pump test rates, CSV-1 water levels began a slight decrease of about half a foot up to 2019, even though the precipitation had increased as shown on Stetson’s Figure 1.

Stetson finds that wells CSV-2, -3, -4, -5 and CE-VF-2 “do not show a response to pumping” in either CSV or MRSA (Stetson 2019, p 48). Myers (2019) found similar results except I found minor decreases of up to half a foot at CSV-5. Stetson’s explanation that the lack of response

is “due to barriers to flow created by normal (extensional) faults that impede groundwater flow in the east-west direction” (Id.) is incorrect. The wells in question lie north of the pumping so barrier to east-west flow would have no effect. Myers (2019) explained the decreasing response with distance north of MX-5 as being due to the higher ground level and to the aquifer becoming less transmissive to the north, not due to an impedance to east-west flow.

Stetson claims pumping at CSI-2 did not affect Warm Springs West (WSW) flow during the last three quarters of 2018 (Stetson 2019, p 52) and references its Figure 21. That figure also shows that MRSA pumping has decreased, which affects water levels at EH-4 which the spring discharge correlates with. Also, Stetson Figure 21 does show a minor flow decrease but the measurements are reported only at 0.1 cfs intervals and Stetson’s scale goes way beyond the bounds that the flow data is reported. In more detail, Myers (2019) Figure 14 shows a substantial fluctuation, but flows that are mostly less than 3.4 cfs, a decrease from levels exceeding 3.4 cfs subsequent to the aquifer test. In other words, Myers’ figure shows that spring discharge has been decreasing ever since it recovered from the pump test.

Stetson (2019) argues in its section 3 that Kane Springs Valley (KSV) should not be part of the LWRFS, but provides evidence that clearly supports KSV’s inclusion and fails to present evidence showing there is no connection. The hydrogeology map presented by Stetson as Figure 8 shows that volcanic rock forms the boundary of KSV (206) and CSV and that carbonate rock forms the boundary between CSV and KSV. Also, at no point did Stetson consider groundwater levels between CSV and KSV or whether drawdown in CSV would draw water from KSV. Myers (2019) showed the groundwater elevation difference between valleys was minimal.

In section 4, Stetson (2019) develops water budgets for LWRFS and CSV. First, Stetson estimates recharge for CSV using three recharge methods, (Maxey and Eakin 1949, Nichols 2000, and Epstein 2004). The Nichols and Epstein methods are based on methodology of Maxey and Eakin (1949) in that recharge is estimated as a coefficient applied to a precipitation interval within the basin. Stetson’s application of the methods is incorrect and shows a misunderstanding of the methodology.

Maxey and Eakin (1949) assumed that outflow from a basin, including groundwater evapotranspiration (GWET), spring flow, and interbasin outflow, would equal recharge and interbasin inflow to that basin. They analyzed 13 basins for which they could estimate the outflow because GWET is easier to estimate than any other flux in the method and for which they could assume interbasin outflow was minimal. They estimated precipitation by elevation using a precipitation map developed by Hardman (1936). The precipitation estimates were by zone, as Stetson shows in its Table 2 (precipitation zones <8 in/y, 8 to 12 in/y, 12 to 15 in/y, 15 to 20 in/y, and >20 in/y). Maxey and Eakin developed the coefficients shown in Stetson Table 2

by trial and error. By precipitation zone, the coefficients are 0, 0.03, 0.07, 0.15, and 0.25, respectively. This means the precipitation falling in the <8 in/y zone would be assumed to not become recharge whereas 25% of that falling in the >20 in/y zone would become recharge within the basin. For example, if 10,000 af falls in the >20 in/y zone, 2500 af of it would be assumed to become recharge within the basin. Several distinguishing points about the method are essential:

- The recharge occurs within the basin, not necessarily at the point the precipitation falls. The method does not consider geology, and it is obvious that precipitation runs off granitic and much volcanic rock but infiltrates carbonate rock. Runoff from granitic rock may become mountainfront recharge whereas infiltration into carbonate rock is recharge in place. An inherent assumption is that the basins have a relatively similar ratio of pervious to impervious geology. However, recharge may be much higher than expected by precipitation zone in an all carbonate basin.
- The method depends on the map used to estimate the precipitation intervals. Just like a regression analysis, the results only hold for dependent and independent values drawn from the same population of data. It is not appropriate to use M-E coefficients with PRISM-estimated rainfall as described (Stetson 2019, p 33-34). As shown in its comparison among methods, using PRISM precipitation yields a much higher estimated recharge. Being “more scientifically sophisticated” (Stetson 2019, p 38) does not make an estimate using most recent PRISM data more accurate because it was not made using the same precipitation estimates used to derive the coefficients.
- Because the M-E method was derived using outflow estimates and precipitation zones for entire basins, it is inappropriate to estimate recharge for small subbasins. Stetson inappropriately divided the Sheep Range portion of CSV into 15 zones in which to estimate recharge, introducing a level of granularity to the analysis which does not exist in the model. Its’ estimated recharge of 5280 af/y is therefore not accurate.

Stetson develops a water budget for the LWRFS (Stetson Table 8) and states that “This report recommends and supports an initial estimate of groundwater available for appropriation should be based on capturing *all evapotranspiration* and groundwater outflow from the LWRFS.” (Stetson 2019; emphasis added). Contrary to Stetson’s assertion, the availability of all evapotranspiration (ET) from groundwater for appropriation is not supported in the report. First, capture of *all* ET is not possible. There is no evidence that all ET from the extensive LWRFS groundwater system that supports functioning ecosystems could feasibly be captured—as Stetson 2019 asserts. Second, the CSI report makes no showing that *any* of the estimated amount of evapotranspiration in the LWRFS (Stetson 2019, Appx. C, chart “LWRFS ET (AFY)”) is “available” for capture. DeMeo et al. (2008), which is relied on by Stetson (2019, Appx. C),

shows that the estimated ET in the hydrographic areas in the LWRFS supports functioning ecosystems consisting of various native vegetation types including both dense and moderate meadowland, woodland, and shrubland vegetation as well as agriculture (Figure 2).

**Table 7.** Estimates of annual discharge from ground- and surface-water evapotranspiration for each ET unit in each hydrographic area in the study area, southern Nevada and adjacent areas in Utah and Arizona, 2003-06.

[ET, evapotranspiration;  $ET_g$ , ground- and surface-water evapotranspiration. ET unit identifier: DMV, dense meadowland vegetation; DWV, dense woodland vegetation; MWV, moderate woodland vegetation; DSV, dense shrubland vegetation; MSV, moderate shrubland vegetation; AGU, agricultural unit; OWU, open water unit]

Hydrographic area	Annual $ET_g$ discharge, in acre-feet								Total annual $ET_g$ discharge (acre-feet)
	NPU	MSV	DSV	MWV	DWV	DMV	AGU	OWU	
Black Mountains Area	0	1,000	440	320	0	0	0	192	1,952
California Wash	0	1,200	440	640	680	0	3,120	0	6,080
Muddy River Springs Area	0	1,450	660	960	1,020	0	0	0	4,090
Lower Moapa Valley	0	1,450	1,320	2,240	2,380	0	3,640	480	11,510
Virgin River Valley	0	8,700	7,260	11,520	16,660	340	6,760	720	51,960
Lower Meadow Valley Wash	0	6,500	1,760	2,880	2,380	0	2,600	48	16,168
Clover Valley	0	2,300	960	960	1,360	340	0	0	5,840
Coyote Spring Valley	0	0	0	0	0	0	0	0	0
Kane Springs Valley	0	0	0	0	0	0	0	0	0
Tule Desert	0	0	0	0	0	0	0	0	0
Hidden Valley (North)	0	0	0	0	0	0	0	0	0
Garnet Valley	0	0	0	0	0	0	0	0	0
Total	0	22,600	12,760	19,520	24,480	680	16,120	1,440	97,600

Figure 2: Annual evapotranspiration (af/y) for hydrographic areas in southeast Nevada. Source: DeMeo et al (2008) Table 7

Stetson also ignores that the capture of any significant amount of ET from the LWRFS could cause significant impacts to native vegetation and soils in areas across the LWRFS as well as to spring flow. For example, loss of vegetation and drying of soils would make them more vulnerable to erosion by water and wind creating impacts to air and water quality as well as habitats. Loss of ET in riparian areas or near springs and seeps could devastate those habitats.

Stetson claims that up to 5280 af/y could be pumped from the west side of CSV because of recharge in the Sheep Range and the unsaturated carbonate rock preventing a connection with flow to MRSA (Stetson 2019, p 57). The amount is the estimated recharge from the Sheep Range, which was shown to be incorrect in the bullet above. It also does not account for where that water discharges which means there is not a means of capturing this discharge from ET.

Thus, the CSI/Stetson proposal to include all ET as available water to be captured in the LWRFS is unsupported and should be rejected.

Stetson also presents a water budget for CSV that included inappropriate fluxes (Stetson 2019, Table 9). They claim ET in CSV is 1000 af/y and reference Thomas et al (2001). That reference does not show where in CSV that ET would occur. Figure 2 shows that DeMeo et al (2008) estimated ET from CSV is 0.

Stetson make an accurate statement about pumping from the aquifers in CSV or MRSA: “All groundwater pumping, regardless of which aquifer it is pumped from, will eventually affect the flow of the Muddy River or subflow out of the LWRFS” (Stetson 2019, p 58). This is a correct statement, and Stetson claims it is all a matter of timing. As shown by the aquifer test, pumping anywhere south of the middle of CSV has a rapid effect on spring flow and, pumping also affects flow from the alluvial aquifer to the river, although the effect is delayed.

Stetson (2019) does not at any point consider the effect of pumping on the spring flows necessary for the dace.

### **Rebuttal to Moapa Band of Paiutes Report**

Moapa Band of Paiutes submitted a report prepared by Cody Johnson and Marty Mifflin of Mifflin Associates (Johnson and Mifflin 2019). They use this report to suggest there is much more water available for development, especially in the west portion of California Wash (CW). Johnson and Mifflin (2019) make the following conclusions based on their analysis of data completed for the NSE Order 1303.

- (1) the LWRFS designation and Order 1303 are responses to a flawed conceptual model based on conflated climate and pumping effects, because widespread water-level declines associated with Order 1169 pumping of MX-5 were mistakenly attributed entirely to pumping rather than to the superposition of local, fracture-controlled pumping responses with regional, climate-driven decline;
- (2) the LWRFS as drawn by the State Engineer ignores hydrochemical and hydrodynamic divides that suggest the existence of two separate capture zones influencing groundwater flow through the five designated basins;
- (3) ~40,000 afy of south-flowing groundwater may be the flux within the Las Vegas Valley capture zone south and southwest of the MRSA;
- (4) pumping from California Wash has little to no impact on the MRSA and much more groundwater is available in California Wash than previously assumed;
- (5) the State Engineer should supplement and extend the LWRFS concept to an analysis domain based on regional-spring capture zones, as delineated by the best available science; and
- (6) if the long-term drought trend evident in climate records persists, no amount of pumping curtailment will restore or maintain high-elevation spring flows, curtailment of pumping in sustainable locations will serve no purpose and thus mitigation measures, including curtailment, will not likely prove effective in protecting senior-rights holders in the Muddy River and Moapa dace habitat from continued drought impacts. (Johnson and Mifflin 2019, p 35)

The conclusions are erroneous because the data and analysis does not support them. This section rebuts these conclusions.

Johnson and Mifflin attempt to claim groundwater level trends can be explained as a response to drought with a few very poorly referenced statements and a series of groundwater level hydrographs. They claim that the longer records “indicate the drought trend began about 1999” (Johnson and Mifflin 2019, p 6) with a reference to their Figure 4 which shows groundwater levels at EH-4 as well as an estimated level adjusted for Arrow Canyon Pumping. They do not explain how the levels were adjusted or provide a reference explaining it. The adjusted groundwater level trend purportedly shows how the water level would have changed without pumping. From 2011 through 2015, they adjust for the aquifer test as well. Johnson/Mifflin use this analysis to claim that groundwater levels are on a major drought-induced downward trend. It is difficult to assess this without an explanation, but the coincidence of drought starting with pumping makes the conclusion suspect. It also does not comport with precipitation data; precipitation data, see Myers (2019) Figure 5, does not reveal a substantial drought spanning the period since 1999.

Johnson/Mifflin consider trends of wells in the Black Mountains Area and Garnet Valley by stating: “Superimposed on generally linear declines since 2006 are widespread but diminishing-with-distance effects from the Order-1169 pumping of MX-5, evidence as far south as the Apex area” (Johnson and Mifflin, p 6). Their Figures 5 and 6 supposedly support their assessment. A linear decline shown on the graphs apparently is intended to be the natural, drought-induced decline, without any analysis supporting that claim. BM-DL-2 in the Black Mountains and GV-1 in Garnet Valley each show a better than 1-foot decline during the pump test. Compared with the declines closer to MX-5, this is a substantial and about what would be expected at that distance. Johnson/Mifflin make no effort to show the rest of the decline is not in fact due to other pumping in the carbonate aquifer. They make similar unsupported claims regarding well MX-4 in CSV and TH-2 in California Wash (Johnson and Mifflin Figures 7 and 8).

Johnson/Mifflin incorrectly attributes the long-term decline in groundwater levels to being a response to a climate-driven trend, with pumping superimposed on that climate-driven decline, and also claims that other Order 1169 reports ignore climate (p 14). At no point does Johnson/Mifflin analyze the climate record and document their assertion that drought commenced in the 1990s at a time coincident with the commencement of pumping through the area. Myers (2019) Figure 5 shows no evidence for a 20-year drought during the period since 1990. Johnson/Mifflin argue that the large water level increases in 2006 refute the idea that “water-level changes in California Wash, Coyote Spring Valley, the Muddy River Springs Area, and Hidden and Garnet valleys have been observed as ‘nearly identical’” (p 14). They argue the “cessation of pumping somewhere could not have caused water levels to rise over 1 foot at CSVM-4 in northern Coyote Spring Valley and 3 feet at GV-1 in southern Garnet Valley beginning in later 2004 because there was no cessation of pumping” (p 15). They are refuting a point no one made. Most of the Order 1169 reports that address the subject accept that a wet

year caused these water level increases in 2004-2006 (for example, FWS 2019). This is a case of a hugely wet year being imposed on a long-term pumping-caused decline in water levels rather than the other way around as claimed by Johnson/Mifflin. Recharge in the LWRFS is event driven as described by Myers (2019, p 4), meaning it is effective only during extremely wet years, rather than as a long-term average flux as is usually considered in Nevada when considering water rights appropriations.

Johnson/Mifflin claims that flow at WSW declined by 0.6 cfs between 2000 and 2015 and compared with EH-4 decreases, this would be about 0.6 cfs in four feet of decline (p 30). They claim that if the “drought-induced trend” continued, the spring would go dry in 100 years (p 31). They claim this would occur whether or not pumping is curtailed in up-gradient areas (Id.). This claim is unsubstantiated because there is no evidence that most of the declines were drought induced.

Johnson/Mifflin claim the aquifer test is responsible for a 0.3 cfs decrease at WSW (p 31) and suggest there is a similar decrease at the Iverson Flume. Iverson was downstream of WSW until 1999 when the flow at Iverson was considered separate from rather than combined with that at WSW. However, the graphs of flows at Iverson (Johnson/Mifflin Figure 26) shows a hydrograph that fluctuates between about 4.2 and 4.7 cfs from 2010 until 2017. There is no discernible aquifer test effect, contrary to the label on the figure and Johnson/Mifflin’s assertions. The aquifer test impact is not discernible at Iverson Flume because the spring contributing to this flume is at a lower elevation so a change in head due to the aquifer test is likely to be much less than the change at the level of head above the WSW spring orifice. Even if the effective head decreases the same amount as at the higher spring, it would be a much smaller percent of the total head above the orifice. The effect of groundwater level decreases at EH-4 could be much different on the flows for the two different spring orifices, with the effect at Iverson being much less.

Johnson/Mifflin Figure 26 shows a substantial decrease at Iverson Flume through about 2018, resulting in the flow decreasing below 4.2 cfs before it recovered. This could represent a delayed response to changes at EH-4. Groundwater levels at EH-4 reached an all-time low point on November 9, 2018 of 1812.18 ft amsl. Whether this caused the low flow at Iverson is not certain.

Johnson/Mifflin continue their analysis of spring flow by claiming that WSW and Iverson streams have been decreasing at 0.3 and 0.7% per year, respectively, since October 2009 when the Refuge Stream was rerouted (p 32). This claim that there is a downward trend suffers from the fact that that assuming a linear flow decrease is not supported by the actual hydrographs for either spring (Johnson/Mifflin, Figure 27). The hydrograph fluctuates around the downward-sloping line labeled “trend” (Id.). This is especially obvious for WSW; for example, from 2013 through early 2015, all points plot beneath the line while from 2009 through 2011 most plot above the line. The hydrograph for WSW shows the sharper decrease during the

aquifer test and then a stabilizing after the aquifer test. Their figure is also misleading in that it shows several points higher than 3.6 cfs in the 2014 through 2016 period but the daily flow data base shows just a few points whereas almost all flows since 2011 are less than 3.6 cfs, with a couple of short-term exceptions; Myers (2019) Figure 14 shows several observations greater than 4.0 cfs, which are probably due to short-term events, such as runoff. Myers' figure based on daily flow data shows no observations of 3.8 cfs, which are shown on the Johnson/Mifflin figure.

Discharge from Big Muddy Spring, probably Muddy River Springs on Myers (2019) Figure 13, increased by 1 cfs from 2010 through 2014 after which it increased by more than 12% (Johnson and Mifflin 2019, p 32). They claim that the flow increases during the aquifer test and increase after the test "demonstrates climate-dominance rather than pumping as a forcing agent for water-level change within the MRSA, and perhaps a complete absence of Order-1169 pumping effect in Big Muddy Spring" (p 32). But Johnson/Mifflin fail to note that a fire in 2010 burned over 600 acres and that this caused a decrease in annual evapotranspiration of about 1000 af/y (SNWA 2019, p 5-2, -3 and Figure 5-1). This much-decreased ET would have had a much larger effect on these springs than pumping upstream.

Johnson/Mifflin conclude that the only pumping effects can be seen at WSW with no evidence of impact at other MRSA springs (p 32). Their conclusion is due to poor analysis of water level trends and reliance on an assumption that a drought had been occurring since the 1990s with one year of exception. What they fail to consider by stating the peak pumping rates show no indication that pumping "the Arrow Canyon Wells have any significant effect" (p 32) is that much of the pumping has removed water from storage. The very high transmissivity, or hydraulic diffusivity, allows a large-scale small decline in water levels that represents the removal of groundwater from storage. The discharge rates do not quickly recover because of the storage loss over a very large area does not allow the well levels to recover quickly.

In Appendix 1 of Johnson/Mifflin (2019), the authors present an analysis suggesting that the flow from the LWRFS to Las Vegas Valley is 40,000 af/y, but the report includes unreviewable information and a failure to consider whether that much water is available to flow toward Las Vegas Valley. The analysis is a Darcy's Law calculation with transmissivity estimated based on a report published for a pump test at a well along the proposed flow path. The reference Mifflin and others (1992) is unpublished so it is not possible to review whether the transmissivity as calculated is relevant to this situation. For example, the authors assume horizontal transmissivity and rely on the relationship of effective transmissivity equal to the square root of the product of transmissivity in perpendicular directions. No evidence provided supports the 10:1 ratio of maximum to minimum horizontal transmissivity. Even if the 1992 pump test transmissivity is accurate, the value chosen for the most transmissive direction could be much too high. The 40,000 af/y estimate for flow from LWRFS to the Las Vegas Valley should be given no credence because it is highly dependent on undocumented and unverified assumptions.



Appendix II of Johnson/Mifflin (2019) presents a claim the “fluxes of two tributary groundwater regimes are attributed to about 2 decades of regional climate” (Johnson and Mifflin 2019, p 43). Their first argument is that the “Muddy River is nourished by two proximal but distinct spring flow regimes as revealed by 30-year monitoring records” (p 43). They compare annual flow at Big Muddy Spring, which they consider to be a proxy for a northern-regime discharge, to groundwater levels at EH-4, which they consider a proxy for a southern-regime discharge. Based on the specified gauge id number 09415900, they are using USGS gage Muddy Spring at LDS Farm near Moapa, NV. Figure 3 shows Figure 1 from Johnson/Mifflin Appendix II. The evidence is misleading because the flows presented in Figure 3 are not just spring discharge but include flood flows and irrigation diversions. The following is the USGS description of the “Remarks” and “Extremes”

([https://waterdata.usgs.gov/nv/nwis/wys\\_rpt/?site\\_no=09415900&agency\\_cd=USGS](https://waterdata.usgs.gov/nv/nwis/wys_rpt/?site_no=09415900&agency_cd=USGS))

REMARKS - Regulation for irrigation purposes occurs 0.1 mi upstream. 10/01/2013-09/30/2014: Records good except for estimated daily discharges, which are poor. 10/01/2014-09/30/2015: Records good except for estimated daily discharges, which are poor. 10/01/2015-09/30/2016: Records fair except estimated daily discharges, which are poor. 10/01/2016-09/30/2017: Records fair except for estimated discharges, which are poor.

EXTREMES FOR PERIOD OF RECORD - Maximum discharge, 41 ft<sup>3</sup>/s, Feb. 23, 2002, gage height, 2.18 ft; the gage was submerged by backwater and over bank flow from Muddy River on Sep. 26, 2014, gage height 10.11 ft; discharge unknown; maximum gage height, 2.57 ft, Apr. 6, 2015; minimum daily, 5.9 ft<sup>3</sup>/s, May 10, 1993, May 25, 2009.

Johnson/Mifflin do not account for the irrigation diversions that occur upstream from the site. Also, the fact the maximum discharge was 41 cfs indicates the channel could be periodically affected by high flows. Both diversions and flood events could account for the variability shown in Figure 3.

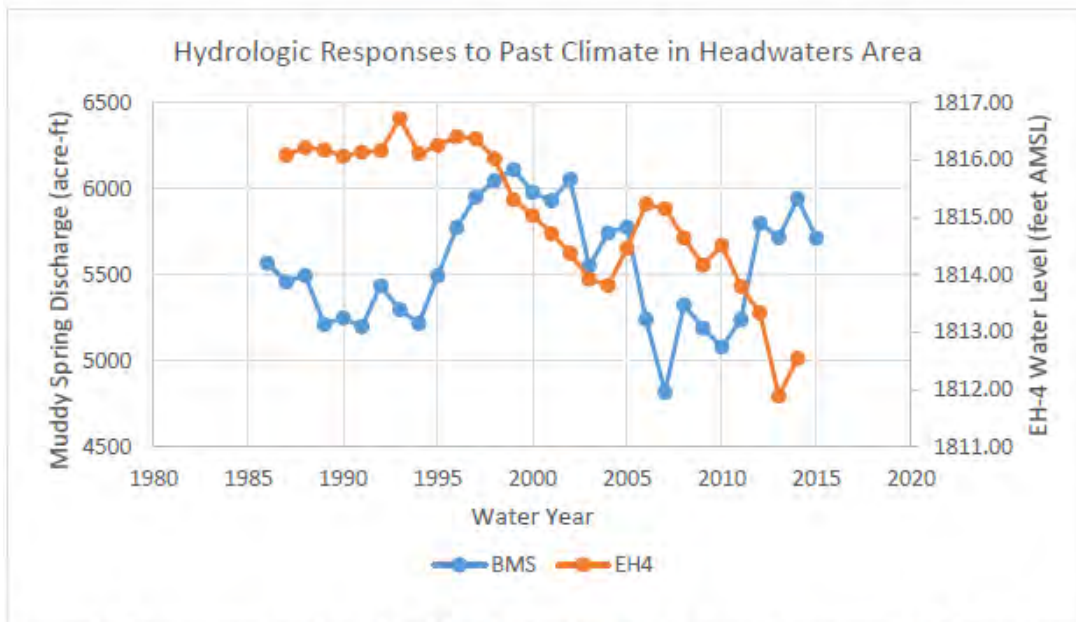


Figure 1. Average spring (April 16 –May 15) water levels in monitoring well EH-4, and annual discharge of Big Muddy Spring (BMS). EH-4 water levels are a proxy for southern-regime discharge, while Muddy Spring is proportional to northern-regime discharge [file SouthernLagComparison.xlsx, sheet 'ShowBMS\_EH4']

Figure 3: Snapshot of Johnson and Mifflin (2019) Appendix II Figure 1.

Johnson/Mifflin claim that the groundwater which combines to form the Muddy River is influenced by both northern and southern climate regimes. This claim is reasonable especially considering that, as they state, the northern part of the White River Flow System lies hundreds of kilometers north of the Muddy River Springs. They also claim that the largest spring, the Muddy Spring, responds to past northern climate regimes as reflected by the historic base flow of the Humboldt River but do not substantiate that claim. Their Figure 2 purportedly shows the relationship between northern climate and Muddy Spring flows (Figure 4). Other than claiming the “climate index time-series dating to 1912” contains the explanatory variable set that determines discharge at Big Muddy Spring, there is no explanation or evidence of this relationship. Apparently, they used a multiple regression of lagged flows at the Humboldt River Palisade gage to explain flows at the springs. This is shown in their Figure 4. The regression coefficients correspond to lags from 12 to 22 years which is the basis for their conclusion that climate in the upper Humboldt River basin causes flows 12 to 22 years later (p 44) at the Muddy River. The northern portions of the WRFs bound the southern portions of the upper Humboldt River watershed, so conceivably there is some connection such as a similarity in climate. However, Johnson/Mifflin fail to consider three critical factors.

First, the data base is very limited and the authors did not consider whether earlier flows at Palisade could correlate better with MRS. Second, they do not provide significant statistics for the regression coefficients, so there is no explanation or evidence for why this lag was chosen.

Third, they also do not discuss whether they accounted for irrigation diversions above the Palisade gage, which would have decreased the flow, or mine dewatering discharges, which increased the flow substantially for a few years. These anthropogenic impacts could have had a large effect on the regression analysis.

Johnson/Mifflin do not discuss the physical connection that would allow climate in the upper Humboldt River to control flows at Muddy River Springs at a 12- to 22-year lag. The watersheds are separated by a groundwater divide, so clearly they are not claiming that water crosses the topographic and groundwater divides to affect the White River flows. Possibly, climate in the northern half of the WRFS correlates with flows in the Humboldt River, but they do not test this even though there are climate statistics that could be used for regression analysis.

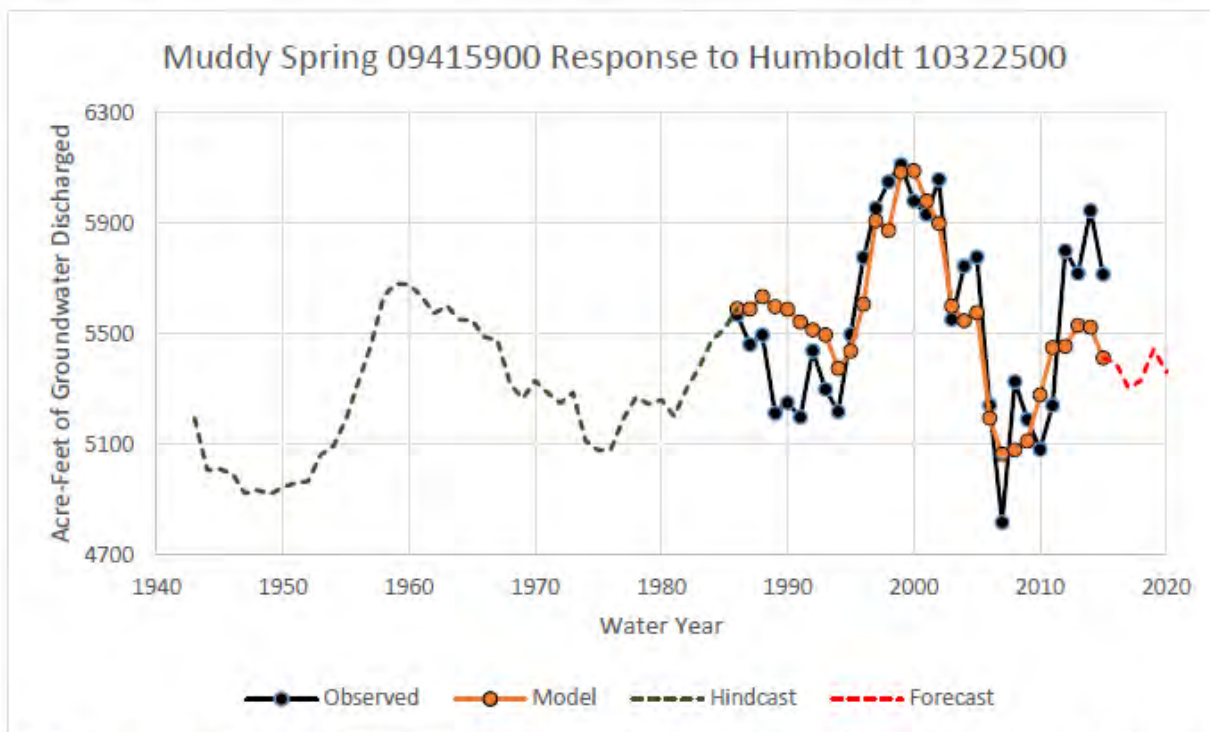
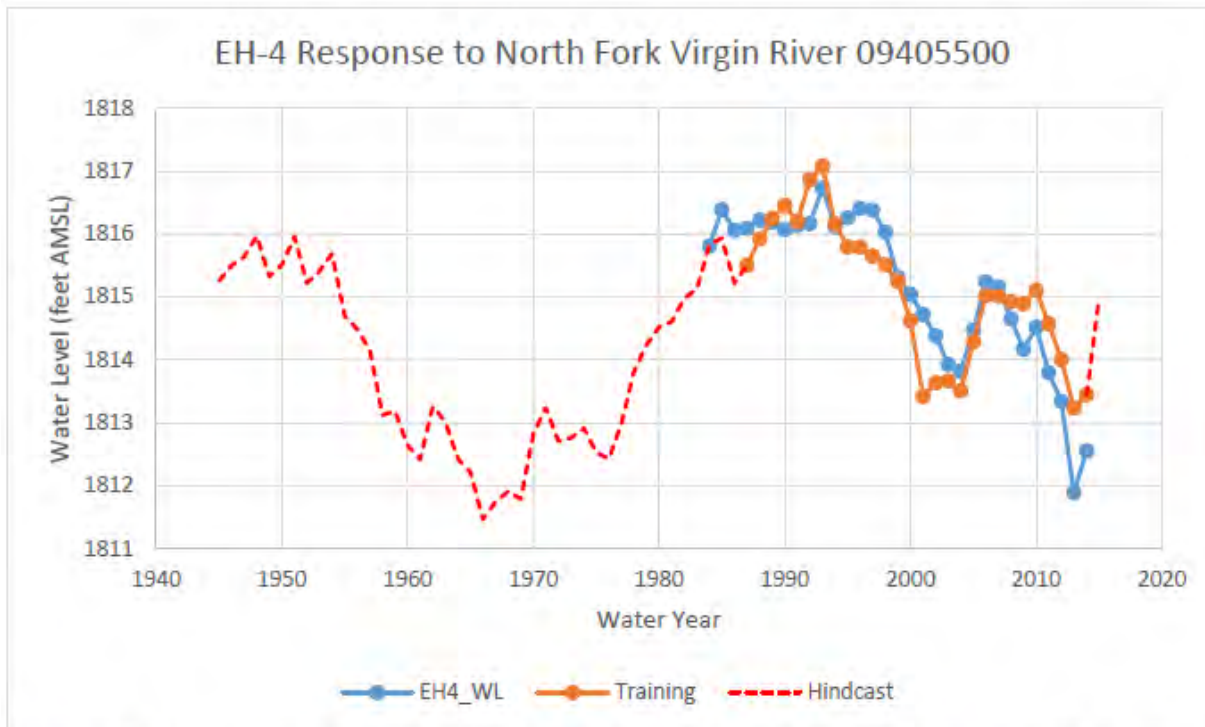


Figure 2. The annual total base flow of the Humboldt River at Palisade provides a climate index time-series dating to 1912, which contains the explanatory variable set that determines discharge at Big Muddy Spring. [file HumboldtBFI.xlsx, sheet 'Hindcast1222']

Figure 4: Snapshot of Johnson and Mifflin (2019) Appendix II Figure 2.

Their Appendix II Figure 3 shows a similar relationship for the water levels at EH-4 and flows at North Fork Virgin River gage 09405500, copied here as Figure 5. Apparently, Virgin River flows

are used as the surrogate for climate, even though the watershed contributing to the gage is significantly east of the LWRFS and being largely on the Colorado Plateau, has a significantly different climate and precipitation regime. Johnson/Mifflin do not explain why they chose this flow gage as a surrogate over the various measures of climate that could be available, such as Myers (2019) Figure 5. There is also no explanation of lag as was done for the Humboldt River surrogate.



**Figure 3.** The annual total base flow of the Virgin River (North Fork) at Springdale provides a climate index dating to 1928, which contains the explanatory variable set that determines groundwater elevations in the Reservation area. [file NFvirginBF12.xlsx, sheet 'Hindcast\_0116']

*Figure 5: Snapshot of Figure 3 from Johnson and Mifflin (2019) Appendix II.*

Johnson/Mifflin also apparently use these correlations to justify their arguments that climate controls EH-4, WSW, and Big Muddy Springs with very little impact from pumping. There is no discussion as to how they included pumping variables in the regression in a way they can argue they controlled for pumping in their analysis. They simply dismiss the obvious causation of decreasing spring flow and EH-4 water levels found by Myers (2019) and the authors of other Order 1169 reports.

Finally, Johnson/Mifflin develop a graph of reconstituted discharge, which apparently includes “all known diversions and evapotranspiration effects” to estimate the natural discharge to the Muddy River headwaters (Johnson and Mifflin 2019, Appendix II Figure 6). They do not

describe the known diversions and evapotranspiration effects or provide their method for adding these effects to the flow making this graph unsupported.

Johnson/Mifflin (2019) Appendix III describes a FEFLOW groundwater flow model completed to “evaluate interbasin groundwater flow within a region sufficiently large to encompass the ‘Eureka Low’ of Sass and Lachenbruch (1982) by using head a hydrologic tracer to constrain the physics” (p 50). They consider it a scoping model to “establish if regional flow from northern recharge areas in the highest mountains to discharge at the southern warm springs is physically possible and more importantly, plausible within the decadal time scales suggested by climate response in the MRSA” (p 51). More specifically, they claim to study whether “rapid signal propagation indicated by modern climate response of spring in the MRSA is corroborated by plausible groundwater velocities needed to deliver the ‘missing’ heat lost from the Eureka Low to the regional springs in a steady-state process” (Id.). The concept is that heat is lost based loosely on flow rate and the Eureka Low is an area of different heat loss that can be used to calibrate the flow model.

Johnson/Mifflin chose to use the FEFLOW finite-element modeling environment (p 51), which is proprietary software so details of the model can only be reviewed by those who have the software. In fact, they imply they used just a demonstration version of the software (Id.).

The report does not document how they constructed the model. Their Appendix III, Figure 2 shows the finite element mesh and a couple of essential properties but no explanation. The figure on the left shows “anisotropy angles”, which presumably means the direction of the axis of the highest transmissivity in the horizontal directions. Without expressing the actual anisotropy, this information is not very useful. On the right, the figure characterizes the Eureka Low in terms of the rate of heat input to the aquifer; there is no information about how this is calibrated or even any discussion as to how the heat flow presumably affects the groundwater flow.

Johnson/Mifflin essentially argue that the terminal end of much of the WRFS is in Las Vegas Valley rather than MRSA (p 61). Their Appendix III is most of their technical evidence in support of this idea, but the evidence is little more than a poorly documented modeling study that cannot be reviewed and a random collection of statements regarding heat transport with little discussion of groundwater flow. Evidence based on this model should not be considered in this proceeding because the model is not reviewable.

Appendix IV attempts to establish a relationship between Arrow Canyon pumping and drawdowns at EH-4 with the intent of developing a pristine (no pumping) water level series at EH-4. The multiple regression, presented in Johnson/Mifflin Appendix IV Table 1, claims to establish a relationship that explains EH-4 water levels based on weekly pumping at Arrow Canyon for the previous 13 weeks. Their Figure 1 shows there is a reasonable fit. However, this

effectively assumes that water levels at EH-4 are controlled by Arrow Canyon pumping and nothing else. Johnson/Mifflin do not provide evidence supporting this.

Their Appendix IV, Figures 2 and 3 are not referenced in the report, but provide some graphical evidence regarding the regression. They analyzed the original pump test of the Arrow Canyon well on EH-4 based on pristine water levels, after the effects of pumping are removed from the data (Johnson and Mifflin, Appendix IV, Figure 4). Figure 4 suggests that without the pumping (from a pump test) the water level would have been several tenths of feet higher. Figure 5 then shows drawdown based on the difference between the observed water level and the reconstructed pristine water level. Figure 6 plots the new drawdown with log 10 time to allege the pump test encountered a recharge boundary, which they identify as the Muddy River. Using this methodology Johnson/Mifflin could be missing all of the relevant effects. The slope in Figures 5 and 6 changes several times which could be due to the fact that other factors control the water level at EH-4 than just pumping Arrow Canyon. The evidence in Appendix IV does not prove that the primary control on water levels at EH-4 is pumping at Arrow Canyon.

Next, Figure 7 shows EH-4 water levels “cleaned of Arrow Canyon pumping effects”. Because they have not eliminated any other effects, this is not a pristine, without pumping, water level. Johnson/Mifflin then suggest that less than 8% of the discharge from Arrow Canyon pumping is drawn from the Warm Springs Refuge, based on 6.5 cfs pumping and a 0.5 cfs springflow reduction (p 68). They acknowledge that other unmonitored springs could be affected, but do not mention that if not captured from spring discharge, the water is withdrawn from storage. Because of the high transmissivity documented in the Order 1169 pump test, that withdrawal at Arrow Canyon may be drawn over up to 1100 square miles. It adds to a cumulative loss of storage that will eventually capture much more discharge. There is no evidence, other than the biased regression analysis in Appendix IV, that allows the statement that recovery at EH-4 is complete 3 months after the cessation of pumping (p 68).

Johnson/Mifflin claim that 40,000 af/y flows from the LWRFS into the Las Vegas Valley, although it refers to this flow as occurring within the Las Vegas Valley capture zone which they describe using model-generated flow lines that emanate within LWRFS and cross basin boundaries to enter Las Vegas Valley. Even if the concept of cross-basin flow from the LWRFS is correct, a Darcy’s law calculation would not be the way to estimate it. Darcy’s law depends on transmissivity and gradient which means they would have to assume a conductivity value and cross-sectional area. The proper way would be to use Darcy’s law to verify the interbasin flow estimated in other ways.

Arguing that Appendix V Figure 12 shows a 2% per year pumping increase based on pumping shown in that figure is fallacious. With the exception of two periods over which pumping increased substantially, year to year pumping decreased. The “trend” is based solely on an almost 1000 af/y increase between 2017 and 2018.

Johnson/Mifflin discuss a regional hydraulic-head gradient and flow between a Steptoe MX well and Tule Springs Pond (p 20), but do not provide evidence of a connection or discuss the flow path. This claim begins a paragraph that seems to be a series of unconnected sentences that together are almost impossible to review. The second sentence references an unpublished report (Mifflin and Johnson 2013) to claim there is a 2832 m<sup>2</sup>/day transmissivity across the width of California Wash. Without a figure showing the cross-section, this cannot be considered. They determine the width of California Wash that would be necessary, based on the assumed transmissivity, to pass 33,771 m<sup>3</sup>/day, a hypothetical flow (equal to 10,000 af/y) (p 19).

In sum, the Johnson/Mifflin report is riddled with unsupported claims and its conclusions should not be relied on.

### **Rebuttal to Vidler/Lincoln County Report**

The report submitted by Lincoln County and Vidler Water Company in response to interim order #1303 primarily argues that the northern portion of CSV should not be administered as part of the LWRFS and that KSV should not be added to the LWRFS for administration. However, the data and analysis presented by Lincoln County et al (2019) actually supports adding KSV to the LWRFS and certainly does not support removing the northern portion of CSV from the LWRFS.

Lincoln County et al (2019) cited the NSE Ruling #6254 in support of allowing appropriation of groundwater that is hundreds of years upgradient (p 2-3). However, there was no evidence presented in the hearing or the order #6254 that KSV is hundreds of years upgradient from LWRFS. The hearing concerned Delamar, Dry Lake and Cave Valley which some argued is that far upgradient from CSV and Las Vegas Valley and therefore water could be appropriated, although that aspect of Order #6254 has been reversed by the Judge Esty order<sup>1</sup>. The Lincoln County et al assertion that KSV is hundreds of years upgradient from CSV and LWRFS is not supported.

Lincoln County et al invoke NSE Ruling # 5712 as claiming that there is “not substantial evidence” that pumping in KSV will affect the flow at Muddy River Springs, Rogers Spring or Blue Point Springs. That ruling predates the Order 1169 pump and that conclusion has been challenged by Myers (2019). Lincoln County et al also reference Ruling #5712 as suggesting the difference in groundwater levels (1875 ft amsl near KSV and less than 1825 ft amsl near MX-5 and the MRSA) as being due to low transmissivity between the areas. Myers (2019) and FWS (2019) acknowledged the transmissivity is lower than in the larger very high transmissivity zone affected by the Order #1169 pump test, but also noted that the gradient through the lower

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<sup>1</sup>White Pine County and Consolidate Cases, Et al, v Jason King, P.E., Nevada State Engineer, State of Nevada Division of Water Resources. In the Seventh Judicial District Court of the State of Nevada in and for the County of White Pine. Case No. CV1204049.

transmissivity is still low as discussed in the following paragraphs and does not represent a barrier or even a substantial impedance to flow. Myers (2019) documented aquifer test effects on the CSV wells near KSV.

Lincoln County et al present a north-south transect of carbonate water level data through CSV and MRSA in Figure 3-4 through 3-7. These figures illustrate well the very flat gradient through a large portion of the transect within the carbonate aquifer. They also illustrate the aquifer becomes steeper in northern CSV, as was also documented by Myers (2019). The steeper gradient indicates the transmissivity in the north of CSV is lower for most of the inflow to the system than from Pahranaagat Valley through to MRSA. It is not evidence the northern portion of the valley is separate from the southern portion.

Lincoln County et al also presents data from well KMW-1 that they argue shows how KSV is not part of CSV. The geologic section presented as Figure 3-3 does not show a separation between KSV and CSV; in fact, the cross-section shows that carbonate rock spans the downstream end of KSV so that there would be a connection between KSV and CSV.

Lincoln County et al allege differences between KMW-1 and well CSV-4 in CSV are evidence that the valleys are different. Their location map, Figure 3-1, shows that KMW-1 lies at the mouth of KSV and CSV-2 lies about 2.5 miles southwest in CSV. There is 5.5 feet of vertical difference in their water levels which is a 0.00042 gradient. That is very flat and certainly not evidence that a fault they postulate (p 3-4) has any effect on flow between the wells. With the carbonate rock that separates the wells they would be expected to have water level trends that are very similar to trends further south in CSV.

Figure 6 shows a figure from the Lincoln County et al report that compares water level at the two wells. The lines added to their figure show up to four different periods that trend similar to each other and to wells south in CSV. Monitoring at CSV-4 began just before the wet 2005 period began, so it shows an increase due to the recharge from that wet year. A similar increase probably occurred in KMW-1. After the recharge, a long-term decline began. This decline was not due to “years to dissipate in the aquifer” the effects of a high recharge event (p 3-4) but the response to pumping that began in CSV in 2006. Both wells had a long-term decline from 2006 through about the beginning of the aquifer test period during which the decline became much steeper, as shown on Figure 5. FWS estimated the decline at these wells during the aquifer test to be 0.5 feet (FWS 2019, Figure 5), but their analysis did not account for the lag in the response as discussed here. There is no evidence that the aquifer test occurred during an abnormally dry period, so these wells responded similar to wells further south in CSV. A brief recovery occurred at each well a few months after the aquifer test. The recovery lasted a few months longer in the north than further south because of the lower transmissivity in northern CSV. Since the brief recovery, the water levels have trended downward but at a slower rate than before the aquifer test. The slower rate reflects slightly less pumping in CSV than prior to the test and slightly above average moisture conditions.



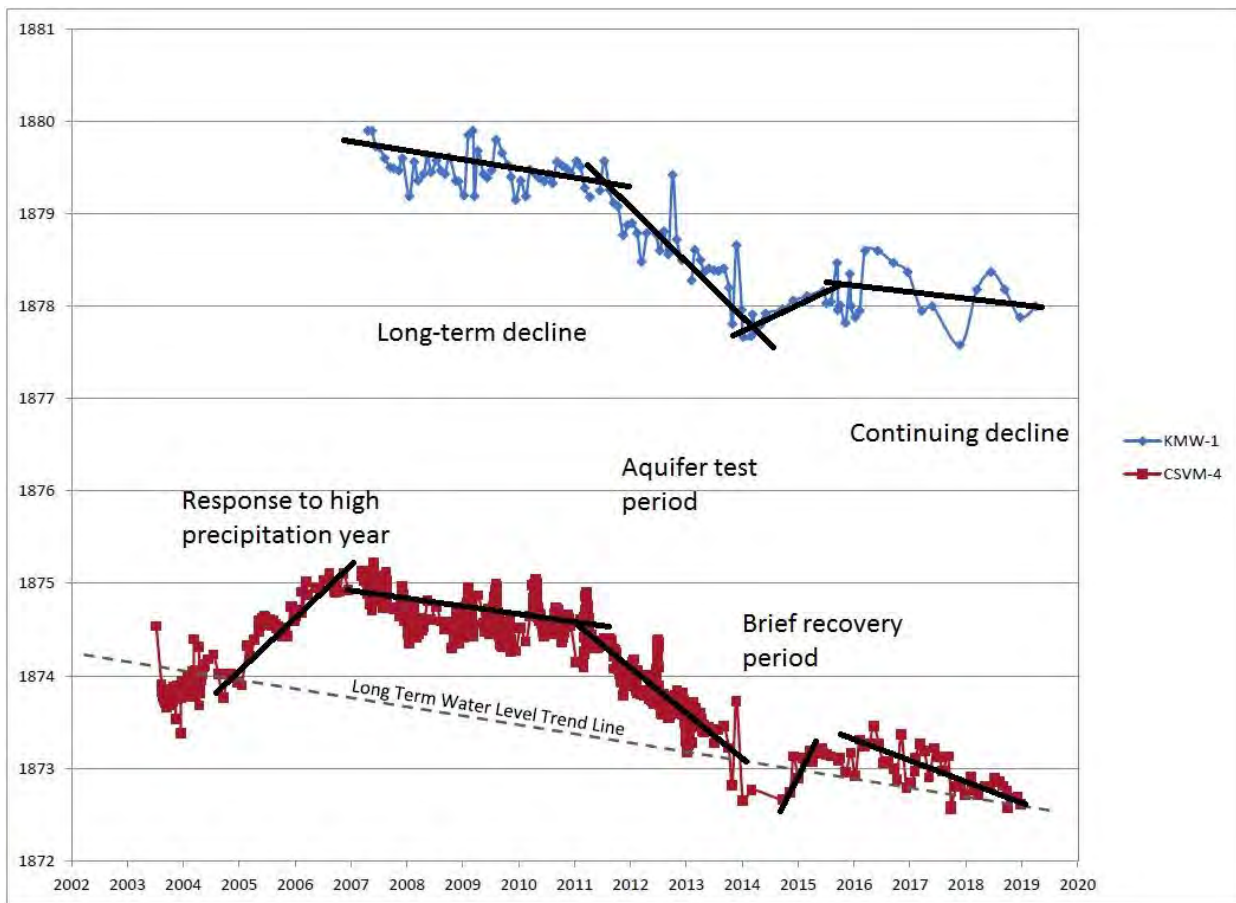


FIGURE 3-9. COMBINED HYDROGRAPHS OF WELLS KMW-1 AND CSVM-4

Figure 6: Trends at hydrographs of wells KMW-1 and CSVM-4. Adapted from Lincoln/Vidler et al (2019) Figure 3-9

Lincoln County et al (2019) document well the huge precipitation event that occurred during 2005, but its claim of estimating in-basin recharge for KSV to be from approximately 4700 to 7500 af/y (p 3-5), based on data they presented in their Appendix B is inaccurate. The appendix contains precipitation, runoff, and chloride data for precipitation and runoff, but no analysis to estimate the recharge. Assuming the precipitation data is representative of the basin and the runoff data accurately captures the runoff from the basin, two variables remain, evapotranspiration and recharge. They do not present enough data with which to estimate recharge. The estimate presented is not useful evidence of the amount of water available in KSV.

Lincoln County et al (2019) Section 3.3 attempts to use simple chemistry, age, and thermal data as evidence that KSW water differs from the other water in LWRFS that will be managed as one.

As will be described in the following paragraphs, nothing in their analysis prescribes that KSV water does not mix into CSV water and eventually discharge at MRSA or that pumping throughout CSV or KSV will not affect water levels and spring flows throughout the LWRFS.

Groundwater from KPW-1 has total dissolved solids (TDS) at 774 mg/l, a little higher than the groundwater at CSV-4 which is 682 mg/l (p 3-8). The authors do not describe the basis for these observations, meaning they do not describe whether it is an average or how many samples were taken to obtain that average. It is common for TDS to vary more than 20% between measurements, so the difference between the wells could be random fluctuation in the data. None of the wells in their Table 3-2 stand out as substantially different than the others.

Assuming the observations are accurate, the groundwater at KPW-1 is almost the oldest (29,000 years) and hottest (136° F) of the wells in the area (p 3-9, -10). If the water in KPW-1 originated in KSV as recharge, it circulated deeply over a long time period to exhibit these characteristics. Once it joins water in CSV, the average age of the mixed water is younger and the temperature is cooler due to mixing. Its circulation depth is not relevant to whether KSV mixes with water in CSV and is affected by pumping in CSV or further downgradient. The supposed pathways in Lincoln County et al Figure 3-12 do not account for mixing along the pathways.

Lincoln et al Section 4.0 presents substantial geophysical data and analysis for KSV and northern CSV and attempts an interpretation of the hydrogeologic effects of the interpreted geology. This review does not rebut the geophysical sections and interpretations of the sections, but it does question and rebut the interpreted effects on groundwater flow. As the next paragraphs discuss, the data presented by Lincoln County et al does not support the interpretations, and the geophysics are not evidence that KSV should not be considered part of the LWRFS.

Lincoln County et al claim that “faulting that occurs in northern CSV ... explains why the water levels in KMW-1 and CSV-4 are distinctly higher than those found in the rest of the basin” (p 4-9). They cite their figures 3-4 through 3-9 as demonstrating the change in water level. The correct interpretation of those figures is that the steadily increasing water level going north of CSV-6 is due to decreasing transmissivity. Their Figure 3-5 shows there is a much more substantial increase in water level north of KSMW-1. Even so, the increase in water levels to CSV-3 of about 330 feet (Figure 3-6) occurs over about 4 miles, so the gradient is only about 0.0156. This is not evidence of a step increase over a fault.

The claim that “faults significantly impede the flow of groundwater from KSV and northern CSV ... into the southern portion of CSV” (p 4-9) ignores the fact that most flow reaching MRSA passes through CSV from Pahrangat Valley and Delamar Valley. The gradient calculated above between KSV and CSV is not a significant impedance.

There is also no evidence to suggest the faulting is substantial enough to “cause the water levels to build up on the upthrown side of the fault ... until there is enough head built up (a few tens of feet) for groundwater to push through into northern CSV”. If that were the case, there would be evidence of water flowing parallel to the fault through the higher conductivity zone along the fault (p 4-8). Lincoln County et al are simply wrong to say “there were no effects ascribable to the start and subsequent stop of a major pumping stress in monitoring wells KMW-1 or CSVM-4, as shown above in Figure 5 and associated text” (p 4-10). The aquifer test effects simply lasted longer at those wells than at others closer to MX-5 because of the lower transmissivity in northern CSV, and the increasing distance from the point of diversion.

Lincoln County et al claims that these wells are too far from the pumping well for the cone of depression to reach that far (p 4-10). They disprove their own claim by noting the “very large sequence of carbonate rocks between the location of the Order No. 1169 pumping and KSV and northern CSV and that thick sequence likely has a very large transmissivity, which is indicated by the nearly flat-water level elevation in much of the LWRFS” (Id.). This nearly flat-water table declined everywhere due to the pumping, as documented by almost all reports filed on Order 1169. It was more like the lowering of a lake than the spread of a cone of depression. The lowering water table beyond the end of the flat-water table surface more resembles a cone of depression. Myers (2019) Figure 12 shows the expansion of the drawdown with distance from the pumping, similar to a cone of depression.

Finally, they seem to argue there is no connection because “groundwater from KSV has to flow through the Northern LWRFS Boundary Fault where the geologic structure changes” (p 4-10). If it does not flow through the boundary, it has to go somewhere, but Lincoln County et al does not explain where else it would go. FWS noted that “Kane Springs Wash Fault must be permeable over much of central Coyote Spring Valley” (FWS 2019, p 22) based on the observation that water flowing into CSV at the Pahrnagat Shear Zone must flow through the carbonate aquifer to the MRSA.

Lincoln County et al (2019) does not present a compelling argument for not managing KSV as part of the LWRFS.

Lincoln County et al also argues that pumpage from the MRSA completely explains reductions in flows of the Muddy River and associated springs and that pumping in CSV has no effect (p 5-3). They support this argument by comparing normalized flows of the Muddy River, which means adjusting recorded flows by removing flood flows and adding back in the diversions, plotting this with the annualized pumping in the MRSA (broken out by carbonate and alluvial pumping) and CSV carbonate pumping. Figure 6 is Figure 5-1 from Lincoln County et al (2019).

The deficit peaks at just less than 8000 af/y in 2003 and 2004 and began to decrease afterwards (Figure 7). MRSA pumping had peaked in 2000 at almost 8000 af/y before dropping to just over 6000 af/y from 2001 through 2006. The most significant decrease in Muddy River deficits

occurred from 2005 through 2009 when they had dropped to almost 4000 af/y. Through this period the deficits almost equaled MRSA pumping without including any CSV pumping (Figure 7). Beginning in 2010, the deficit increased about 1500 af/y and remained above 5000 af/y while MRSA pumping increased about 500 af/y for one year before decreasing during 2012. This is the period of the aquifer test as may be seen by the much higher pumping in CSV. For five years, the deficits are higher than pumping in MRSA. This would seem to be a direct reaction to the higher pumping in CSV. The aquifer test pumping caused a broad drawdown which means that it mostly drew water from storage. It slowly captured groundwater discharge, as documented by the hydrograph at Warm Springs West (Myers 2019, Figure 14) and other springs, and as documented for the Muddy River in Figure 7. Overall pumping rates from 2015 through 2018 are similar to 1995 through 1997, although the sources are different, and Muddy River depletions are similar.

Contrary to their claims, Lincoln Co et al’s analysis of Muddy River depletions and groundwater pumping is not evidence that pumping in CSV has no effect on discharge from MRSA.

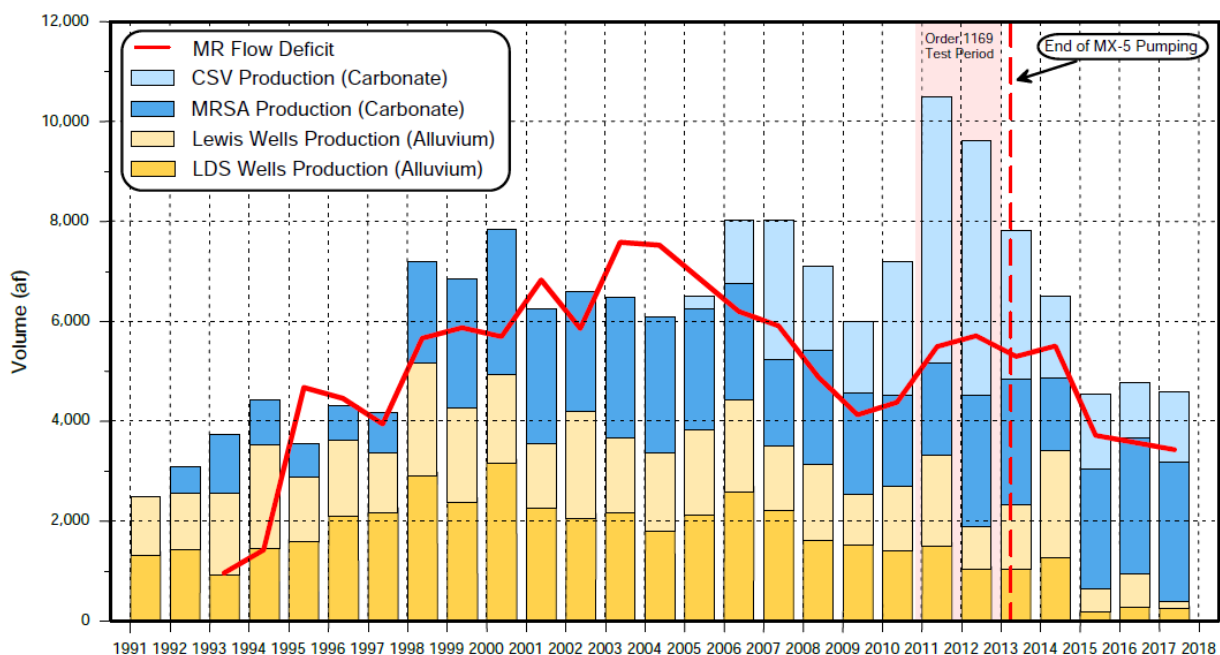
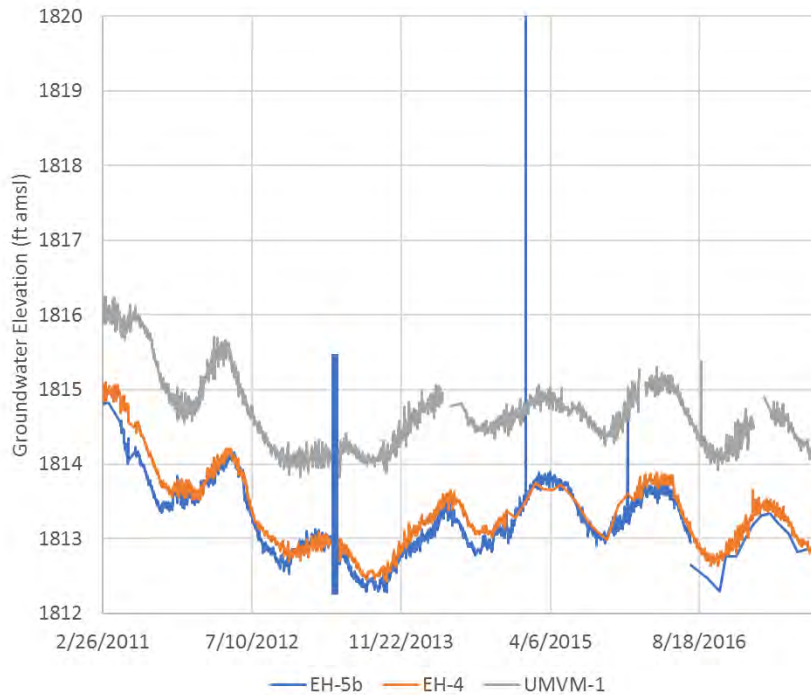


Figure 7: Muddy River (MR) flow deficit and CSV and MRSA groundwater production. Source: Lincoln County et al (2019) Figure 5-1.

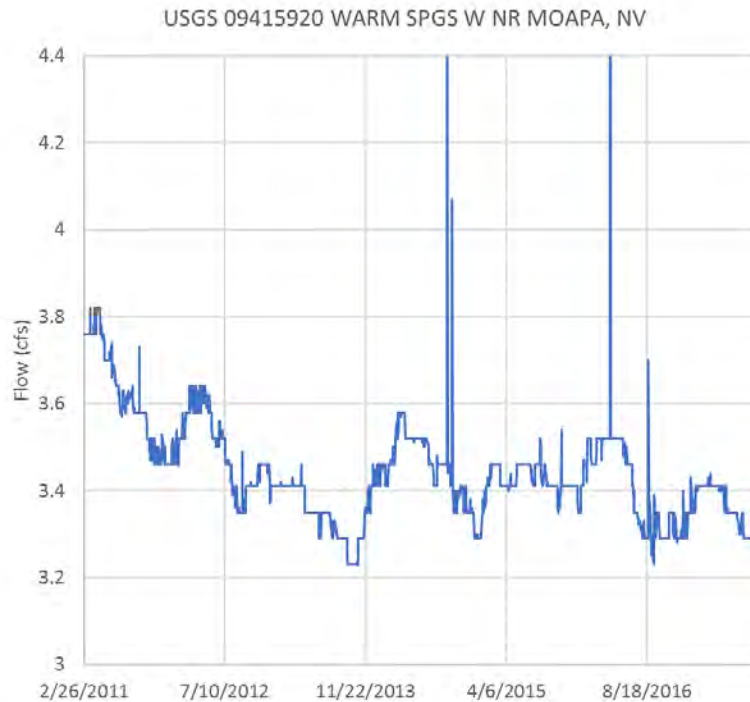
### Rebuttal to US Fish and Wildlife Service Report

Most US Fish and Wildlife Service (FWS) data and analysis is accurate but their report argues for a too-high allowable pumpage from LWRFS. FWS claims that full recovery from the aquifer test occurred by late summer 2015 based on measured water levels in carbonate well EH-4 and

spring flows. Graphs of EH-4 and WSW flow do not allow that conclusion of full recovery. The water levels at EH-4, EH-5b and UMVM-1 show a distinct downward trend through the aquifer test and continued pumping of MX-5, which ended about April 2013 (Figure 8). Water levels continued a small decline for several months before they began to recover, as reported by FWS. However, water levels at those three wells never reached within a foot of levels seen near the beginning of the aquifer test (Figure 8). The levels remain steady with just a seasonal fluctuation until early 2016 when they again began a downward trend. The same occurred at Warm Springs West. Near the beginning of the aquifer test, flows were near 3.8 cfs but they decreased to less than 3.3 cfs by several months after the test (Figure 9). Although they briefly recovered to almost 3.6 cfs, flows have been decreasing since.



*Figure 8: Plot of monitoring wells EH-5b, EH-4, UMVM-1 for the period during and after the aquifer test. Source: Myers (2019) Figure 8.*



*Figure 9: Hydrograph of Warm Springs West for the period during and after the aquifer test. Source: Myers (2019) Figure 14.*

FWS states that the average pumping of years 2015 through 2017 should be the long-term allowed total pumping rate from carbonate and alluvial aquifers because it claims the discharge of Muddy River Springs and Muddy River at Moapa gage was relatively constant (p 37, 38). This is incorrect, Muddy River flows were steady but flows at Big Muddy Springs (gage #09415900) dropped over 200 cfs from 2015 to 2017 (5799 to 5546 cfs). FWS also incorrectly claims that flow rates at the Refuge springs were reasonably stable in 2015 to 2017 (p 37). Myers (2019) Figures 14 and 15 show a continuing slight decrease in flow rates at Warm Springs West and the Pederson Springs. Myers (2019) concluded that any pumping from the carbonate aquifer would decrease spring flow over the long term because discharge equals the long-term recharge and that infrequent short-term recharge events provide minimal recovery. NPS' groundwater modeling discussed below also predicts long-term spring flow decline due to pumping. Experiencing a long-term decrease does not mean there will be no temporary upticks in flow, as seen at the end of MX-5 pumping, as groundwater storage throughout the carbonate aquifer is depleted. Myers (2019) suggests that the total pumpage from the LWRFS should occur only from alluvium after the flow has discharged from springs and become secondary recharge into the alluvium. This objection to FWS' recommended pumping is not so much to the amount but to the location from which it would be drawn.

FWS argues that total carbonate pumping can continue but not be increased from 2015-2017 levels even if it would replace alluvial pumping. This FWS recommendation will not protect the high-elevation springs. Most carbonate pumping is removed from storage and only a small percent is currently being removed from discharge (the spring flow). As pumping continues and storage removed, which also lowers the head at the carbonate monitoring wells (see the continued lowering at EH-4 and EH-5b in Figure 8). Eventually, more carbonate pumping will be captured from discharge and the spring flow will decrease until it reaches critical levels.

FWS section 1.6 develops relationships between the water level at EH-4 and discharges from various springs. All have significant coefficients demonstrating that decreases in water level decreases the discharge at all springs (except Muddy Springs at the LDS). The highest elevation springs have the most significant relationship and proportionally lose the most water as EH-4 water levels decrease. The higher elevation springs will be the first to go dry as carbonate pumping continues. This evidence suggests that FWS should not recommend a continuation of the existing carbonate pumping rates.

### **Rebuttal to US National Park Service Report**

The National Park Service (NPS) submitted a report prepared by Tetra Tech which was based on the model Tetra Tech had previously prepared of the LWRFS. Tetra Tech (2019) used their LWRFS groundwater model to analyze various pumping scenarios. Regardless of the simulation, the model results indicate that the long-term trend will be for drawdown to expand and spring discharge to decrease. Unfortunately, none of the simulations pumped as little as was being pumped during 2017 (Tetra Tech, Table 4-1, reproduced here as Figure 10).

Water Right Holder Pumping Basin	2017 Withdrawals (ac-ft)	Simulation #1 Withdrawals (afy)	Simulation #2 Withdrawals (afy)	Simulation #3 Withdrawals (afy)
Coyote Springs Investment				
Coyote Spring Valley	1,399	4,140	1,650	1,477
SNWA				
Coyote Spring Valley		1,957		
Garnet Valley	1,048		1,433	1,709
Moapa Valley Water District				
California Wash		90		
Muddy River Springs Area	2,823	1,000	5,079	2,823
Moapa Band of Paiutes				
California Wash	43		2,063	2,960
Muddy River Springs Area		500		
NV Energy				
California Wash	29		299	356
Garnet Valley	75	75	62	1,800
Muddy River Springs Area	296	3,160	795	
LDS Church				
Muddy River Springs Area	240	2,329	655	586
Nevada Cogeneration Associates				
Black Mountains Area	1,507		1,374	1,638

Table 4-1. Summary of the largest simulated annual withdrawals for selected water-right holders in the LWRFS basins and aquifers.

Figure 10: Tetra Tech (2019) Table 4-1 showing 2017 pumping withdrawals by water rights hold and basin and the amount pumped for three simulations.

Each simulation pumped the same amount, but the difference was the location from which it was withdrawn (Tetra Tech 2019, p 20). Simulation #1 included substantially more pumping in CSV than observed in 2017 (Figure 10). Simulations #2 and #3 have much less pumping in CSV but still more than observed in 2017. The simulations also have much more pumping in MRSA than observed, but the location of the pumping, both by aquifer and water right holder, varies.

The biggest difference in the results shows in the drawdown maps (Tetra Tech Figures 4-4 through 4-12). They present drawdown for 10-, 100-, and 200-year simulations for each simulation. After 10 years in the high CSV-pumping simulation #1, drawdown exceeds 2 feet and ranges from 1 to 2 feet over larger portions of CSV and approaches 10 feet for portions of MRSA. Simulation #2 shifts pumping south into Garnet and Hidden Valley with a large area experiencing 1 to 2-foot drawdown. The shift south is greater for Simulation #3 with a large area experiencing 2 to 5-foot drawdown. Going forward 100 years, the differences are much less because drawdown up to 10 feet covers most of the area west of Meadow Valley Wash. There is a large area near Garnet and Hidden Valleys over which drawdown approaches 20 feet.



After 200 years, drawdown approaches 20 feet over large areas. Tetra Tech acknowledges these differences at Tetra Tech (p 20, 21).

Spring discharge decreases with the simulations as well, but the difference among simulations is much less. Over the 500-year period simulated, spring flows would decrease by about 20% with just small variation among simulations. This reflects the long period required to reestablish hydrologic equilibrium (Tetra Tech, p 20). Equilibrium is reestablished when the reduction in spring flow equals the amount being pumped; when this happens, the pumping will have completely captured the discharge. This would violate the trigger points in Warm Springs West and surface water rights on the Muddy River. The lack of difference among outcomes in these simulations is evidence that there is not some perfect scenario that would allow pumping to continue at a much higher rate (that is not to say other scenarios should not be tested, especially those with even less pumpage than simulated by Tetra Tech). The simulations basically confirm Myers (2019) results regarding continued pumping in the carbonate aquifer – drawdown will increase and spring flow decrease regardless of pumping rate; the only difference is the rate of decrease. Eventually the reduction in spring flow will equal the amount of water being pumped.

Tetra Tech' model simulations lead NPS to conclude that all of the Black Mountains Area (BMA) and KSV should be included in the LWRFS management area. Myers (2019) argued the same for inclusion of KSV (and this is discussed further above in rebuttal to Lincoln County et al). The Tetra Tech model showed drawdown in KSV coalescing with that in CSV, although it must be recognized that there was no monitoring well data with which to calibrate the connection between valleys.

Myers (2019) did not address the BMA. Model-simulated drawdown, such as was simulated through the BMA, rarely is accurate near structural boundaries so the accuracy of the predicted drawdown in BMA is questionable. Although there is little doubt that pumping in LWRFS would affect Rogers and Blue Point Spring, the model does not provide evidence that pumping within BMA would spread into LWRFS. Without more evidence it appears that the connection may be distant enough that including the remainder of BMA is not necessary and that flow at the springs should be considered as a long-term impact, tantamount to the way pumping in Delamar, Dry Lake and Cave Valley is considered at MRSA.

The Tetra Tech model raises a quandary that should be addressed. Its simulated drawdown reached the model boundary with Las Vegas Valley. This could have caused the model to overestimate drawdown in the southern reaches of LWRFS. It also suggests that the connection with Las Vegas Valley be better examined. Is there flow from LWRFS to LVV, as suggested by Johnson/Mifflin? Tetra Tech (p 22) suggests any flow would be minimal, although they present no evidence other than unreferenced estimates from the USGS.

## Rebuttal to Southern Nevada Water Authority Report

SNWA in its abstract claims that “[i]f the conflicts with senior water-right holders are adequately addressed, the annual groundwater production from the carbonate aquifer should be managed between 4,000 – 6,000 afy over the long-term” (SNWA 2019, p ix). This conclusion however violates all of the findings SNWA makes throughout its report. The most important finding that does not support the conclusion is “(c) the data indicated that groundwater production from the MRSA alluvial reservoir or the carbonate aquifer simply cannot occur over the long-term without depleting spring and streamflows and conflicting with senior surface-water rights” (Id.). This rebuttal reviews SNWA (2019) and discusses additional points as to why the ultimate conclusion is faulty.

SNWA shows there have not been any significant climatic trends or shifts in the area since 1895 (SNWA, p 5-1). SNWA Figure 4-2 shows a slight, non-significant upward trend which is likely due to the very high precipitation in 2005.

SNWA notes that since 2016, heads in the carbonate aquifer and discharge measured at Pederson Spring and WSW have declined (SNWA, p 6-2). It notes that a significant increase in pumping as occurred during the aquifer test would increase the rate of decline. The only way to recover groundwater levels to pre-test levels would be for a pulse recharge event like in 2004-2005 (Id.). Stopping pumping is not sufficient. It further elaborates:

In the long-term, it is expected that **any groundwater production from the carbonate system with in the LWRFS will ultimately capture discharge** to the MRSA (e.g., spring discharge, subsurface inflow to the alluvial reservoir and, consequently, Muddy River streamflow) because of the high aquifer diffusivity and hydraulic connectivity throughout the flow system and because the MRSA constitutes the majority, if not all, of the discharge from the flow system” (Id., emphasis added).

Moving the pumping center will not help in the long term either, but may just take longer (Id.). SNWA presents four important conclusions:

- groundwater production from the carbonate aquifer in the LWRFS has impacted discharge to the MRSA and, consequently, senior surface-water rights associated with the 1920 Muddy River Decree
- impacts due to groundwater production within areas directly upgradient of the MRSA occur relatively quickly, and the magnitude of the impacts depends upon the pumping rates and durations
- **additional appropriations** that increase groundwater production from the carbonate aquifer within the LWRFS will **accelerate the timing and magnitude** of impacts

- **changing the spatial distribution of pumping within the LWRFS will change the distribution of drawdown and the timing of impacts, but not the long-term outcome.** (SNWA, p 6-4, emphases added)

SNWA's conclusions quoted here are accurate and are supported by the evidence they have analyzed. However, SNWA's attempt to quantify these analyses with ratios of spring flow to total MRSA flow may be incorrect. If high elevation spring discharge drops more rapidly than overall discharge, the ratio would change. Higher elevation springs will be dry before the flow reduction of lower elevation springs are substantively affected. This is based on the fact that a given change in groundwater level causes a larger change in the gradient controlling the discharge than it does for the lower elevation springs. The change in flow is proportional to the change in gradient, and therefore the claim that each "spring contributes to MRSA discharge in the same proportion under any stress conditions" (p 6-11) is incorrect. This does not obviate the overall conclusion that in the long term, capture of aquifer storage will decrease MRSA discharge on a nearly 1:1 ratio (Id.).

SNWA's analysis supports the concept that any carbonate pumping anywhere in the LWRFS will lead to a decrease in critical spring flow. SNWA's analysis does not support the recommendation that 4000 to 6000 af/y can continue to be developed from the carbonate aquifer.

### **Endorsement of Great Basin Water Network Letter**

Great Basin Water Network (GBWN) addresses one issue directly pertinent to the subject of Order 1303, that of the boundary of the LWRFS. GBWN argues that the entire White River Flow System (WRFS) should be managed as one. This is a well-founded idea because most of the water that reaches MRSA originates in the northern portions of the WRFS. Myers (2019, p 19) explained how pumping in the northern portion of the WRS will diminish inflow to the LWRFS and eventually decrease water levels and discharges from the springs. It is completely reasonable to manage the entire WRFS as one unit.

### **References**

- DeMeo, G.A., Smith, J.L., Damar, N.A., Darnell, J., 2008. Quantifying groundwater and surface water discharge from evapotranspiration processes in 12 hydrographic areas of the Colorado Regional Groundwater Flow System, Nevada, Utah, and Arizona. U.S. Geol. Surv. Sci. Invest. Rep. 2008-5116, 22 p.
- FWS (U.S. Fish and Wildlife Service) (2019) Issues Related to Conjunctive Management of the Lower White River Flow System. Presentation to the Office of the Nevada State Engineer in Response to Order 1303. July 3, 2019
- Lincoln County et al (Lincoln County Water District, Vidler Water Company, Zonge International, Inc.) (2019). Lower White River Flow System Interim Order #1303 Report Focused on the Northern Boundary of the Proposed Administrative Unit. July 3, 2019.

Myers T (2019) Technical Memorandum: Groundwater Management and the Muddy River Springs, Report in Response to Nevada State Engineer Order 1303. Prepared for Center for Biological Diversity.

Myers T (2013) Technical Memorandum, Comments on Carbonate Order 1169 Pump Test Data and the Groundwater Flow System in Coyote Springs and Muddy River Springs Valley, Nevada. Prepared for Great Basin Water Network.

SNWA (Southern Nevada Water Authority) (2019) Assessment of Lower White River Flow System Water Resource Conditions and Aquifer Response, Presentation to the Office of the Nevada State Engineer. Las Vegas NV.

Tetra Tech (2019) Prediction of the Effects of Changing the Spatial Distribution of Pumping in the Lower White River Flow System. Present to US National Park Service. Superior, CO

US DOI (US Fish and Wildlife Service, Bureau of Land Management, National Park Service) (2013) Test Impacts and Availability of Water Pursuant to applications Pending Under Order 1169.

USFWS (US Fish and Wildlife Service, Region 1) (1996) Recovery Plan for the Rare Aquatic Species of the Muddy River Ecosystem, First Revision. Portland OR

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**OF THE STATE OF NEVADA** 2019 SEP -6 PM 3:33

STATE ENGINEER

IN THE MATTER OF THE ADMINISTRATION AND MANAGEMENT OF THE LOWER WHITE RIVER FLOW SYSTEM WITHIN COYOTE SPRING VALLEY HYDROGRAPHIC BASIN (210), A PORTION OF BLACK MOUNTAINS AREA HYDROGRAPHIC BASIN (215), GARNET VALLEY HYDROGRAPHIC BASIN (216), HIDDEN VALLEY HYDROGRAPHIC BASIN (217), CALIFORNIA WASH HYDROGRAPHIC BASIN (218), AND MUDDY RIVER SPRINGS AREA (AKA UPPER MOAPA VALLEY) HYDROGRAPHIC BASIN (219).

**LIST OF WITNESSES AND EXHIBITS OF LINCOLN COUNTY WATER DISTRICT AND VIDLER WATER COMPANY, INC.**

LINCOLN COUNTY WATER DISTRICT and VIDLER WATER COMPANY, INC., by and through their attorneys, DYLAN V. FREHNER, ESQ. the LINCOLN COUNTY DISTRICT ATTORNEY and KAREN A. PETERSON, ESQ. of the law firm of ALLISON MacKENZIE, LTD., in accordance with the State Engineer's Amended Notice of Hearing dated August 26, 2019, provide their list of hearing witnesses and exhibits. LINCOLN COUNTY WATER DISTRICT ("LINCOLN COUNTY") and VIDLER WATER COMPANY, INC. ("VIDLER") may call any or all of the following witnesses and utilize any or all of the following exhibits in this proceeding, along with the State Engineer's exhibits and the exhibits listed by any other participant to this proceeding. LINCOLN COUNTY and VIDLER do not waive any legal issues or positions by making this submission pursuant to the State Engineer's Amended Notice of Hearing. This submission does not waive any objections by LINCOLN COUNTY and VIDLER to witnesses or exhibits submitted by the other participants in this proceeding.

LINCOLN COUNTY and VIDLER may call any or all of the following witnesses and utilize any or all of the following exhibits in this proceeding:

///

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1           A.     List of Hearing Witnesses:

- 2                     1.     Greg L. Bushner, P.G.  
3                             Vice President of Water Resource Development/Chief Hydrogeologist  
4                             Vidler Water Company, Inc.  
                               3480 G.S. Richards Blvd., Suite 101  
                               Carson City, Nevada 89703

5           Mr. Bushner is a registered geologist in Arizona and professional geologist in California and a  
6 professional hydrogeologist recognized by the American Institute of Hydrology. Mr. Bushner will  
7 testify concerning his expert report entitled *Lower White River Flow System Interim Order #1303*  
8 *Report Focused on the Northern Boundary of the Proposed Administrative Unit*, prepared by Lincoln  
9 County Water District and Vidler Water Company in association with Zonge International Inc., dated  
10 July 3, 2019, and his expert rebuttal report entitled *Rebuttal Submittal to Reports Submitted in*  
11 *Response to Interim Order #1303, Attachment A*, dated August 16, 2019. Mr. Bushner may testify  
12 regarding LINCOLN COUNTY/VIDLER's work in Kane Springs Valley. Mr. Bushner may also  
13 testify regarding any other matters included in the reports submitted by LINCOLN  
14 COUNTY/VIDLER in this proceeding. Mr. Bushner has been qualified by the State Engineer as an  
15 expert in hydrogeology. Mr. Bushner's Curriculum Vitae LC-V\_003 provides Mr. Bushner's further  
16 qualifications.

- 17                     2.     Peter A. Mock, Ph.D., R.G./P.G.  
18                             Peter Mock Groundwater Consulting, Inc.  
19                             6130 N. Camelback Manor Dr.  
                               Paradise Valley, Arizona 85253

20           Dr. Mock is a registered geologist in Arizona and a professional geologist in California. Dr.  
21 Mock will testify concerning his Technical Memorandum entitled *Lower White River Flow System*  
22 *Interim Order #1303 Rebuttal Report to the Nevada State Engineer*, dated August 16, 2019. Dr. Mock  
23 may testify regarding LINCOLN COUNTY/VIDLER's work in Kane Springs Valley. Dr. Mock may  
24 also testify regarding any other matters included in the reports submitted by LINCOLN  
25 COUNTY/VIDLER in this proceeding. LINCOLN COUNTY/VIDLER will seek to have Dr. Mock  
26 qualified by the State Engineer as an expert hydrologist and geologist with a specialty in groundwater  
27 modeling, and computational hydrology. Dr. Mock's Curriculum Vitae LC-V\_004 provides Dr.  
28 Mock's further qualifications.

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3. Thomas W. Butler, II, PG, CHG, CEG  
Stantec Consulting Services, Inc.  
1340 Treat Boulevard  
Walnut Creek, California 94597

Mr. Butler is a certified engineering geologist, certified hydrogeologist and professional geologist in the State of California and will testify regarding his Technical Memorandums entitled *Review of Water Level Decline in the LWRFS: Managing for Sustainable Groundwater Development*, dated July 3, 2019, and *Review of Preliminary Geochemical Evaluation of Sources of Water Discharge at Rogers and Blue Point Springs, Southeastern Nevada*, dated August 16, 2019. Mr. Butler may testify regarding LINCOLN COUNTY/VIDLER's work in Kane Springs Valley. Mr. Butler may also testify regarding any other matters included in the reports submitted by LINCOLN COUNTY/VIDLER in this proceeding. Mr. Butler has been qualified by the State Engineer as an expert in geology and geochemistry. LINCOLN COUNTY/VIDLER may also seek to have Mr. Butler qualified as an expert in hydrogeology. Mr. Butler's Curriculum Vitae LC-V\_005 provides Mr. Butler's further qualifications.

4. Todd G. Umstot  
Senior Hydrogeologist  
Daniel B. Stephens & Associates, Inc.  
6020 Academy NE, Suite 100  
Albuquerque, New Mexico 87109

Mr. Umstot is a hydrogeologist, qualified as an expert in hydrogeology in the state district courts of Arizona and New Mexico and before the New Mexico Office of the State Engineer. Mr. Umstot will testify regarding his Technical Memorandum entitled *Drought and Groundwater*, dated August 16, 2019. Mr. Umstot may testify regarding LINCOLN COUNTY/VIDLER's work in Kane Springs Valley. Mr. Umstot may also testify regarding any other matters included in the reports submitted by LINCOLN COUNTY/VIDLER in this proceeding. LINCOLN COUNTY/VIDLER will seek to have Mr. Umstot qualified by the State Engineer as an expert in hydrogeology, vadose zone processes, groundwater recharge, and geostatistical techniques. Mr. Umstot's Curriculum Vitae LC-V\_006 provides Mr. Umstot's further qualifications.

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1                   5.     Norman R. Carlson  
2                             Chief Geophysicist  
3                             Zonge International, Inc.  
4                             3322 East Fort Lowell Road  
5                             Tucson, Arizona 85716

6                   Mr. Carlson is a registered professional geoscientist (geophysics) in Texas. Mr. Carlson will  
7 testify concerning his expert report entitled *Lower White River Flow System Interim Order #1303*  
8 *Report Focused on the Northern Boundary of the Proposed Administrative Unit*, prepared by Lincoln  
9 County Water District and Vidler Water Company in association with Zonge International Inc., dated  
10 July 3, 2019, and his Technical Memorandum entitled *Zonge International, Inc., Rebuttal Response*  
11 *to the July 3, 2019 Reports Submitted to the Nevada State Engineer in Response to IO#1303*, dated  
12 August 16, 2019. Mr. Carlson may testify regarding LINCOLN COUNTY/VIDLER's work in Kane  
13 Springs Valley. Mr. Carlson may also testify regarding any other matters included in the reports  
14 submitted by LINCOLN COUNTY/VIDLER in this proceeding. Mr. Carlson has been qualified by  
15 the State Engineer as an expert in geophysics. Mr. Carlson's Curriculum Vitae LC-V\_007 provides  
16 Mr. Carlson's further qualifications.

17                   LINCOLN COUNTY and VIDLER reserve the right to call additional witnesses as may be  
18 identified resulting from the testimony or exhibits disclosed by other participants and rebuttal or  
19 impeaching witnesses as may be required at the hearing.

20                   B.     List of Exhibits:

21                   LC-V\_001. Lower White River Flow System Interim Order #1303 Report Focused on  
22 the Northern Boundary of the Proposed Administrative Unit, prepared by Lincoln County Water  
23 District and Vidler Water Company in Association with Zonge International Inc., dated July 3, 2019.

24                   LC-V\_002. Rebuttal Submittal to Reports Submitted in Response to Interim Order  
25 #1303, dated August 16, 2019 and Attachments A, B, C, D and E containing the reports or technical  
26 memorandums of Greg Bushner, Peter Mock, Thomas Butler, Todd Umstot and Norman Carlson.

27                   LC-V\_003. Curriculum Vitae of Greg L. Bushner, P.G.

28                   LC-V\_004. Curriculum Vitae of Peter A. Mock, Ph.D., R.G./P.G.

                  LC-V\_005. Curriculum Vitae of Thomas W. Butler, PG, CHG, CEG.

                  LC-V\_006. Curriculum Vitae of Todd G. Umstot.



- 1 LC-V\_007. Curriculum Vitae of Norman R. Carlson.
- 2 LC-V\_008. PowerPoint Presentation of Greg L. Bushner, P.G., entitled  
3 Lincoln/Vidler's Presentation in Response to the Nevada State Engineer's Lower White River Flow  
4 System Interim Order #1303 Presenting New Geophysical Data of the Northern Lower White River  
5 Flow System Boundary Fault.
- 6 LC-V\_009. PowerPoint Presentation of Peter A. Mock, Ph.D., R.G./P.G., entitled  
7 Order 1303 Rebuttal Summary.
- 8 LC-V\_010. PowerPoint Presentation of Thomas W. Butler, PG, CHG, CEG, entitled  
9 Lower White River Flow System Interim Order #1303, Review and Interpretation of Geochemical  
10 Data.
- 11 LC-V\_011. PowerPoint Presentation of Todd G. Umstot, entitled Drought and  
12 Groundwater.
- 13 LC-V\_012. PowerPoint Presentation of Norman R. Carlson, entitled Collection of new  
14 geophysical data February & March 2019 Northern Coyote Spring Valley.
- 15 LC-V\_013. State Engineer's Ruling #5712, dated February 2, 2007.
- 16 LC-V\_014. Memorandum to R. Michael Turnipseed, P.E., State Engineer, from Hugh  
17 Ricci, P.E., Deputy State Engineer, Subject: Pumping in the Carbonates, dated June 21, 2000, with  
18 attachment showing high-lighted paragraph text typed out.
- 19 LC-V\_015. Stipulation for Dismissal of Protests entered into between Lincoln County,  
20 Vidler Water Company, Inc. and the United States Department of the Interior, National Park Service,  
21 dated May 9, 2002.
- 22 LC-V\_016. Amended Stipulation for Withdrawal of Protests entered into between  
23 Lincoln County Water District, Vidler Water Company, Inc., and the United States Department of the  
24 Interior, Fish and Wildlife Service, dated July 19, 2006.
- 25 LC-V\_017. Hydrologic Assessment of Kane Springs Valley Hydrographic Area (206):  
26 Hydrologic Framework, Hydrologic Conceptual Model, and Impact Analysis, Presentation to the  
27 Office of the Nevada State Engineer, Prepared for Lincoln County Water District and Vidler Water  
28 Company, Prepared by CH2MHill, dated April 2006.

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1 LC-V\_018. Cooperative Agreement among Lincoln County, the Southern Nevada  
2 Water Authority and the Las Vegas Valley Water District effective April 17, 2003.

3 LC-V\_019. Groundwater, Vol. 44, No. 1—January-February 2009 (pages 24-34), The  
4 AEM and Regional Carbonate Aquifer Modeling, by Cady Johnson and Martin Mifflin.

5 LC-V\_020. September 5, 2019 Email string and attachments re: USFWS/Vidler  
6 agreement.

7 LINCOLN COUNTY and VIDLER reserve the right to introduce records from the State  
8 Engineer's files and records and additional exhibits as may be identified resulting from the testimony  
9 or exhibits disclosed by other participants and any exhibits to be used for impeachment or rebuttal  
10 purposes as may be required at the hearing.

11 DATED this 6<sup>th</sup> day of September, 2019.

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1 **CERTIFICATE OF SERVICE**

2 I hereby certify that I am an employee of ALLISON MacKENZIE, LTD., Attorneys at Law,  
3 and on this date, I caused the foregoing document to be served on the following via Hand Delivery or  
4 Electronic Transmission as follows:

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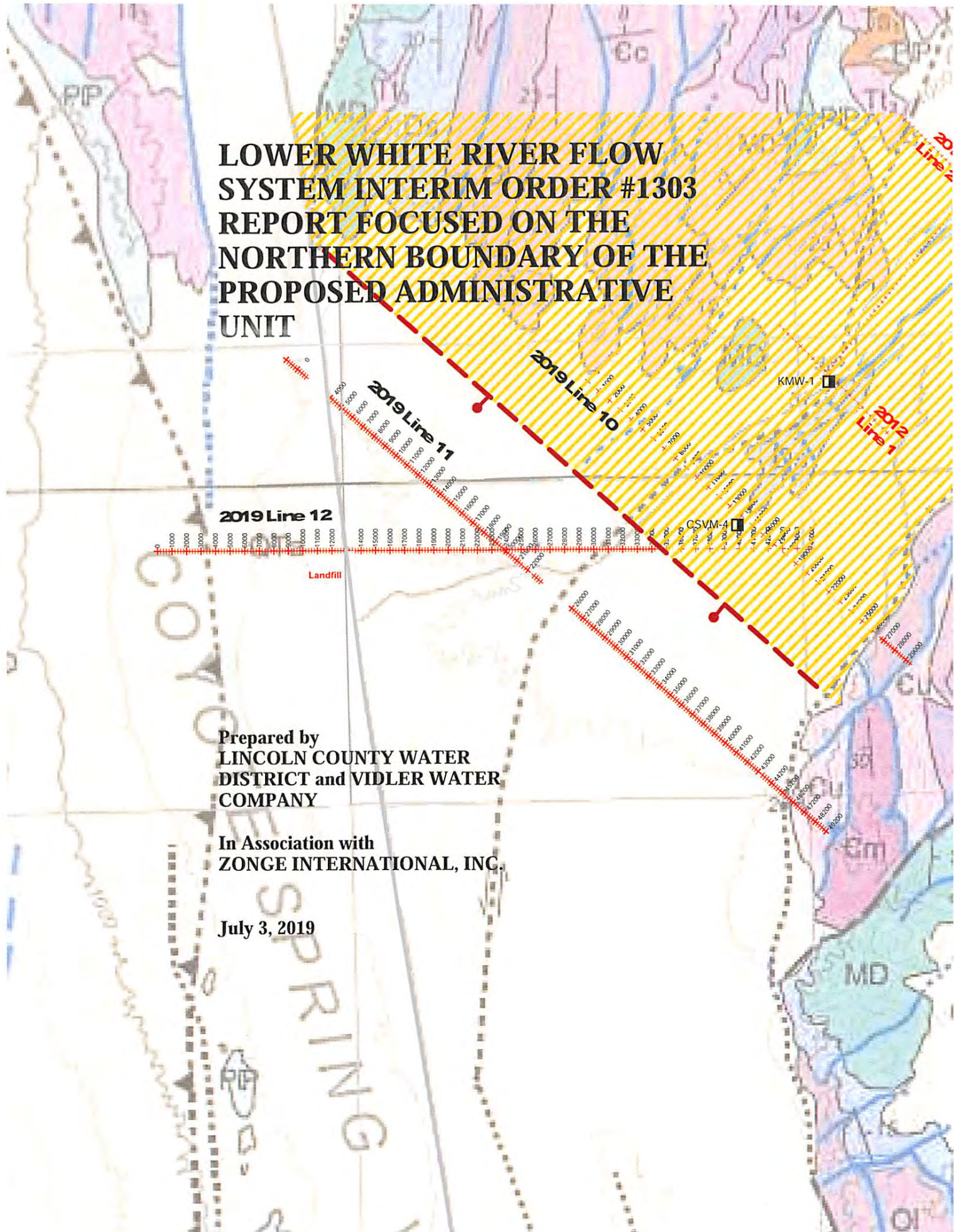
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DATED this 6<sup>th</sup> day of September, 2019.

  
NANCY FONTENOT

4813-0204-7394, v. 1

**LOWER WHITE RIVER FLOW  
SYSTEM INTERIM ORDER #1303  
REPORT FOCUSED ON THE  
NORTHERN BOUNDARY OF THE  
PROPOSED ADMINISTRATIVE  
UNIT**



**Prepared by  
LINCOLN COUNTY WATER  
DISTRICT and VIDLER WATER  
COMPANY**

**In Association with  
ZONGE INTERNATIONAL, INC.**

**July 3, 2019**

## 1.0 EXECUTIVE SUMMARY

The Nevada State Engineer (NSE) through Rulings #5712 (NSE 2007) and #6254 (NSE 2014) has made several findings about Kane Springs Valley (KSV), the impacts from KSV and the effects of pumping from KSV on springs in the Lower White River Flow System (LWRFS) and further south of the LWRFS. The NSE has historically supported and affirmed the exclusion of KSV from the LWRFS since the Order No. 1169 requirements, including the Order No. 1169 aquifer test (NSE 2002) and since the hearing on by Lincoln County Water District and Vidler Water Company (Lincoln/Vidler) groundwater rights in 2006 (NSE 2007).

In this report, groundwater elevation data from wells in KSV and in the LWRFS groundwater basins<sup>1</sup>, precipitation and recharge data, and groundwater chemistry and temperature data are used to illustrate the hydrologic differences between KSV and the basins of the LWRFS. Using the groundwater level data, which can be found on the NSE's website: <http://www.nv.gov/WaterLevelData.aspx>, Lincoln/Vidler identified a distinct "break" in water levels in the regional hydraulic gradient, including several distinct breaks in water levels from wells throughout the LWRFS. These "breaks" in gradient can mostly be attributed to geologic structures in the Regional Deep Carbonate Aquifer (RDCA). As a general statement, wells within the LWRFS exhibit very consistent groundwater levels that are indicative of high transmissivity values across this area. However, in KSV the gradient between well KPW-1 and down-basin wells is much steeper, which again implies some type of impediment to groundwater flow near the mouth of KSV.

There was an exceptional precipitation event that occurred in 2005 that overwhelmed the hydrologic system in KSV as identified in monitor wells KMW-1 and CSVM-4 groundwater levels. This event obscured the overall regional trend in groundwater levels in this region making identification of a response to the Order No. 1169 aquifer test not relevant neither appropriate. The

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<sup>1</sup> The "joint administrative unit" includes the following hydrographic basins: Coyote Spring Valley (210), a portion of the Black Mountains Area (215), Garnet Valley (216), Hidden Valley (217), California Wash (218), and the Muddy River Springs Area (AKA Upper Moapa Valley) basin (219).

finding that water levels in KSV did not response to the Order No. 1169 aquifer test is supported by the lack of response or correlation of groundwater levels in well KMW-1 to groundwater pumping from Coyote Spring Valley (CSV).

Lincoln/Vidler have been collecting groundwater recharge data for over a decade in order to better understand and quantify the actual recharge that is occurring in the KSV hydrographic basin. These data have been submitted to the NSE and interested parties in the form of quarterly reports. A preliminary analysis of these data indicates in-basin groundwater recharge values that range from 4,700 acre-feet per year (ac-ft/yr) to 11,000 ac-ft/yr (T. Umstot, Daniel B. Stephens & Associates (DBS&A), unpublished data and analysis, 2019).

A comprehensive analysis of the regional geochemistry data including stable isotopes, temperature, and carbon-14 data was presented during the Lincoln/Vidler groundwater rights hearing in 2006. That analysis found that the groundwater pumped from KSV could not be identified in the source water for the Big Muddy Springs, nor other springs farther south and outside the geographic boundaries of the LWRFS. This means that groundwater pumped from production well KPW-1 is on a different groundwater flow path from the springs, which is again consistent with the differences in hydraulic gradients, groundwater levels, and the existing and recently collected geophysical data that documents the structural changes between KSV/northern CSV and the rest of the LWRFS groundwater basins.

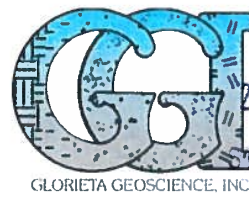
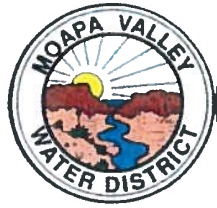
The combined existing and new geophysical data collected in and around KSV allows the recognition of significant geologic structures in southern KSV and northern CSV that explain why groundwater level elevations in this area are different in KSV and northern CSV, than in the LWRFS groundwater basins to the south. The geophysical data identified significant changes in resistivities between the Delamar Mountains, southern KSV, and northern CSV. These changes are consistent and correlate well with the distribution of existing geochemistry and groundwater temperature data that can be used to identify different groundwater flow paths. The extensive faulting that occurs in southern KSV and northern CSV, explained by the interpretation of the geophysical data forms the basis for the exclusion of KSV from the LWRFS administrative basin.



As will be shown later in this report, virtually all of the reduction in flows of the Muddy River and its associated springs over the past several years can be explained by the amount of groundwater pumping within the documented declines in the Muddy River Springs Area (MRSA). This provides a road map for the NSE in administering rights in this area with the intent of mitigating impacts to these springs. Focus should first be placed on both the carbonate and alluvial pumping in the MRSA. Secondly, since there is approximately 8,000 acre-feet of groundwater inflow from Lower Meadow Valley Wash (LMVW) to the MRSA, more research should be done to identify and quantify this inflow into the MRSA as it lies adjacent to and directly down-gradient of LMVW.

Lincoln/Vidler are not a party to, nor have ever been a participant of the Order No. 1169 aquifer test proceedings. The NSE never requested that Lincoln/Vidler provide a report on the outcome of the Order No. 1169 aquifer test results; hence none was ever developed.

In conclusion, KSV should remain excluded from the LWRFS administrative unit. Any revisions to the current LWRFS administrative unit boundary should also exclude northern CSV.



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July 1, 2019

Mr. Tim Wilson, P.E.  
Acting State Engineer  
Nevada Division of Water Resources  
901 S. Stewart St. Suite 202  
Carson City, NV 89701

Dear Mr. Wilson:

This letter, on behalf of the Moapa Valley Water District (MVWD; District), is in response to the Nevada Department of Water Resources' (DWR) request for comments on Interim Order 1303, issued on January 11, 2019 and amended May 15, 2019. The order requests comments on specific topics; the District's comments are presented in the order of the elements that were established in the Interim Order.

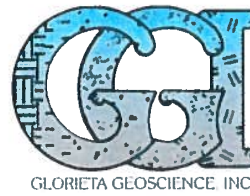
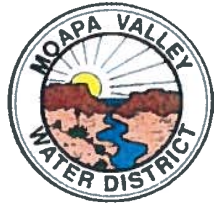
**A. Geographic Boundary of the hydrologically connected groundwater and surface water systems comprising the Lower White River Flow System**

The Kane Springs Valley Basin is part of the White River Flow System, an interconnected system of carbonate rock aquifers that extend from Long Valley (Basin 175) in the northern part of the state to the Muddy River Springs Area (Basin 219) in the south. Within the White River Flow System, water in the carbonate aquifer flows generally from north to south. Of particular importance to Interim Order 1303 is that the terminus of the Lower White River Flow System (LWRFS) is the Muddy River Springs Area, the headwaters of the Muddy River. These springs provide water that maintains habitat for the endangered Moapa dace.

Based on available data that indicate a direct connection between Kane Springs Valley (Basin 206) and Coyote Springs Valley (Basin 210), MVWD proposes that Kane Springs Valley be added to the six basins that are included in Interim Order 1303, for a total of seven basins that will be jointly administered by DWR as a single "Super Basin" comprising the Lower White River Flow System (LWRFS).

During the Order 1169 pumping test, water levels were monitored in a carbonate observation well located in Kane Springs Valley (the well is alternately referred to as KMW-1, and KSM-1 at different times by SNWA [2013]). Water level in this carbonate observation well decreased approximately 0.5 ft over the duration of the pumping test (SNWA, 2013, Fig. C-53), indicating a direct connection between the Coyote Springs Valley and Kane Springs Valley.

In State Engineer Ruling 5712 (Joint Applications 72218, 72219, 72220 and 72221 by Lincoln County and Vidler Water Company, Inc. to Appropriate Water in the Kane Springs Valley Hydrographic Basin 206), the State Engineer concluded that geochemical evidence and groundwater gradient data indicate that groundwater from the Kane Springs Valley flows into Coyote



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Spring Valley. Reductions in the amount of groundwater available in Coyote Springs Valley will impact all downgradient LWRFS basins, as well as discharge to Muddy River Springs.

The Las Vegas Valley Water District (LVVWD, 2001, Table 6-1) presented estimates of inter-basin groundwater flow in the White River Flow System which included approximately 6,000 ac-ft of groundwater flowing from Kane Springs Valley into Coyote Springs Valley.

The physical hydrology and hydrochemistry both support the conclusion that Kane Springs Valley is hydrologically connected to Coyote Springs Valley. Pumping in the Kane Springs Valley will therefore affect water levels in the Coyote Springs Valley and the interconnected basins of the LWRFS, ultimately resulting in impacts to spring discharge in the Muddy River Springs area. For these reasons, MVWD requests that Kane Springs Valley Hydrographic Basin 206 be added to the "Super Basin".

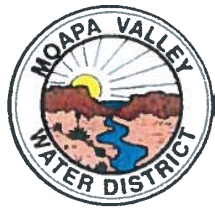
**B. Information obtained from the Order 1169 aquifer test and subsequent to the test and Muddy River headwater spring flow as it related to aquifer recovery since the completion of the aquifer test**

Post-Testing Water Level Recovery

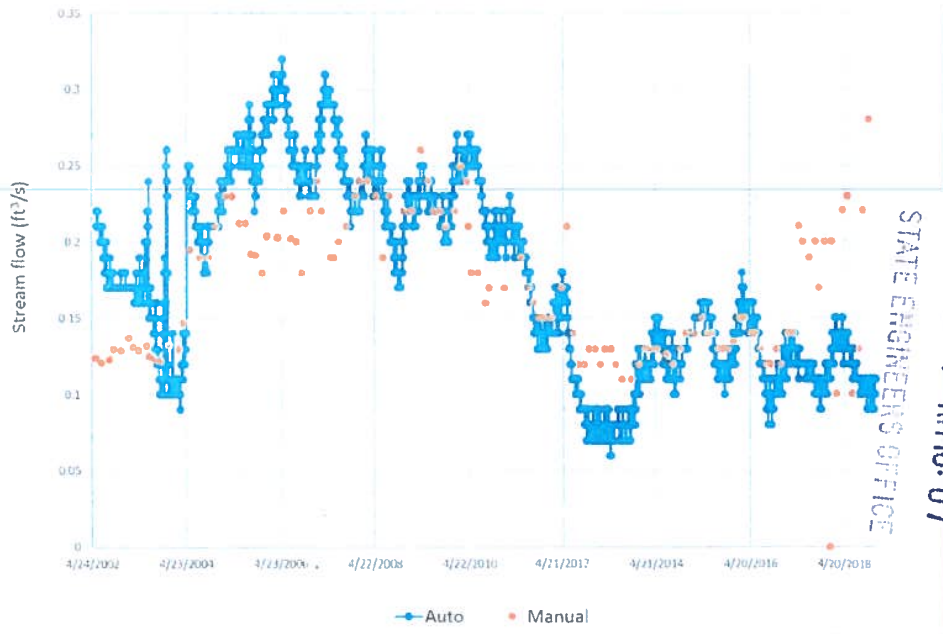
MVWD agrees with DWR's statement in Interim Order 1303 that, "the current amount of pumping corresponds to a period of time in which spring flows have remained relatively stable and have not demonstrated a continuing decline." (Order 1303 p. 10).

In a 2006 Memorandum of Agreement (2006 MOA), trigger levels were established to protect the Moapa Dace habitat and senior water rights holders. The signatories to the 2006 MOA are MVWD, Southern Nevada Water Authority (SNWA), Coyote Springs Investment, LLC (CSI), United States Fish and Wildlife Service (USFWS), and the Moapa Band of Paiutes (MBOP). Since 2006, no actions have been taken by the 2006 MOA signatories to adjust trigger levels. Although water levels and spring discharge have remained fairly constant since cessation of the Order 1169 pumping test, water levels and spring discharges have not recovered to pre-1169 test levels or discharges.

Manual measurements of Pederson East Spring flows by the USGS are higher than discharge reported from automated readings (see graph below). As a result, all surface water gages maintained by the US Geological Survey should have regular hand measurement for data validation and verification, and interpretations based on automated stream flow measurements should be adjusted accordingly.



Pederson E Springs: Manual and Automatic Stream Flow Measurements

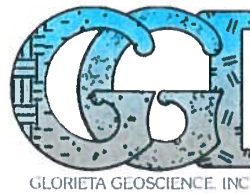
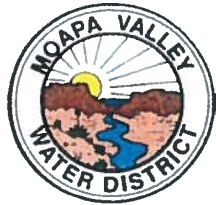


Influence of Climate

Above-average precipitation in 2004-2005 and 2013 was documented by Stetson Engineers (2018, Fig.1). Hydrographs for Pederson Spring, Pederson Spring East and Warm Springs West all show an increase in carbonate spring discharge after above average precipitation in 2004 and 2005. Water levels in carbonate monitoring wells EH-4, EH-5B, CSV-2 and CE-DT-4 rose after the 2004-2005 recharge event (GGI, 2019).

The hydrograph for alluvial well Lewis North shows a rise in water levels after the above-average precipitation in 2004-2005. Hydrographs for Lewis 1 and Lewis 2 show annual cyclical water level changes in response to alluvial pumping and any recharge from the 2004-2005 above average precipitation was not observed or was masked by pumping cycles. Hydrographs for both Lewis 1 and Lewis 2 show a water level rise and a fairly constant water level after alluvial pumping was reduced beginning in 2015 and ceased in 2017. The hydrograph for Perkins Old shows a rise in water levels after alluvial pumping was reduced and ceased (GGI, 2019).

Climate and climatic cycles are an important part of any long-term aquifer recovery. Recharge is episodic, not a constant, annual occurrence. The bulk of aquifer recharge occurs in wet years such as 2005. These slugs, or pulses of recharge, contribute to a cyclical water budget for the carbonate aquifer. Long term spring discharge projections and water level trends are affected both by climate and pumping.



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**C. The long-term annual quantity of groundwater that may be pumped from the Lower White River Flow System, including the relationships between the location of pumping on discharge to the Muddy River Springs, and the capture of the Muddy River flow**

MVWD agrees with DWR's statement in Interim Order 1303 that, "the current amount of pumping corresponds to a period of time in which spring flows have remained relatively stable and have not demonstrated a continuing decline." (Order 1303 p. 10). It is possible that the carbonate aquifer system is reaching somewhat of a steady-state condition at current pumping rates, but additional data is required to verify this conclusion.

MVWD agrees with SNWA (2013) and Johnson (2019) that the alluvial wells are in direct hydrologic communication with the Muddy River and directly capture Muddy River flows, adversely affecting senior water right holders. Additional carbonate pumping in excess of current diversions in the 7-basin flow system will likely accelerate spring depletions. To maintain carbonate diversions at current volumes, no new subdivision parcel maps should be approved that will require increased pumping.

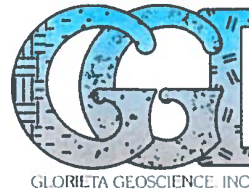
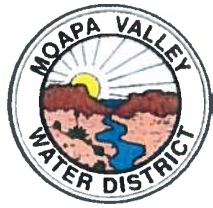
**D. The effects of movement of water rights between alluvial wells and carbonate wells on deliveries of senior decreed rights to the Muddy River**

Impact of carbonate and alluvial pumping on Muddy River Flows

The decline in gage flow at the Moapa gage is approximately equal to the alluvial groundwater pumping and surface-water diversions (SNWA, 2013). Figure 28 in the 2013 SNWA analysis of the 1169 pumping test is a graph titled "Comparison Between Decline in Flow at the Moapa Gage and Alluvial vs. Carbonate Groundwater Pumpage and Surface-Water Diversions". SNWA's conclusion after analyzing the graph was: "*This clearly demonstrates that nearby carbonate pumping is not influencing Muddy River flows at the Moapa gage and is therefore not influencing senior Muddy River surface-water rights*" (emphasis added).

Johnson (2019) analyzed data from various carbonate pumping tests and determined that pumping from the carbonate aquifer, specifically from MVWD Arrow Canyon Wells, impacts spring flows but has no measurable impact on flows in the Muddy River, whereas pumping from the alluvial aquifer, primarily by Nevada Power Company, had direct impacts on Muddy River flows. Furthermore, Johnson (2019) found that water levels in the nearby carbonate monitoring well EH-4 had fully recovered within 3 months of the end of pumping, and no cumulative drawdown effects remained.

MVWD agrees with SNWA (2013) and Johnson (2019) that the alluvial wells are in direct hydrologic communication with the Muddy River and directly capture Muddy River flows, adversely affecting senior water right holders.



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The timing and magnitude of carbonate pumping effects on spring discharge is dependent on the volume of water pumped and the proximity of a pumping center to the springs – the closer it is, the sooner it will occur; the further away it is, the longer it will take to show effects, but in any case, all cumulative carbonate pumping in the 7 interconnected basins will eventually cause depletions on the Muddy River Springs.

Spring discharge from the carbonate aquifer provides water for Moapa dace habitat. Alluvial pumping does not have an effect on spring discharge from the carbonate aquifer. Transfer of alluvial water rights to the carbonate aquifer will increase and accelerate spring depletions. Pumping from the carbonate aquifer in volumes greater than currently being pumped will increase and accelerate spring depletions and adversely impact dace habitat. Conversely, if carbonate water rights are transferred to the alluvial aquifer there will be depletions to Muddy River flows and impacts to senior Muddy River water right owners.

#### **E. Any other matter believed to be relevant to the State Engineer’s analysis**

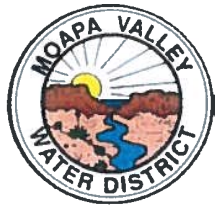
##### Municipal Use as the Preferred Use in the LWRFS basins

The District supports the language in Interim Order 1303 recognizing the need for a reasonably certain supply of water for future permanent uses without jeopardizing the economies of the communities that depend on the water supply and to protect the health and safety of those who rely on or may rely on that water supply in the future.

NRS 534.120 authorizes the State Engineer to make rules, regulations and orders when groundwater is being depleted in designated areas and to designate preferred uses of water. NRS 543.120(2) states “In the interest of public welfare, the State Engineer is authorized and directed to designate preferred uses of water within the respective areas so designated by the State Engineer and from which the groundwater is being depleted, and in acting on applications to appropriate groundwater, the State Engineer may designate such preferred uses in different categories with respect to the particular areas involved within the following limits:

- (a) Domestic, municipal, quasi-municipal, industrial, irrigation, mining and stock-watering uses; and
- (b) Any uses for which a county, city, town, public water district or public water company furnishes the water.

MVWD provides water service to approximately 8500 people with 3175 metered service connections. DWR Rulings 6259 and 6261 both denied the District’s applications for new appropriations from the carbonate aquifer. Denial of the District’s applications is causing the District to seek costly alternative sources of supply to accommodate growth scenarios calculated in the District’s 2014 Integrated Water Resources Plan (GGI, 2015). Protection of municipal water rights for municipal-type providers is essential for the long-term economic and social well-being of the communities served by the District. The District supplies water to the Moapa Band of



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Paiutes in addition to its non-Indian customers. Curtailment of the District's water supply and water rights will have an adverse effect on the Indian and non-Indian communities that the District is legally obligated to serve.

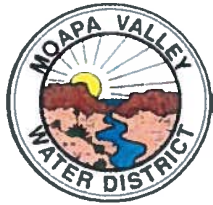
The District carefully planned for development of additional water resources that were severely curtailed by Orders 1169 and 1169A. As such, the District's long-term plans require additional wells. The District trusts the State Engineer will recognize its carbonate wells are irreplaceable sources for the District. To protect all of its customers, the communities it serves, and to plan for orderly growth, the District is requesting:

- the State Engineer designate municipal use of water as the most protected and highest use of water in the 7-basin flow system;
- the State Engineer immediately recognize the quantities of water put to beneficial use by the District from its wells and springs in Basin 219;
- the District will have the perpetual right to divert 6791 acre-ft/yr of permitted and certificated rights from its carbonate aquifer wells;
- the State Engineer designate municipal certificated and permitted water rights as a preferred use regardless of priority;
- the State Engineer give preferred use designation to municipalities or water districts with a 50 Year Water Resource Plan;
- MVWD can add diversion only permits in the carbonate aquifer or other aquifers;
- when transferring a Point of Diversion, the priority date of the base right will be retained; and
- transfers of carbonate water rights from Arrow Canyon to other basins not in the "Super Basin" should be allowed and encouraged.

Requests for extension of time to file proof of beneficial use for non-municipal permittees should be approved only when a permittee shows diligent and active development of the right. The State Engineer should consistently exercise the discretion he was given pursuant to NRS 533.380(3) by elevating the "good cause" standard. Senior permit holders not actively developing rights should be required to submit proofs of beneficial use, regardless of the extent of historic beneficial use, and certificates issued on those water rights that have been put to beneficial use. Extensions of time to submit proof of beneficial use for non-municipal or quasi-municipal uses should be limited to one year. For municipal water providers, a 50-year water development plan can meet the standard for active development.

#### Protection of Dace Habitat and Senior Water Rights

In the 2006 MOA, the District agreed to dedicate 1 cfs of flow from Pipeline Jones Spring to provide in stream flow to support recovery of the Moapa dace. The 1 cfs represents approximately 724 ac-ft or approximately 25% of the District's current diversions. The 2006 MOA and DWR Rulings 6259 and 6261 have resulted in a loss of 724 ac-ft/yr in addition to a significant reduction in the District's developable carbonate groundwater supply from existing



wells. With dedication of 1 cfs from Pipeline Jones Spring for habitat enhancement, the District mitigated effects its carbonate pumping on the dace habitat 13 years ago. Based on SNWA's (2013) and Johnson's (2019) conclusions that carbonate pumping has minimal or no impact on Muddy River flows above the Moapa gage, the District has met its obligation to protect dace habitat and senior water rights.

Thank you for the opportunity to comment on the Interim Order 1303. MVWD reserves the rights to supplement these comments in a rebuttal submittal. Please contact either Joe Davis with the Moapa Valley Water District at 702-397-6893; [joe@moapawater.com](mailto:joe@moapawater.com) (601 N. Moapa Valley Blvd., Overton Nevada, 89040) or Jay Lazarus with Glorieta Geoscience, Inc. at 505-983-5446 x111; [lazarus@glorietageo.com](mailto:lazarus@glorietageo.com) (PO Box 5727 Santa Fe, NM 87502) with any questions or comments.

Sincerely,

A handwritten signature in blue ink, appearing to read "Joe Davis", written over a large, stylized blue scribble.

Joseph Davis  
General Manager  
Moapa Valley Water District

Sincerely,

A handwritten signature in blue ink, appearing to read "Jay Lazarus", written in a cursive style.

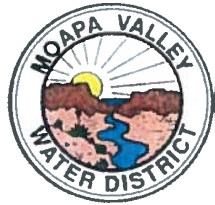
Jay Lazarus  
Pres. /Sr. Geohydrologist  
Glorieta Geoscience, Inc.

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# NV Energy Rebuttal Report to State Engineer's Order 1303 Initial Reports by Respondents

Richard A. Felling PG

August 16, 2019

NVEnergy offers the following rebuttal arguments to the five topics requested pursuant to State Engineer Order 1303.

## **The geographic boundary of the hydrologically connected groundwater and surface water systems comprising the Lower White River Flow System.**

Contrary to the opinions of the Center for Biological Diversity (CBD), Lincoln-Vidler, Moapa Band of Paiutes (MBOP), Moapa Valley Water District (MVWD), City of North Las Vegas (CNLV), the Great Basin Water Network (GBWN), and the US Fish and Wildlife Service (USFWS), NV Energy believes the jointly-managed Lower White River Flow System (LWRFS) should consist of the five basins plus the northern portion of the Black Mountains Area as presently defined by the State Engineer. The reason for the current boundary is due to the fact recognized by most of the responding parties and the State Engineer that the basins share an extremely highly transmissive carbonate aquifer and water levels that move in lockstep throughout much of the area. It was demonstrated in the Order 1169 aquifer test that water development in one of the basins effects the remaining basins.

Submitted reports by the USFWS and the CBD argue for the inclusion of Kane Springs Valley into the LWRFS jointly managed area. Lincoln-Vidler and USFWS suggest adding the Lower Meadow Valley Wash to the LWRFS jointly managed area. Their arguments are similar. They are in agreement that subsurface water flows from the two basins into Coyote Spring Valley and the Muddy River Springs Area, respectively. That in itself is not sufficient for inclusion into the LWRFS jointly managed area. Those two basins have water levels that are significantly higher than the LWRFS carbonate aquifer and did not immediately respond during the Order 1169 aquifer test. If one were to add all basins whose groundwater flows into the LWRFS basins, then we would also need to add the entire White River Flow System as well as the Meadow Valley Flow System.

Most, if not all, of Nevada's Hydrographic basins have subsurface inflow or outflow to adjacent basins to some extent, but that does not mean joint management is warranted. The basins are best managed individually because the aquifers are separate and distinct, water budgets are easily distinguished between the basins, and management as individual hydrographic basins is straightforward and appropriate. The State Engineer should consider the water budgets of interconnected basins, but to require joint management at this late stage is unnecessary.

It also does not make sense to exclude from joint management those portions of the five plus basins whose groundwater levels differ from the central carbonate aquifer. If, for example, the northern portion of Coyote Spring Valley, as proposed by Lincoln-Vidler, or areas east of the Dry Lake Thrust in

## NV Energy Order 1303 Rebuttal Report

California Wash, as proposed by CNLV, were excluded from joint management, how would the excluded areas be managed? As new hydrographic basins? Those areas are not basins, but portions of mountain block, alluvial fan, or valley floor. What would be the perennial yield of those partial basins when their recharge is already included in the groundwater supply of the basin as a whole and the LWRFS? The area as defined is acceptable.

**The information obtained from the Order 1169 aquifer test and subsequent to the aquifer test and Muddy River headwater spring flow as it relates to aquifer recovery since the completion of the aquifer test.**

NVEnergy does not agree that a significant portion of the water-level decline during and after the Order 1169 aquifer test was due to drought, as argued by MBOP. We agree with Southern Nevada Water Authority (SNWA) and MVWD that recovery was complete approximately two to three years after completion of the test. Full recovery to pre-test levels did not occur, and could not occur, because water levels regionally were still declining due to existing pumping as noted by SNWA. Contrary to the arguments made by SNWA and MBOP, NVEnergy argues that there is significant data to support the conclusion that the system is approaching steady state in the Muddy River Springs Area (MRSA) and other locations, and that water levels, spring flow, and the Muddy River are nearly equilibrated with the current carbonate pumping rate of 7,000 to 8,000 acre-feet annually.

The following hydrographs rebut their arguments, and display carbonate water levels at EH-4, located in the MRSA, Muddy River at Moapa gage flow, and carbonate pumpage. Figure 1 shows water levels in EH-4 and carbonate pumpage. The linear segments sketched and described on the hydrographs are self-explanatory. Note that since the recovery from the Order 1169 test, the hydrograph is nearly flat, indicating steady state conditions are almost present. Careful examination of the hydrograph since the middle of 2016 indicates that the water levels are no longer declining, and are perhaps even rising.

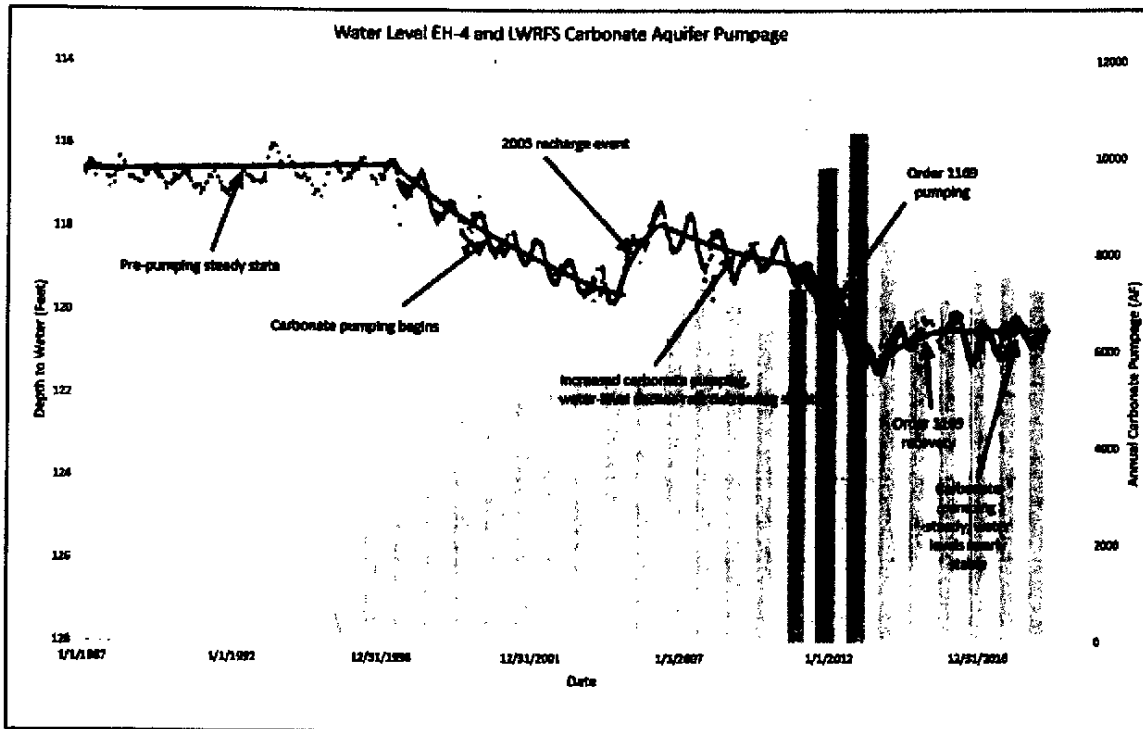


Figure 1. EH-4B hydrograph, annual carbonate aquifer pumpage in the LWRFS, and linear trend segments corresponding the various hydrologic stresses on the carbonate aquifer since 1987. Annual carbonate pumping from SNWA initial report, Table D-1. Water levels from State Engineer’s website.

Figure 2 shows monthly flow at the Warm Springs West gage along with carbonate pumpage. The linear segments sketched on Figure 1 are unchanged and overlain on the Figure 2 hydrograph. The fit is not perfect, but is quite close. This comparison supports the findings of SNWA and the USFWS that spring flows are a direct function of groundwater levels.

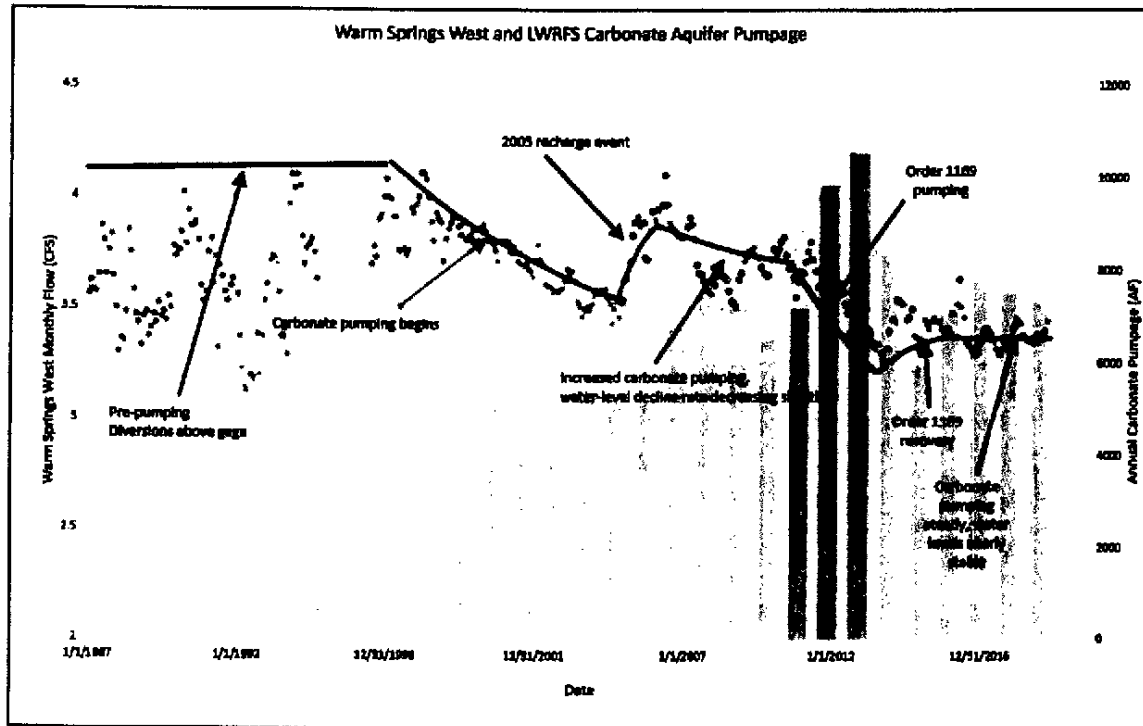


Figure 2. Monthly flow at Warm Springs West (grey dots) and annual carbonate pumpage in the LWRFS. The trendline segments from Figure 1 shown here for comparison purposes. Warm Springs West flow data from USGS website.

Figure 3 is a reconstructed hydrograph, displaying the segments of the hydrograph drafted in Figure 1, portraying their location as if they were not affected by the short-term stresses of the 2005 recharge event or the Order 1169 aquifer test. The declining portions of the hydrograph were simply copied and moved lower to indicate what the hydrograph might look like in the absence of those two stresses. In Figure 3 the hydrograph has not quite reached steady state, but is close. NVEnergy argues that this clear and empirical analysis rebuts those arguments by SNWA and MBOP that continued pumping at existing rates and locations will result in a significant and continued reduction in water levels and flows in the MRSA. Instead, future pumping at current rates and locations will result in minimal future water-level decline in the MRSA or significant decrease in the flow of Warm Springs West or the Muddy River.

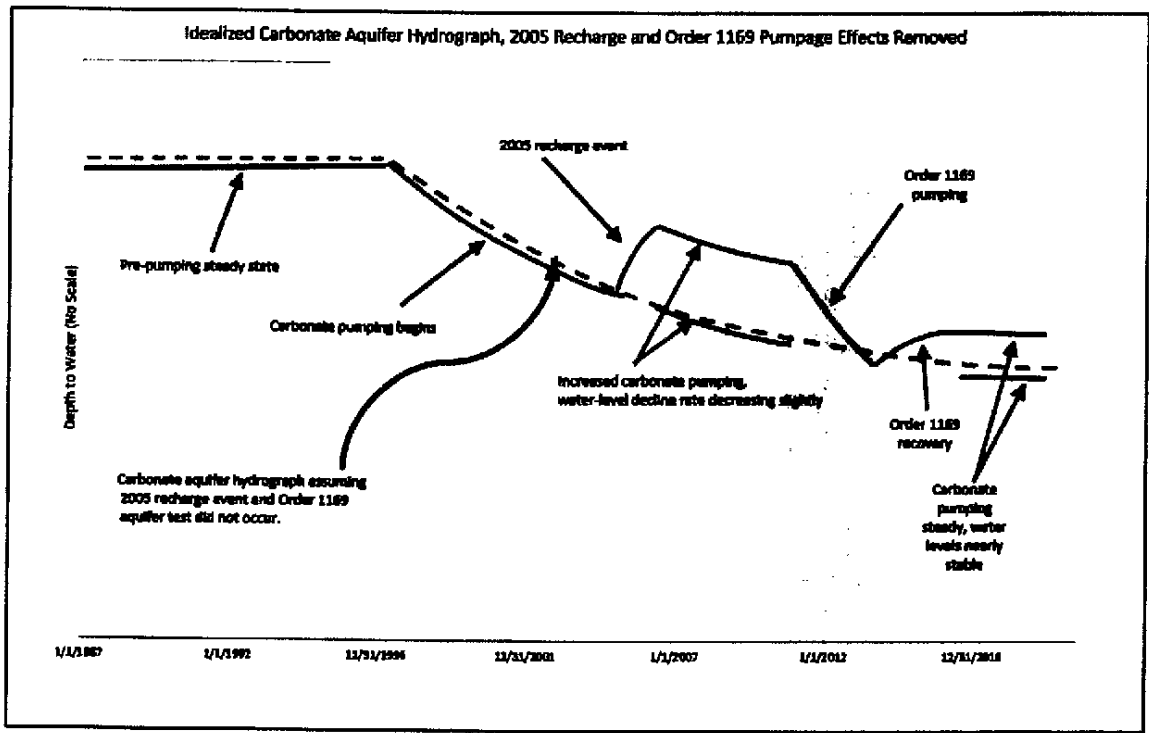
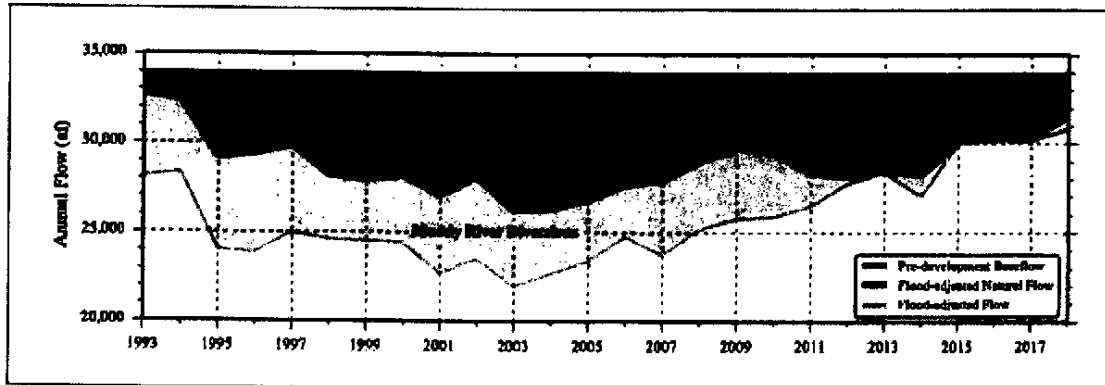


Figure 3. Hypothetical hydrograph of carbonate water levels and Warm Springs West flow (dashed blue line) in the absence of the 2005 recharge event and the Order 1169 aquifer test. Note the hydrograph is approaching steady state, contrary to the arguments of SNWA and MBOP.

SNWA's Figure 5-3 from their June report (Figure 4) shows that natural flows of the Muddy River at Moapa have increased since the Order 1169 pumping stress. The flow deficit since maximum recovery from the Order 1169 aquifer test in mid-2015 (per SNWA) is on the order of 2,300 to 3,750 afy, and is decreasing. The recovery of the Muddy River flow at Moapa further rebuts arguments for continued or increasing decline in the flow of the Muddy River, and supports the argument that the hydrologic system is reaching steady state under the present pumping regime.



**Figure 5-3**  
**MR Flow Deficit (1993 - 2018)**

Figure 4. Figure 5-3 from SNWA, June 2019 Assessment of Lower White River Flow System Water Resource Conditions and Aquifer Response report, submitted to the Nevada State Engineer pursuant to Order 1303.

Other areas in the LWRFS show a continuing decline in water levels as noted by several of the parties, but water levels also appear to levelling off in locations more distant from the center of the current pumping stress. Figure 5 shows the hydrograph for EH-4 in the Muddy River Springs Area and BM DL-2 at the southern end of the LWRFS in the Black Mountains Area. The total head tracks very closely through the end of the Order 1169 test, but diverge just a bit after the test pumping stopped. MBOP argues that drought alone could be responsible for 0.18 ft/yr of decline in the Apex area. It should be noted that pumping in the Apex area has increased in recent years, and could easily be responsible for the divergence.

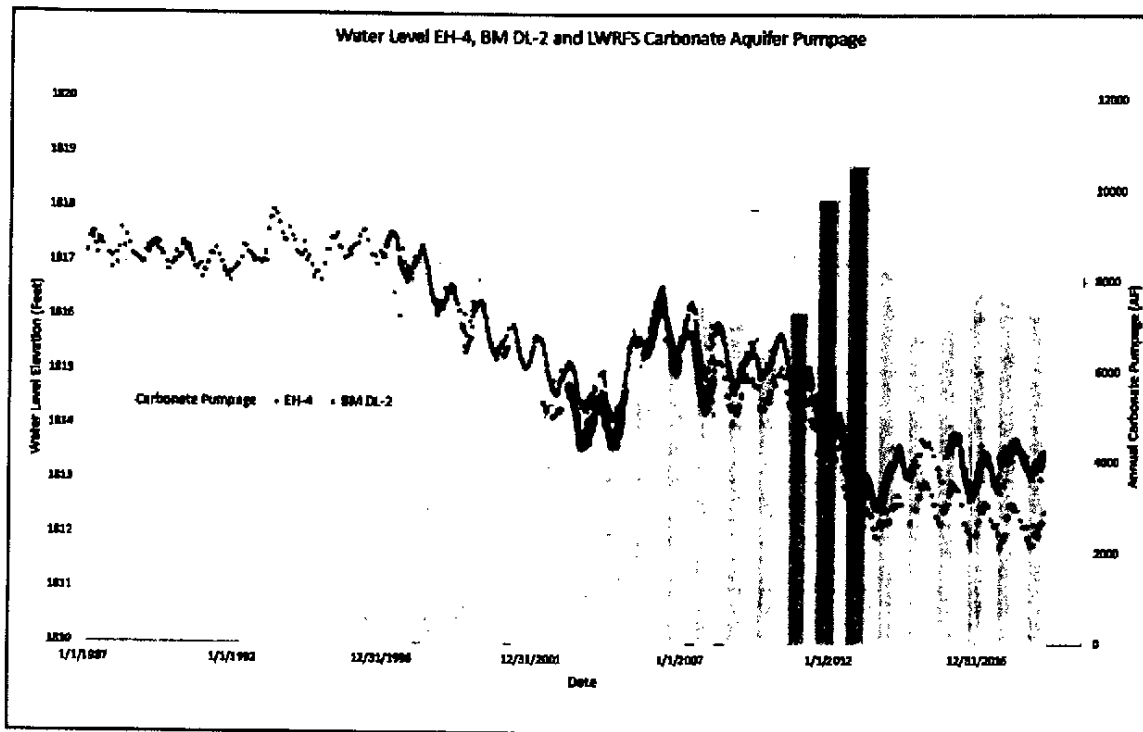


Figure 5. Hydrographs of EH-4 and BM DL-2 showing divergence since the end of Order 1169 pumping. Water-level data from NDWR website, pumping data from SNWA Table D-1.

**The long-term annual quantity of groundwater that may be pumped from the LWRFS, including the relationships between the location of pumping on discharge of the Muddy River Springs and the capture of Muddy River flow.**

Each of the parties appears to believe that they can pump their water rights without impacting the springs or the flow of the Muddy River, that is, it is always the other party's fault. In this case, NV Energy both agrees with and disagrees with the arguments of many of the parties. NV Energy does not rebut the arguments of SNWA and USFWS that it is likely that all pumping in the LWRFS, and perhaps Kane Spring Valley and Lower Meadow Valley Wash, will ultimately impact the springs and the Muddy River. It is simply a matter of how much of an impairment and when will it occur. As discussed above, it is likely that the majority of impact for much of the pumping has already occurred.



In the 2011 State Engineer hearing on pending applications for groundwater in Delamar, Dry Lake and Cave Valleys, SNWA presented evidence and expert testimony in support of subsurface flow that bypassed the Muddy River and springs, flowing in the subsurface south from the Muddy River Springs Area to California Wash. The groundwater then exited the LWRFS somewhere along the southern or southeastern perimeter of the area. This amount was estimated to be 9,900 afy. The State Engineer accepted this evidence and expert testimony in Rulings 6254 through 6261. The source of that water was groundwater recharge distributed among all of the upgradient basins, including those basins in which SNWA had applications to appropriate groundwater. SNWA now argues that probably all of the groundwater in the LWRFS discharges to the Muddy River and springs, and that there is no bypass flow. NVEnergy disagrees.

Other respondents to Order 1303 information requests also believe that some amount of groundwater bypasses the Muddy River. The Moapa Band of Paiutes argue that perhaps up to 40,000 afy flows through Hidden and Garnet Valleys to the Las Vegas Valley. The City of North Las Vegas believes that there is some amount of subsurface discharge in the southeast portion of the LWRFS, but do not go so far as to estimate the amount. NV Energy agrees that there is some amount of groundwater that bypasses the Muddy River and springs. The amount is unclear, but SNWA argued in the 2011 hearing that the amount is 9,900 afy, and the State Engineer agreed. There is an approximately 40-mile perimeter east of California Wash and south of Garnet Valley and the Black Mountains Area where there is a potentiometric gradient to the east and south, away from the LWRFS. It seems impossible that the entire perimeter of the LWRFS is impermeable. Given the existing gradients, the thickness of the carbonate aquifer, and the length of the perimeter, it is possible that 10,000 afy could exit the LWRFS to the Las Vegas Valley or to the lower portions of the Black Mountains Area or Lake Mead.

The likelihood of subsurface flow bypassing the Muddy River and springs is important because that means that it is possible to capture groundwater discharge without causing a 1:1 depletion of the Muddy River or springs. The post-Order 1169 analyses discussed above show clear evidence that steady state conditions are being reached in the Muddy River Springs Area with 7,000 to 8,000 afy of carbonate pumping. The depletion of the Muddy River with this amount of pumping appears to be on the order of 2,300 to 3,750 afy, and is not increasing. Using these figures, impacts to the Muddy River appear to be on the order of 25% to 50% of the amount of groundwater pumped under the current pumping regime. NVEnergy agrees with respondents MBOP, North Las Vegas and others that groundwater pumping at locations further south, toward the southern boundary of the LWRFS, are likely to have less effect on the Muddy River and springs than pumping in Coyote Spring Valley or the Muddy River Springs Area.

**The effects of movement of water rights between alluvial wells and carbonate wells on deliveries of senior decreed rights to the Muddy River.**

Respondents to Order 1303 generally agree that pumping from the alluvial aquifer in the Muddy River Springs Area impacts the Muddy River flows and deplete those flows on a near 1:1 ratio in a short period of time. SNWA also argues that carbonate pumping in the LWRFS will have a 1:1 effect on discharge from the springs and the Muddy River, but the time frame is longer for these effects to occur. NV Energy disagrees with SNWA that all pumping will ultimately deplete the Muddy River at a 1:1 ratio. As discussed above, water levels, spring flows, and the flow of the Muddy River at the Moapa gage have essentially stabilized under the current pumping regime. Depletion of the Muddy River at Moapa was 3,750 acre-feet in 2015, 3,598 acre-feet in 2016, 3,569 acre-feet in 2017, and decreased to about 2,300 acre-feet in 2018 (SNWA Fig 5-3 and Table 7-2). Increases in flow that occurred during a time period that carbonate aquifer pumping was relatively stable. Furthermore, because there does appear to be

## NV Energy Order 1303 Rebuttal Report

groundwater underflow that bypasses the Muddy River and springs, some of that bypass flow could potentially be captured by pumping south of the Muddy River without impacting the river or springs.

Many of the parties that own water rights in California Wash and Garnet Valley argue that their pumping does not impact the Muddy River. That is likely true in part. However, many of the water rights in those areas have never been pumped. Nevada water law is based on two main tenants: prior appropriation and beneficial use. If the five plus basin area is managed as one, those parties with senior and certificated groundwater rights must be allowed the continued use of those rights over junior water rights that have never been put to beneficial use. That would be accomplished by changing some of these senior, certificated alluvial water rights to the carbonate aquifer in the southern LWRFS.

### **Any Other Matter believed to be relevant to the State Engineer's analysis.**

#### Drought

Drought is not a significant cause for decreased water levels and spring flows in the LWRFS. MBOP argues that discharge at Big Muddy Spring correlates to discharge of the Humboldt River at Palisade, with a time lag of 12 to 22 years. It is not demonstrated by any scientific analysis that any water from the Humboldt River Basin contributes to the LWRFS, nor why any correlation between the two makes any sense. The preponderance of the water supply in the LWRFS is derived from groundwater recharge in NV Climate Division 3. Local recharge events in NV Climate Division 4, extreme southern Nevada, have been shown to almost immediately increase water levels and spring flows, as shown by SNWA. This occurred in 2005 and 2006 as a result of exceptional precipitation in 2005 (Figure 1 and Figure 6). The hydrograph of EH-4 in Figure 1 demonstrates that water levels are steady in the 10 years prior to significant carbonate pumping.

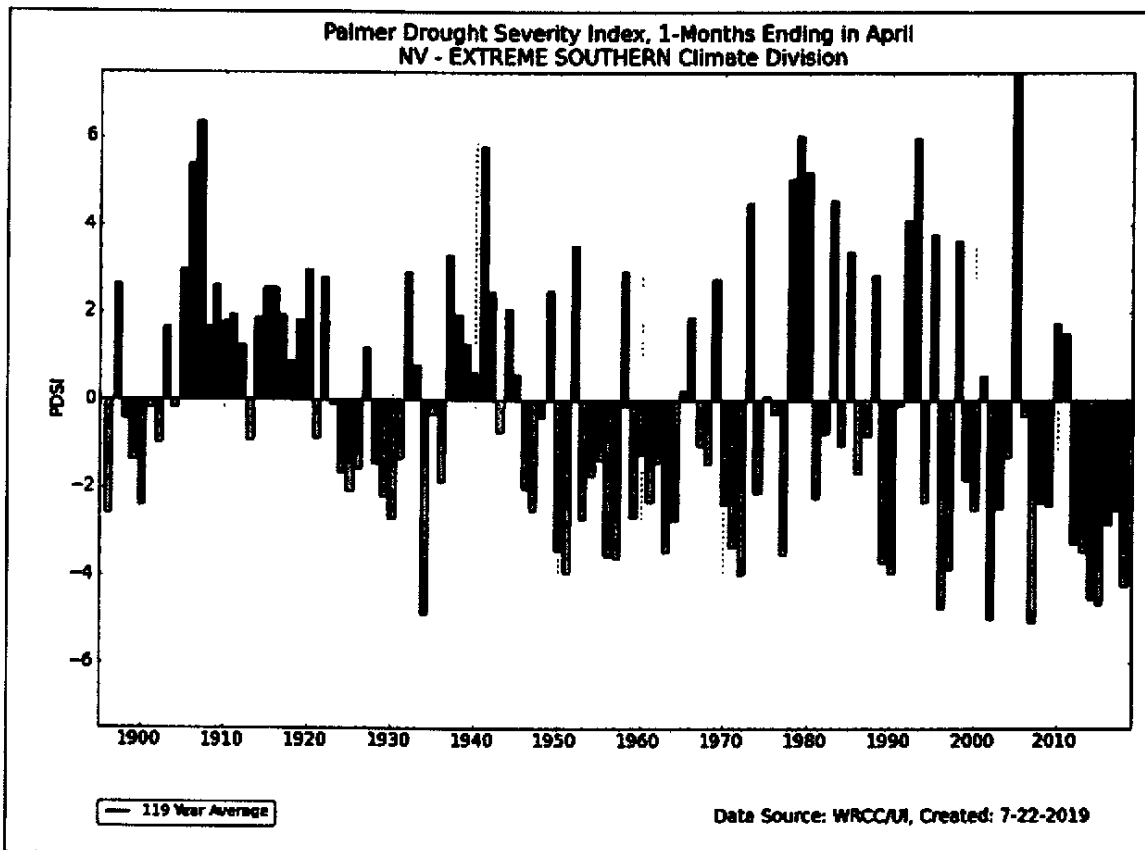


Figure 6. Palmer drought severity index, Extreme Southern Nevada, for 12-month periods ending in April. Note 2005 was extremely wet.

The subsurface flow into the LWRFS from upgradient basins is a function of the potentiometric gradient between Delamar Valley and Pahranaagat Valley and Coyote Spring Valley. As documented by several of the respondents, water levels decline approximately 900 feet across the Pahranaagat Shear Zone. The Delamar MX well (Figure 7), unaffected by groundwater pumping, shows steady or increasing water levels since 1982 even though there are significant drought periods in Climate Division 3 (Figure 8). SNWA monitor well 209-M1, east of Hiko and completed in carbonate, shows no change since its first measurements in 2008. These water levels in the source basins for the majority of the LWRFS groundwater supply show no evidence of drought. Perhaps the wells relied on by MBOP to demonstrate drought are in fact being affected by LWRFS pumping.

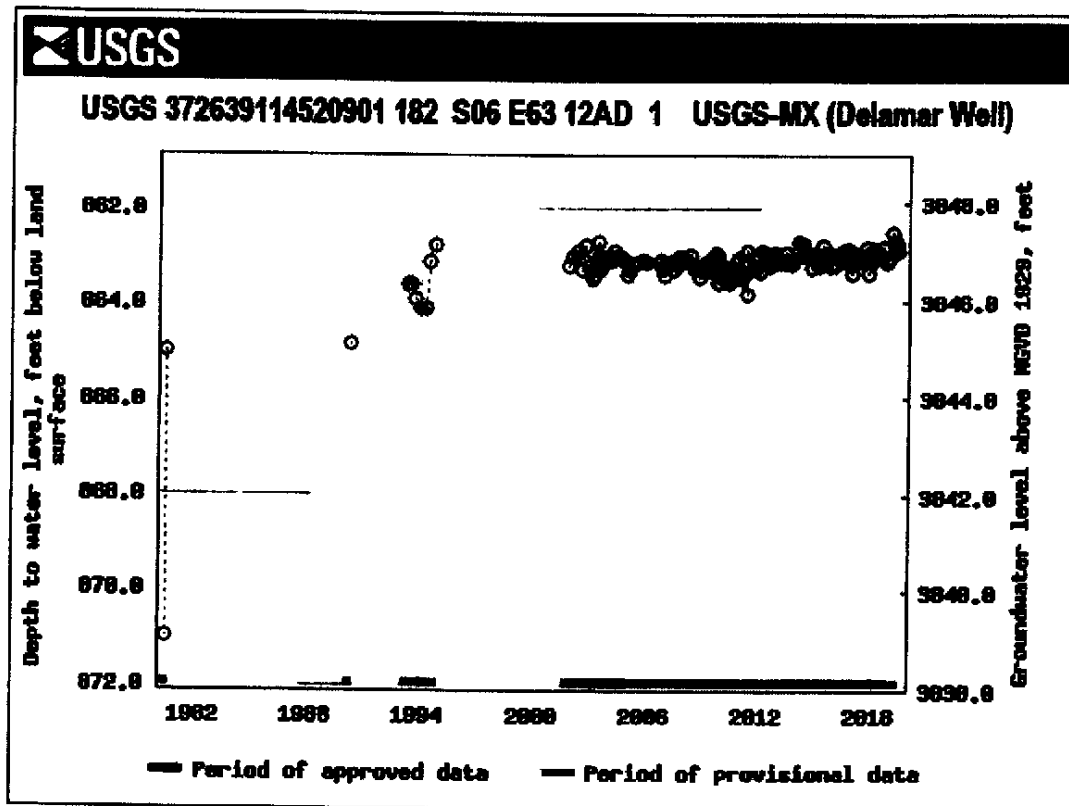


Figure 7. Hydrograph of USGS Delamar MX well. No evidence of drought or water-level decline.

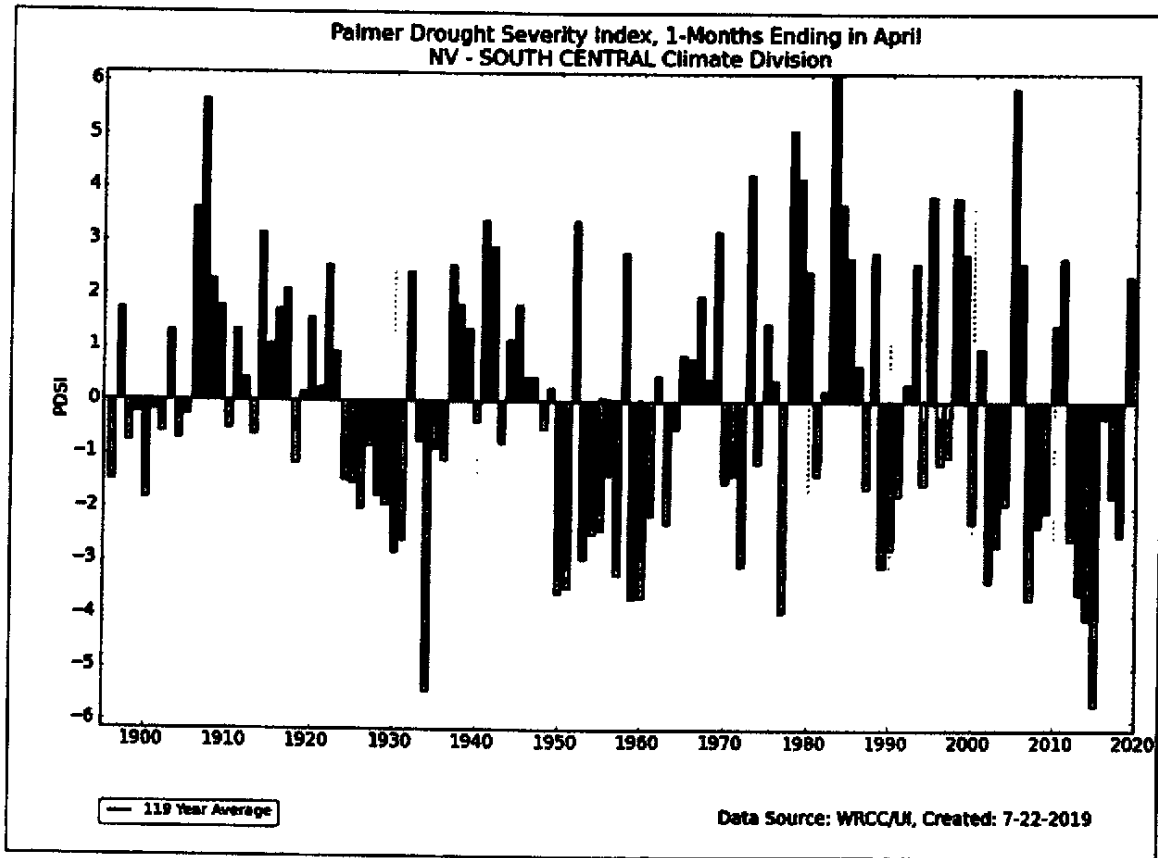


Figure 8. Palmer drought severity index for South Central Nevada climate division 3, the principal source of groundwater supply to the LWRFS.

Suggested actions for consideration in a later phase

It is highly unlikely that the water rights holders in the LWRFS can come to a voluntary agreement on a conjunctive management plan to manage surface water and groundwater in the LWRFS. Even assuming a majority could agree, those opposed would be under no obligation to abide by any such agreement. SNWA is claiming that groundwater use conflicts with their senior surface water rights, and is asking that all groundwater users mitigate their full water use on a 1:1 basis. A thorough analysis of the hydrologic data does not support this drop-for-drop depletion of Muddy River flow.

Two options are proposed. The first option would be for the State Engineer to officially combine the basins into a new hydrographic basin and to then declare the new basin a Critical Management Area pursuant to NRS 534.037 and 534.110. The water rights holders would then have 10 years to come up with a plan that would need approval by simple majority of water rights in the basin. The State Engineer would only approve the plan if it was equitable for all the parties.

The second option is for the State Engineer to take control of the process for creating a conjunctive management plan for the LWRFS. The State Engineer has authority to make rules for the administration of underground waters under NRS 534.020 and 534.120.

# Assessment of Lower White River Flow System Water Resource Conditions and Aquifer Response

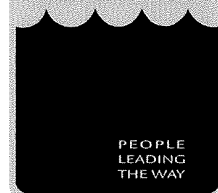
PRESENTATION TO THE OFFICE OF THE NEVADA STATE ENGINEER

Prepared by



SOUTHERN NEVADA  
WATER AUTHORITY

LAS VEGAS VALLEY  
WATER DISTRICT



June 2019

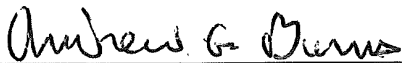
# Assessment of Lower White River Flow System Water Resource Conditions and Aquifer Response

Submitted to:  
Timothy Wilson, P.E., Acting State Engineer  
State of Nevada  
Department of Conservation & Natural Resources  
Division of Water Resources  
901 S. Stewart Street, Suite 2002  
Carson City, Nevada 89701

Pertaining to:  
Nevada State Engineer  
Interim Order 1303

June 2019

Prepared by:  
Southern Nevada Water Authority and  
Las Vegas Valley Water District  
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Las Vegas, Nevada 89193-9956



Andrew G. Burns, Water Resources Division Manager

6-27-2019

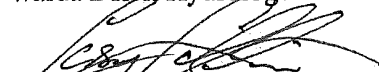
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Warda Drici, Hydrologist

06/27/2019

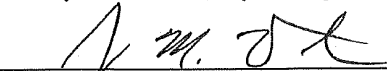
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Casey A. Collins, Hydrologist

6/27/2019

Date



James M. Watrus, Sr. Hydrologist

6-27-2019

Date

## **ABSTRACT**

In response to Nevada State Engineer (NSE) Interim Order 1303, the Las Vegas Valley Water District (LVVWD) and Southern Nevada Water Authority (SNWA) conducted an assessment of the current water-resource conditions of the Lower White River Flow System (LWRFS), an administrative unit of six conjoined basins designated by the NSE. The LVVWD and SNWA have significant interests in the administration of water rights and management of water resources within the LWRFS. The LVVWD is the management entity for the Coyote Springs Water Resources General Improvement District located in Coyote Spring Valley. This means LVVWD will, effectively, be the water purveyor responsible for providing water to any community that is developed. SNWA owns substantial groundwater rights and owns or leases 1920 Muddy River Decree surface-water rights. SNWA also controls over 51 percent of the Muddy Valley Irrigation Company shares through ownership and lease agreements. SNWA interests in the groundwater and surface-water resources of the LWRFS total over 31,863 afy, and include points of diversion located in five of the six basins composing the LWRFS. Of particular interest to this assessment are Muddy River Tributary Intentionally Created Surplus (ICS) credits created and managed by SNWA. ICS is a critical component of the SNWA water-resource portfolio which is relied upon to supply current and future water demands of over 2 million Nevada residents and 40 million annual visitors.

As part of the assessment, an analysis was completed to evaluate hydrologic responses to natural and anthropogenic stresses observed at various locations of interest. The analysis considered time-series data for several variables that describe the historical conditions of the hydrologic system over a period of decades. The analysis focused on the historical behavior of the carbonate aquifer composing the LWRFS, the hydrology of the Muddy River Springs Area (MRSA), and responses of Muddy River streamflow to groundwater production.

The assessment yielded the following conclusions: (1) the carbonate rocks underlying the LWRFS basins are contiguous and form a single aquifer that is the source of spring discharge, subsurface inflow to the MRSA alluvial reservoir, and perennial streamflow; (2) hydrologic responses are highly correlated amongst LWRFS wells and springs sourced by the carbonate aquifer; (3) carbonate-aquifer groundwater production has impacted spring discharges; (4) groundwater production has depleted Muddy River streamflow and conflicted with senior Muddy River water rights; (5) the long-term average annual groundwater production from the carbonate aquifer must be limited to maintain specified flows at the Warm Springs West gage; and (6) since 2006, Muddy River streamflow depletions have reduced the volume of SNWA's ICS by about 12,000 acre-feet at a replacement cost of almost \$2.3 million.

Based on the findings of this assessment, responses to NSE Interim Order 1303 are as follows: (a) the geographic boundary of the LWRFS as defined by the NSE is appropriate; (b) the data gathered during and after the Order 1169 aquifer test indicate that recovery of the LWRFS had attained its maximum by late 2015 - early 2016; (c) the data indicate that groundwater production from the MRSA alluvial reservoir or the carbonate aquifer simply cannot occur over the long-term without depleting spring and streamflows and conflicting with senior surface-water rights; (d) changing points of diversion to move groundwater production from the MRSA alluvial reservoir to locations sourced by the carbonate aquifer will not mitigate these conflicts, only delay their inevitable occurrence; and (e) groundwater production should not be permitted to continue without strict regulatory oversight and appropriate mitigation to affected senior water-right holders and adequate protections to ensure the Moapa dace are protected. If the conflicts with senior water-right holders are adequately addressed, the annual groundwater production from the carbonate aquifer should be managed between 4,000 – 6,000 afy over the long-term.



## **1.0 INTRODUCTION**

This report was prepared on behalf of the Las Vegas Valley Water District (LVVWD) and Southern Nevada Water Authority (SNWA) in response to the Nevada State Engineer's (NSE) Interim Order 1303 (Order 1303) (NSE, 2019) concerning the Lower White River Flow System (LWRFS). The NSE defines the LWRFS as the hydrographic areas (HA) of Coyote Spring Valley (HA 210), Hidden Valley (HA 217), Garnet Valley (HA 216), California Wash (HA 218), Muddy River Springs Area (HA 219), and the northwest portion of the Black Mountains Area (HA 215) (NSE, 2019). Figure 1-1 depicts the boundary of the LWRFS, as designated by the NSE, and the adjacent Kane Springs Valley which is included in this assessment because it is tributary to the LWRFS and contributes to the local recharge.

The LVVWD and SNWA have significant interests in the administration of water rights and management of water resources within the LWRFS. LVVWD is the management entity for the Coyote Springs Water Resources General Improvement District (CSWR GID) located in Coyote Spring Valley (CSV). Within the LWRFS, SNWA owns substantial groundwater rights (11,200 afy) and owns or leases Muddy River surface-water rights (10,663 afy). SNWA also controls over 51 percent of the Muddy Valley Irrigation Company (MVIC) shares through ownership and lease agreements which for 2018 equated to approximately 10,000 af. SNWA interests in the groundwater and surface-water resources of the LWRFS total over 31,863 afy and include points of diversion located in five of the six hydrographic areas designated by the NSE.

This report presents data, technical analyses, and results to address issues raised in NSE Order 1303 concerning water-resource conditions and responses to groundwater production within the LWRFS. SNWA and the LVVWD urge the NSE to consider this report in issuing any temporary or final order concerning the administration of water rights and management of groundwater development in the LWRFS.

### **1.1 Background**

In 1920, all waters of the Muddy River were decreed. The Muddy River plays an important role in the LWRFS because (1) it is the sole source of perennial streamflow; and (2) its headwaters constitute the main regional discharge from the flow system. In 1989, the LVVWD filed applications with the Nevada Division of Water Resources (NDWR) to appropriate groundwater in Coyote Spring Valley. The NSE held administrative hearings on these applications and other applications filed by Coyote Springs Investment, LLC (CSI) during 2001. Subsequent to these hearings, several NSE orders, stakeholder agreements, and NSE rulings were issued. The pertinent details of the relevant documents are summarized in the following sections.

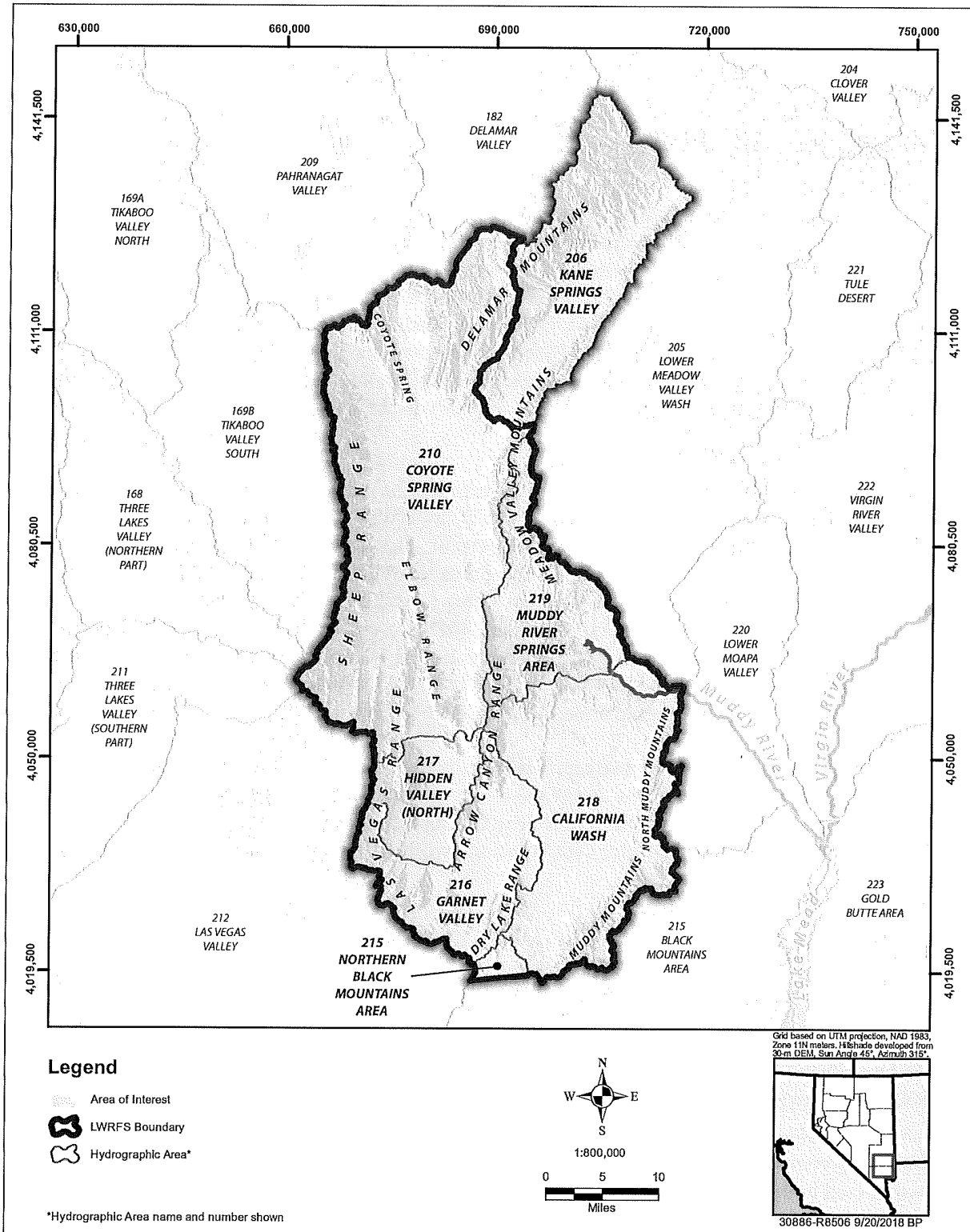


Figure 1-1  
Boundary of the LWRFS

### 1.1.1 1920 Muddy River Decree

The Muddy River and the associated water rights were adjudicated and decreed in 1920 by the Tenth (now Eighth) Judicial District Court of the State of Nevada. The judgment and decree were in the case of Muddy Valley Irrigation Company et al. v. Moapa and Salt Lake Produce Company et al., *In the Matter of the Determination of the Relative Rights In and To the Waters of the Muddy River and its Tributaries in Clark County, State of Nevada*, dated March 12, 1920. The Muddy River Decree adjudicated the entire flow of the Muddy River including its tributaries, springs, headwaters, and other sources of supply. All of the decreed water rights are vested rights acquired by valid appropriation and beneficial use prior to March 1, 1905 and are considered as equal in rank without any party having any priority over another.

The decree specifies the entitlement to the waters of the Muddy River to several individuals and companies who were using the river prior to 1905 and maintained continuous use through the date of the decree. One of those companies is the Muddy Valley Irrigation Company (MVIC) who had certificated water rights in the Upper Muddy River but is, by the decree, entitled to the entire flow of the Muddy River except the flows granted to the other parties.

### 1.1.2 Order 1169

In 2002, the NSE issued Order 1169 holding in abeyance all pending and new applications for the appropriation of groundwater from the carbonate-rock aquifer (hereinafter referred to as the carbonate aquifer) underlying Coyote Spring, Hidden, Garnet, and Lower Moapa valleys, and the Muddy River Springs and Black Mountains areas. In addition, the NSE required a five-year study during which at least 50 percent of the existing groundwater rights in Coyote Spring Valley would be pumped for at least two consecutive years. The NSE stated the purpose of the study and aquifer test was to “...determine if the pumping of those water rights will have any detrimental impacts on existing water rights or the environment.” (NSE, 2002). The NSE directed the following entities to complete the study:

- LVVWD
- SNWA
- CSI
- Nevada Power Company (hereinafter referred to as Nevada Energy)
- Moapa Valley Water District (MVWD)

Order 1169 also instituted hydrologic monitoring and reporting requirements for the study participants and other water-right owners with points of diversion located in Garnet Valley and the Black Mountains Area. In April of 2002, the NSE granted requests by the Moapa Band of Paiutes (MBOP) and the U.S. Department of Interior to allow the Bureau of Indian Affairs, Fish and Wildlife Service (USFWS), and National Park Service (NPS) to participate in the study.



**1.1.3 2006 Memorandum of Agreement**

In 2006, to facilitate implementation of the Order 1169 study and aquifer test and to ensure protections of senior water rights and the endangered Moapa dace, the SNWA, CSI, USFWS, MBOP and MVWD entered into a Memorandum of Agreement (MOA) that instituted, among other things, Trigger Ranges associated with flows at the Warm Springs West near Moapa, Nevada gage under which pumping restrictions would apply (SNWA, 2006). These Trigger Ranges and the corresponding pumping restrictions are listed in Table 1-1.

**Table 1-1  
Trigger Ranges at Warm Springs West Gage and Corresponding  
Pumping Restrictions**

	SNWA <sup>1</sup>	CSI <sup>1</sup>	MVWD <sup>2</sup>	MBOP <sup>3</sup>
<b>Water Rights considered under MOA (afy)</b>	9,000	4,600	--	2,500
<b>Trigger Ranges (cfs)</b>	<b>Pumping Restrictions (acre-feet per year [afy])</b>			
3.2 or less	Parties meet to discuss and interpret data and plan mitigation measures			
3.0 or less	SNWA & CSI take actions to redistribute pumping		--	--
3.0 to <2.9	< 8,050		--	--
2.9 to <2.8	< 6,000		--	< 2,000
2.8 to <2.7	< 4,000		--	< 1,700
≤ 2.7	< 724		--	< 1,250

<sup>1</sup> SNWA and CSI production from wells MX-5, RW-2, CSI-1, CSI-2 and other CSI wells in Coyote Spring Valley

<sup>2</sup> MVWD pumping restrictions were only for the duration of the NSE Order 1169 aquifer test

<sup>3</sup> MBOP pumping under permit no. 54075

In addition, the MOA established a Hydrologic Review Team (HRT) composed of representatives of each MOA signatory. The HRT is tasked with analyzing hydrologic data and determining, on an annual basis, whether the pumping restrictions under each Trigger Range should be modified.

**1.1.4 Order 1169 Aquifer Test and Order 1169A**

Pumping associated with the aquifer test began in accordance with Order 1169 on November 15, 2010. The aquifer test was completed on December 31, 2012; however, production from SNWA’s MX-5 well continued into April 2013.

During the test, pumping rates of the SNWA MX-5 well ranged from 3,300 to 3,800 gpm and constituted the single largest stress on the carbonate aquifer in the LWRFS. Equipment issues associated with the water treatment facility connected to the well resulted in periods of non-pumping during the test. Production volumes from the MX-5 well totaled 4,131 af and 3,961 af for calendar years 2011 and 2012, respectively. Combined with CSI pumping from wells CSI-1 through CSI-4, a total of 5,331 and 5,102 af were pumped in Coyote Spring Valley during calendar years 2011 and 2012, respectively. Additional production from the carbonate aquifer occurred during the test by MVWD in the Muddy River Springs Area (MRSA) and by several entities in Garnet Valley. A

historical accounting of groundwater production in the LWRFS is presented in Section 4.0. Prior to and during the aquifer test, the study participants implemented a comprehensive hydrologic monitoring program under the direction of NDWR. Data collected under this program were submitted quarterly to NDWR in electronic form and made available to all study participants and the public.

The NSE issued amended Order 1169A on December 21, 2012 (NSE, 2012). In Order 1169A, the NSE declared the aquifer test completed as of December 31, 2012 and solicited information from the study participants regarding the test, impacts, and the availability of water pursuant to the pending applications held in abeyance by Order 1169. The reports submitted by the MOA signatories are summarized in Section 2.0.

#### **1.1.5 NSE Rulings Nos. 6254 through 6261**

In January 2014, the NSE issued Rulings 6254 through 6261 (NSE, 2014a through h). In these rulings the NSE denied all pending applications in the LWRFS and found that “...*the Order 1169 test measurably reduced flows in headwater springs of the Muddy River.*” The NSE also found that “... *the amount and location of groundwater that can be developed without capture of and conflict with senior water rights on the Muddy River and springs remains unclear, but the evidence is overwhelming that unappropriated water does not exist.*” Based on these findings, the NSE ruled that there is no unappropriated groundwater and that the applications would conflict with existing rights and threaten to prove detrimental to the public interest. The NSE also ruled that the basins composing the LWRFS would be jointly managed.

#### **1.1.6 CSWR GID Letter to NSE**

In a letter dated November 16, 2017, the LVVWD, acting in the capacity of the general manager of the CSWR GID, solicited an opinion from the NSE regarding whether Coyote Spring Valley groundwater could sustainably supply water for a project to develop 13,100 acres of land within Coyote Spring Valley. In the letter, LVVWD cited NSE Ruling 6255 in which the NSE concluded “*pumping under the Order 1169 test measurably reduced flows in the headwater Springs of the Muddy River...*” LVVWD further stated that while Ruling 6255 did not invalidate any existing water rights, LVVWD were not convinced that Coyote Spring Valley groundwater could sustainably support the project given the endangered species issues in the Muddy River and impacts to senior water rights. In addition, LVVWD solicited an opinion regarding the extent to which the NSE would be willing to execute subdivision maps for the project if the maps were predicated on the use of groundwater owned by the CSWR GID and developers of the project.

#### **1.1.7 NSE Interim Order 1303**

On January 11, 2019, the NSE issued Order 1303 designating the hydrographic areas composing the LWRFS as a joint administrative unit for the purpose of administering water rights. Order 1303 also held in abeyance any changes to existing groundwater rights and established a temporary moratorium on the review of final subdivision maps. In Order 1303, the NSE also requested input on the following issues from stakeholders with interests in the LWRFS that may be affected by water-rights development (NDWR, 2019):



- (a) The geographic boundary of the hydrologically connected groundwater and surface-water systems comprising the Lower White River Flow System;
- (b) The information obtained from the Order 1169 aquifer test and subsequent to the aquifer test and Muddy River headwater spring flow as it relates to aquifer recovery since the completion of the aquifer test;
- (c) The long-term annual quantity of groundwater that may be pumped from the Lower White River Flow System, including the relationships between the location of pumping on discharge to the Muddy River Springs, and the capture of Muddy River flow;
- (d) The effects of movement of water rights between alluvial wells and carbonate wells on deliveries of senior decreed rights to the Muddy River; and,
- (e) Any other matter believed to be relevant to the State Engineer's analysis.

## **1.2 Purpose and Scope**

The purpose of the work presented in this report is to summarize the current state of knowledge of the LWRFS, including spring discharge, the alluvial reservoir and perennial streamflow in the MRSA.

Specific objectives are to address the issues identified in Order 1303 by:

- evaluating hydrologic responses to the variable stress conditions affecting the LWRFS;
- evaluating the recovery responses associated with the cessation of the 2-year aquifer test;
- identifying trends in the behavior of key hydrologic variables;
- assessing the hydraulic connectivity between pumping centers and various points of interest;
- quantifying the average annual groundwater production from the carbonate aquifer that correspond to pre-selected spring discharge levels; and
- quantifying impacts to SNWA related to Muddy River streamflow depletions.

The scope of work includes a survey of the available information; compilation and analysis of time-series data; and the creation of various maps, tables, and charts to support the analyses and conclusions.

## **1.3 Approach**

The objectives of this work were achieved by completing the following steps:

1. Performing a survey of the information available regarding the LWRFS, including hydrologic stress conditions and responses (Section 2.0).
2. Describing the flow system using the available information, including the interpretations derived from the data collected during the two-year aquifer test (Section 3.0).

3. Compiling and analyzing historical time-series data for natural and anthropogenic stresses affecting the hydrology of the LWRFS (Section 4.0).
4. Using historical time-series data to analyze the hydrologic responses of several variables that describe the historical conditions of the flow system over a period of decades (Section 5.0).
5. Qualitatively and quantitatively assessing the implications of changes in the hydraulic heads of the carbonate aquifer due to groundwater production in the LWRFS (Section 6.0).
6. Quantifying the impacts to SNWA related to Muddy River streamflow depletions caused by groundwater production in the LWRFS (Section 7.0)
7. Using the results of this assessment to respond to NSE requests for stakeholder input regarding several issues described in Order 1303 (Section 8.0).

3.4.1 Surface Water

The primary surface-water features of the LWRFS are located within the MRSA where five spring-complexes and numerous gaining stream reaches form the headwaters of the Muddy River, the only perennial stream within the LWRFS (Figure 3-2). There are additional small springs in Coyote Spring and Kane Springs valleys which discharge groundwater sourced from local recharge; however, these springs are not described in this report because their discharge is known to be minor (Eakin, 1964).

The regional carbonate aquifer is the source of water for the springs and the gaining stream reaches that form the headwaters of the Muddy River (Eakin, 1964; Rowley et al., 2017). Discharge from the springs coalesce with the gaining reaches to form the main channel of the Muddy River just above the USGS Muddy River near Moapa, Nevada (NV) gaging station. Figure 3-2 depicts the location of this gaging station and several other USGS gaging stations. Also depicted are the locations of metered surface-water diversions in the headwaters area. Table 3-1 lists the periods of record for each of the gaging stations.

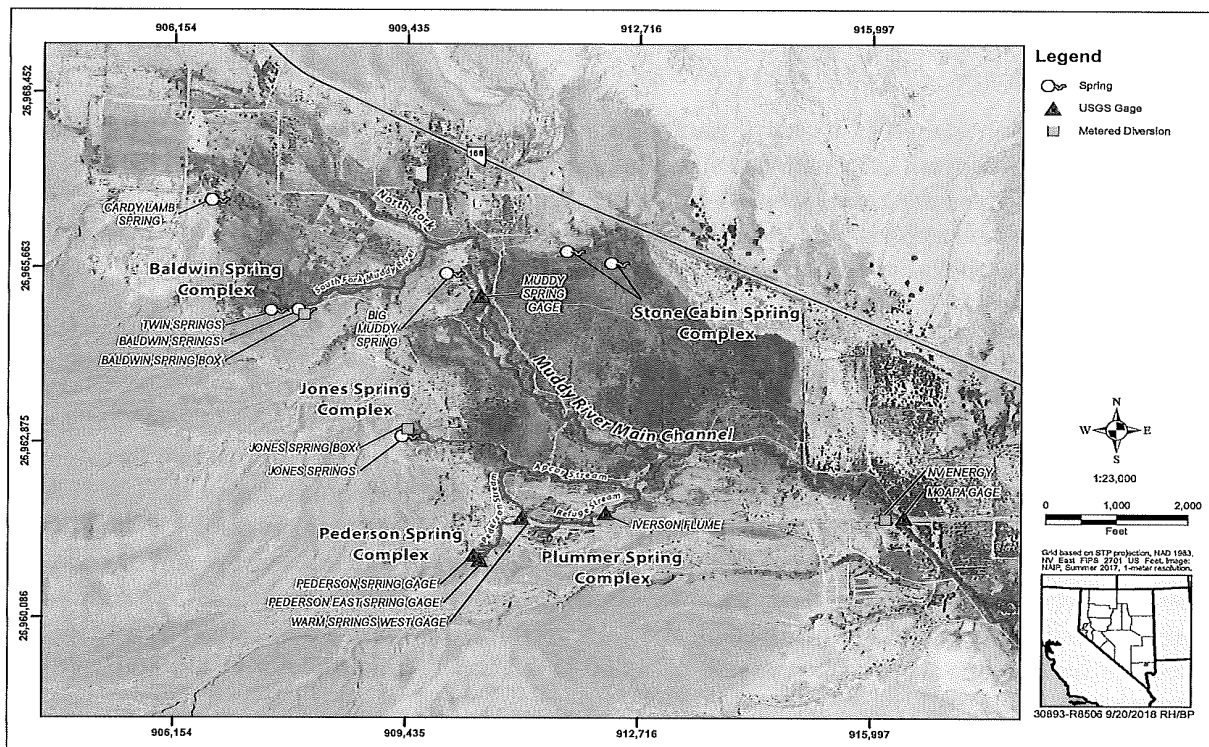


Figure 3-2  
Spring Complexes, Streams, Diversions, and Gaging Stations  
within the Headwaters of the Muddy River

There are three gaging stations that are critical to the analyses presented in this report. Two are associated with the Pederson Spring Complex: Pederson Spring near Moapa, NV and Warm Springs





West near Moapa, NV. The Pederson Spring near Moapa, NV gage is important because it measures flow from the highest elevation spring within the MRSA representing groundwater discharge from the regional carbonate aquifer. The Warm Springs West gage is important because flow triggers have been established at the gage as part of the 2006 MOA (see Table 1-1). The third gaging station is the Muddy River near Moapa gage, which is important because it (1) measures the streamflow at this location, (2) provides the only basis for estimating the total discharge from the carbonate aquifer to the springs area, and (3) has the longest period of record. Details for each are presented in the following sections.

**Table 3-1  
USGS Gaging Stations in the Headwaters of the Muddy River**

USGS Station Number	Gaging Station Name	Period of Record for Daily Average flow
09415900	Muddy Springs at LDS Farm near Moapa, NV (LDS gage)	August 1985 to Present
09415908	Pederson East Spring near Moapa, NV (Pederson East gage)	May 2002 to Present
09415910	Pederson Spring near Moapa, NV (Pederson gage)	October 1986 to Present <sup>1</sup>
09415920	Warm Springs West near Moapa, NV (Warm Springs West gage)	August 1985 to September 1994 June 1996 to Present <sup>2</sup>
09415927	Warm Springs Confluence at Iverson Flume near Moapa, NV (Iverson Flume gage)	October 2001 to Present
09416000	Muddy River near Moapa, NV (Moapa gage)	July 1913 to September 1915 May 1916 to September 1918 October 1944 to Present

Note: <sup>1</sup>Flow data in the latter half of 2003 through April 2004 reflects flows bypassing the gage through a leak in the weir. The weir was replaced in April 2004.

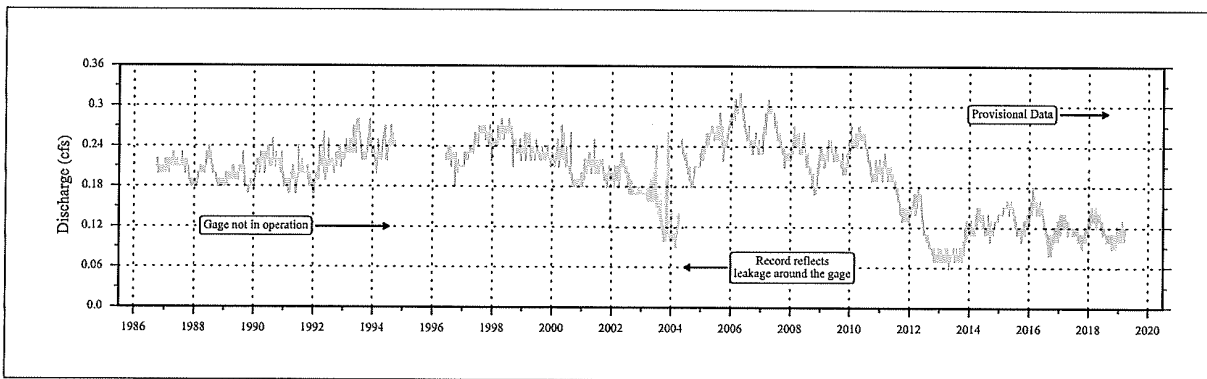
<sup>2</sup>Flow records prior to October 1997 were influenced by an agricultural diversion above the gage.

***Pederson Spring Complex***

The Pederson Spring near Moapa, NV gage (09415910) measures spring discharge from the highest elevation spring in the Muddy River headwaters area. The gage record begins in 1986, but is missing data from 1994 to 1996. The aluminum weir was found to be severely warped and it is speculated this happened when a fire burned through the area in 1994 (SNWA, 2008). In addition, the record includes underreported values from 2003 until April 2004 during which time discharge was observed bypassing the gage. The record from 1994 to April 2004 when the gage was replaced is considered poor quality. Figure 3-3 presents the flow record for the gage for the period 1986 to present. As the highest-elevation spring, it is considered to be the most sensitive to changes in groundwater conditions associated with the regional carbonate aquifer, and, therefore, a good indicator of how these changes affect spring discharge in the MRSA.

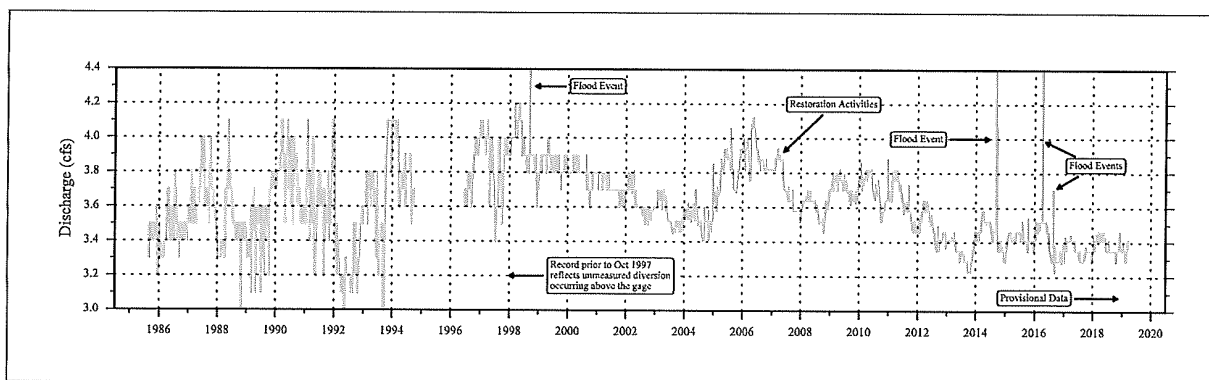
***Warm Springs West near Moapa, NV Gage (09415920)***

The Warm Springs West near Moapa, NV gage (09415920) is a parshall flume that measures the total discharge from the Pederson Spring complex. The period of the continuous record ranges from 1985 to present. Continuous gage records prior to October 1997 are considered unreliable because the flows were influenced by an unmetered agricultural diversion above the gage. Discrete measurements such as those made by Eakin (1964) are also available. These measurements are important because they provide valuable information prior to significant development in the area. Figure 3-4 presents



**Figure 3-3**  
**Pederson Spring near Moapa, NV - Daily Discharge Record (1986 to present)**

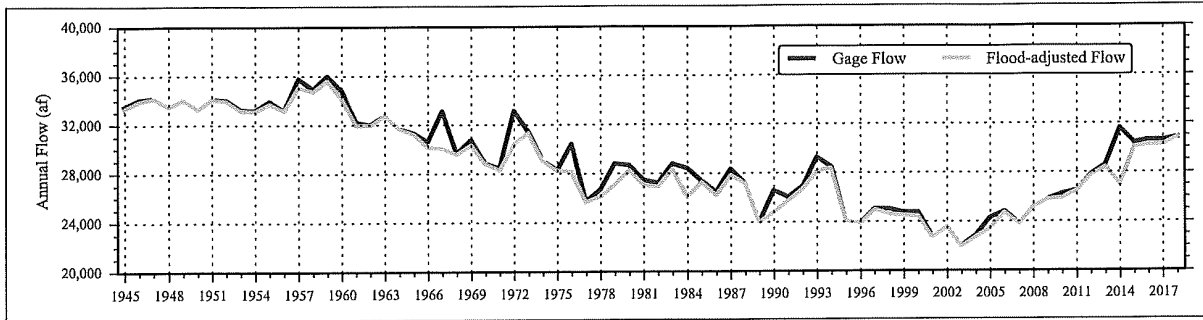
the flow measured at the gage for the period of continuous record. The parties to the MOA established Trigger Ranges at various flow rates at the gage for the purpose of initiating water management actions to protect instream flow rights and habitat for the endangered Moapa dace. The first trigger has been established at 3.2 cfs.



**Figure 3-4**  
**Warm Springs West near Moapa, NV - Daily Discharge Record (1985 to present)**

***Muddy River near Moapa, NV Gage (09416000)***

The USGS Muddy River near Moapa, NV gage (Station No. 09416000; hereinafter referred to as the MR Moapa gage) measures the streamflow contributions from spring complexes, gaining reaches and intermittent flood flows. Streamflow is directly affected by surface-water diversions and ET occurring above the gage. Figure 3-5 presents a time-series chart of the annual streamflow measured at the MR Moapa gage for the period 1945 to 2018. Also presented on the chart is a record of these flows that has been adjusted to remove the influence of intermittent flood flows. These influences were removed from the mean daily flow record using a method that replaces the identified flood flow with the median monthly flow as described in Johnson (1999). The resulting flow record is more representative of actual baseflow conditions at the gage. The flood-adjusted flow record is used in the analyses presented in this report.



**Figure 3-5**  
**Muddy River near Moapa, NV (1945 to 2018)**

The mean annual flow measured at the MR Moapa gage in 1946 was 46.8 cfs (33,900 af). This flow rate is considered the predevelopment baseflow because it predates municipal and industrial surface-water diversions and exports by NVE and MVWD, as well as groundwater development within the MRSA. This baseflow also matches the average mean annual flow when the gage was operated intermittently between 1913 and 1918. During two intervals covering 3-years (July 1, 1913 to June 30, 1915 and October 1, 1916 to September 30, 1917) the average flood-adjusted mean annual flow was 47.0 cfs (34,000 afy), a difference of 100 afy from the 1946 flow rate.

The 1946 pre-development baseflow also corresponds with information compiled by Eakin (1964). Eakin (1964) reported a 25-year average flood-adjusted mean annual flow of 46.4 cfs (33,600 afy) using intermittent data between 1914 and 1962. In addition, Eakin (1964) estimated that approximately 2,000 to 3,000 afy of spring flow was being consumed by phreatophytes between the spring orifices and the gage. Eakin and Moore (1964) examined the MRSA discharge in more detail and concluded that the January measurements of river flow at the MR Moapa gage are the most reliable estimates of discharge to the area as ET above the gage is practically zero during that month. They estimated the mean discharge to be 50.2 cfs, or about 36,000 afy, using data for a period spanning 1945 to 1962. As illustrated by Figure 3-5, the gage flow during pre-development conditions only varied by about 1,000 afy from 1945 to 1955. Starting in the early 1960s, Muddy River streamflow began to decline from the 33,900 afy pre-development baseflow. This decreasing trend continued, reaching a low of about 22,000 af in 2003. By this time, streamflow had declined by over one-third of the pre-development baseflow. Streamflow has since recovered, and by the end of 2018 the mean annual flood-adjusted flow was 30,800 af. The causes of this decline and subsequent recovery are analyzed in Section 5.0.

### 3.4.2 Groundwater

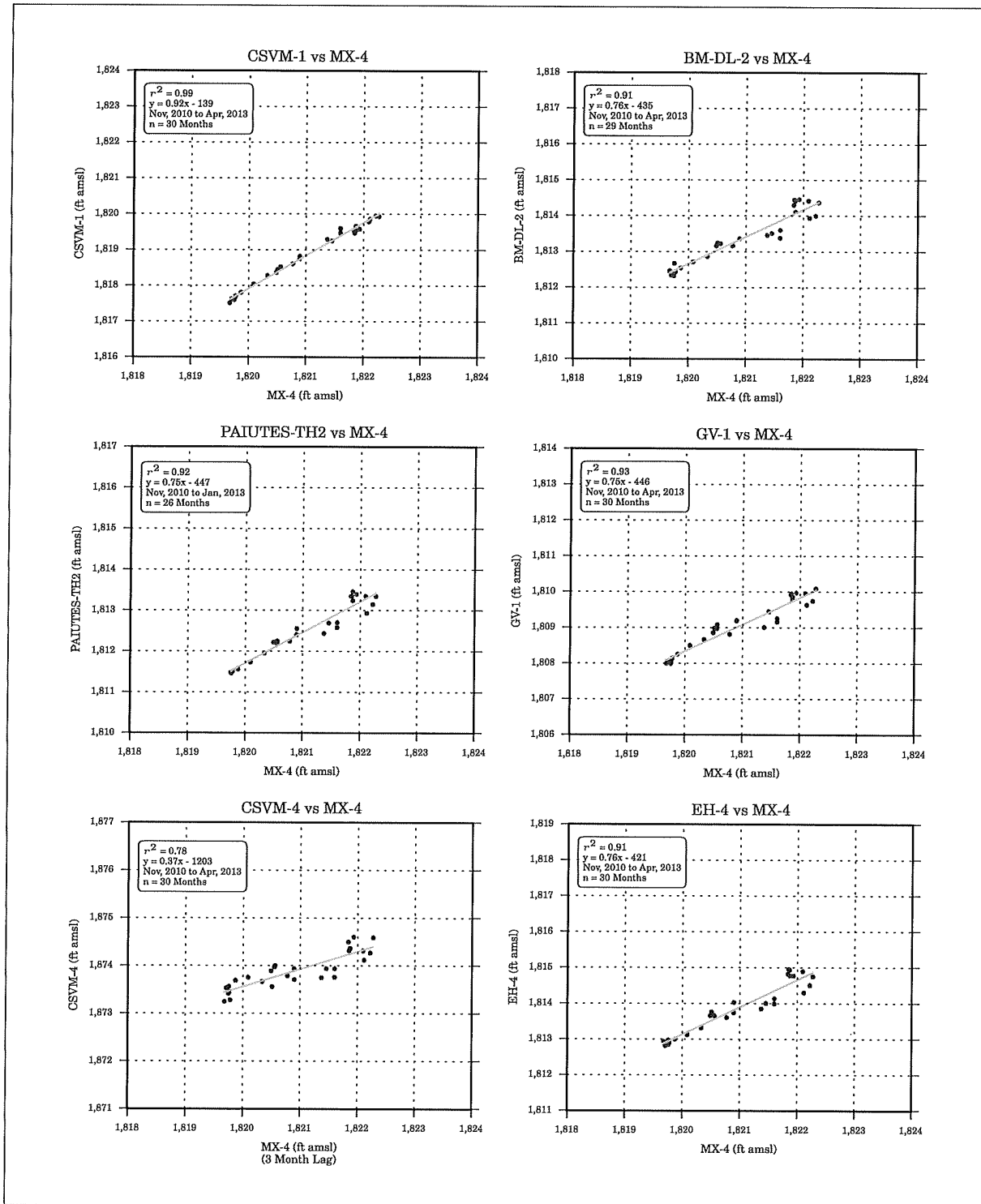
Descriptions of the groundwater characteristics of the LWRFS, including aquifer types and conditions and groundwater occurrence and movement are presented in this section.

An analysis of the correlations of water-level elevations between well MX-4 and other representative carbonate wells located throughout the LWRFS was performed to confirm the widespread pumping responses observed during the 2-year aquifer test. Well MX-4 was selected because it is in close proximity to the primary production well, MX-5, and therefore, strongly reflected the resulting drawdown response. The correlations were developed using monthly data collected from November 2010 to April 2013, inclusive, and are presented as graphs in Figure 5-14. All relationships exhibit linear trends with very high  $R^2$  values ranging from 0.78 to 0.99. As expected, the highest correlation is with well CSVN-1, which is located only 0.5 mile from well MX-4 in Coyote Spring Valley. The highest correlations indicate that most of the decreases in the groundwater levels at the wells during the test period were caused by pumping from well MX-5 and other nearby wells. Correlation with well CSVN-4 is the smallest at 0.78, but still indicates that changes in groundwater levels at this well are also mainly due to pumping associated with the aquifer test. The slopes of the straight lines provide estimates of the drawdown at the selected wells relative to the drawdown in well MX-4 and are indicative of the degree of connection between their respective locations and that of the MX-4/MX-5 wells. A one-foot drawdown in MX-4 corresponds to 0.92 ft drawdown in well CSVN-1, to about 0.76 ft in wells BM-DL-2 and EH-4, 0.75 ft in wells Paiutes-TH2 and GV-1, and 0.37 ft in well CSVN-4. This analysis provides undeniable evidence that (1) the selected wells were all impacted by the MX-5 pumping during the 2-year test, and (2) the basins of the LWRFS in which these wells are located are highly connected.

#### **5.2.3.2 Recovery Period**

Recovery from the pumping stresses imposed during the aquifer test was less than expected, and never reached pre-test levels. There were two primary factors that influenced the initial recovery record observed during 2013: (1) continued carbonate-well pumping, including the MX-5 well in Coyote Spring Valley and (2) the seasonal responses to recharge pulses. The drawdown associated with continued pumping of the MX-5 well muted the recovery response during a period in which water levels typically increase to their seasonal high in April. After the MX-5 well was shut down in mid-April 2013, the recovery response was attenuated by the seasonal water-level decline that starts in May and reaches a low in October. Although these factors complicated the 2013 record, the subsequent years of monitoring provided a clear picture of the recovery response and the following observations are made:

- Carbonate-aquifer water levels have not recovered to pre-test levels.
- Spring flows measured at the Pederson Spring and Warm Springs West gages have not recovered to pre-test levels.
- Recovery achieved its maximum levels between the first quarters of 2015 and 2016.



**Figure 5-14**  
**Correlation of Hydraulic Heads at Well MX-4 with**  
**Hydraulically Connected Carbonate Wells during the Order 1169 Aquifer Test**

**Response to Stakeholder Reports  
Submitted to the Nevada State Engineer  
with Regards to Interim Order 1303**

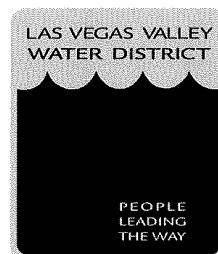
**PRESENTATION TO THE OFFICE OF THE NEVADA STATE ENGINEER**

Prepared by



SOUTHERN NEVADA  
WATER AUTHORITY

LAS VEGAS VALLEY  
WATER DISTRICT



August 2019

# Response to Stakeholder Reports Submitted to the Nevada State Engineer with Regards to Interim Order 1303

Submitted to:  
Timothy Wilson, P.E., Acting State Engineer  
State of Nevada  
Department of Conservation & Natural Resources  
Division of Water Resources  
901 S. Stewart Street, Suite 2002  
Carson City, Nevada 89701

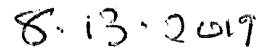
Pertaining to:  
Nevada State Engineer  
Interim Order 1303

August 2019

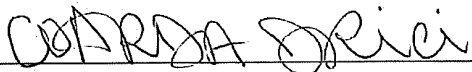
Prepared by:  
Southern Nevada Water Authority and  
Las Vegas Valley Water District  
Water Resources and Resources & Facilities Departments  
P.O. Box 99956  
Las Vegas, Nevada 89193-9956



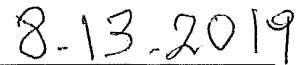
Andrew G. Burns, Water Resources Division Manager



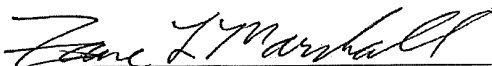
Date



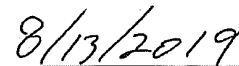
Warda Drici, Hydrologist



Date



Zane L. Marshall, Director, Resources & Facilities



Date



## 2.0 ISOLATED FLOW PATHS AND LWRFS BOUNDARY FLOW

Data do not support interpretations of hydraulically-isolated flow paths, capture zones, or structural blocks within the LWRFS. Using terms like “hydraulically isolated” or “barrier to groundwater flow” implies there is no hydraulic communication (flow or pressure response) from one part of the carbonate aquifer to another. In fact, what has been observed throughout the LWRFS domain is a high-degree of hydraulic connectivity as discussed and presented in Burns et al. (2019, pp. 5-6 to 5-18). Various Stakeholders have asserted that there are carbonate rocks within the LWRFS that are hydraulically isolated from the carbonate aquifer, which is the source of discharge to the Muddy River Springs Area (MRSA). Others have asserted new interpretations of the LWRFS flow regime. These assertions are based on erroneous interpretations of the hydrogeologic framework, hydraulic gradients, or other speculative lines of evidence, and are addressed in the following sections.

### 2.1 Northern Coyote Spring Valley

Bushner (2019) asserts that there are “science-based reasons” to exclude Kane Springs Valley and northern Coyote Spring Valley from the LWRFS. Bushner (2019) relies primarily on new geophysical surveys and an implausible interpretation of the hydrogeologic framework in which a new, unmapped fault is postulated in northeastern Coyote Spring Valley. The fault is referred to as the “Northern LWRFS Boundary Fault” and is interpreted to bear a strike perpendicular to the range-front faults of the Delamar Mountains and Meadow Valley Mountains, and the Kane Springs Fault Zone, which is the dominant structural feature in this area. The orientation of the fault also happens to be coincident with the boundary of the two basins.

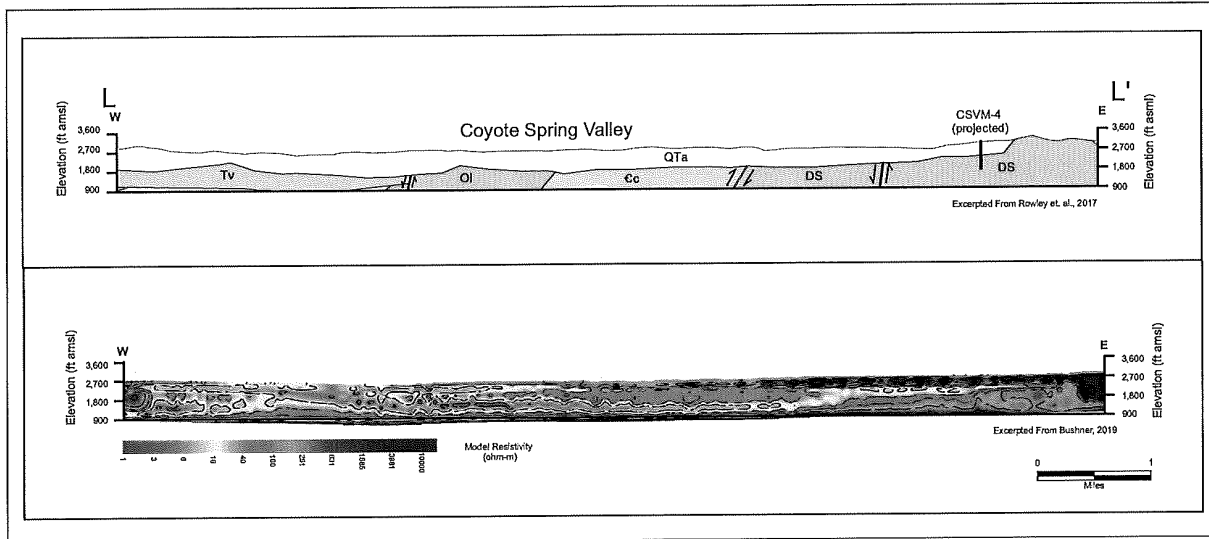
Bushner (2019) presents model interpretations of Controlled Source Audio Frequency Magneto Telluric (CSAMT) data collected along new transects in northern Coyote Spring Valley and Kane Springs Valley. These new transects corroborate previous interpretations of the geologic framework by Rowley et al. (2011) and the structural significance of the range-bounding faults and Kane Springs Fault Zone. Bushner (2019) suggests the so called “*Northern LWRFS Boundary Fault*” is present because the high resistivity rocks associated with the outcropping of carbonate rocks between KPW-1 and CSVM-4 is reflected in Line 10 but not Line 11 of the geophysical transects. Bushner (2019) concludes the presence of a normal fault between the two lines because of this difference. However, the fault can not be discerned in the east-west transect of Line 12 in Bushner (2019). In fact, this transect supports the interpretation of Rowley et al. (2011, cross section L-L’). A comparison of the two is presented in Figure 2-1, which demonstrates their similarity and the absence of the unmapped fault. Applying the Bushner (2019) logic, there should also be a normal fault on the northeast end of this outcrop because transect Line 2 demonstrates its diminishing presence. This report adopts the previous work of Rowley et al. (2011; 2017) and Pampeyan (1993) who describes the area as follows:

*“Splays of the Kane Springs Wash fault cut alluvial fan deposits and mark the north edge of an isolated block of Devonian strata near the mouth of Kane Springs Wash.”*

Interpretations of the framework in this area are important because they inform interpretations of groundwater flow. Bushner (2019) uses the postulated “*Northern LWRFS Boundary Fault*” as part of the rationale for excluding northern Coyote Spring Valley from the LWRFS. However, the



range-front faults and Kane Springs Fault Zone, which likely have hundreds of subsidiary faults and fractures aligned with their northeast-southwest orientation, define the framework geometry in this area. It is along this orientation that Bushner (2019) concludes a groundwater flow path from Kane Springs Valley to northern Coyote Spring Valley (Bushner, 2019). Rather than the unlikely occurrence of a normal fault perpendicular to the basin and all other major faults, the differences between carbonate-aquifer water levels in northern Coyote Spring Valley and the rest of the LWRFS are more likely caused by the fabric of the Kane Springs Fault Zone. The fault zone is not a barrier to groundwater flow, rather it causes local-scale anisotropy that enhances groundwater flow along its orientation, and impedes flow across it.



**Figure 2-1**  
**Comparison of Rowley et al. (2017) Cross Section L-L' with**  
**Bushner (2019) CSAMT Line 12 Interpretation**

Bushner (2019) cites the analysis of water-quality, geochemical, and stable-isotope data reported by CH2M HILL (2006) and uses the results with hydrologic data to conclude that groundwater in wells KPW-1 and CSVM-4 “...are related and on similar flow paths based on TDSS [Total Dissolved Solids Sum] values and other geochemical data.” Citing a reported KPW-1 groundwater age of 29,000 years, temperature of 136 °F, and relatively high concentration of total dissolved solids, Bushner (2019) suggests deep circulation of groundwater in Kane Springs Valley and asserts that the groundwater is of such a different composition than groundwater in Coyote Spring Valley that it is unlikely that the water contributes to the flow in the MRSA. CH2M HILL (2006) reports deuterium values of -104 to -105 permil from the KPW-1 well and an average of -87 permil for local springs in Kane Springs Valley, and suggests the KPW-1 groundwater composition has only a minor mixture with recharge water (i.e., local recharge sourced in Kane Springs Valley).

These data support the Bushner (2019) conclusion that the groundwater is deeply circulated. In fact, groundwater that is 29,000 years old and with such a different isotopic composition than that of the local recharge must be sourced from a great distance away and not Kane Springs Valley. The KPW-1 and CSVM-4 wells are completed within the Kane Springs Fault Zone, and with the upgradient



caldera complexes (Kane Springs Wash, Narrow Canyon and Boulder Canyon calderas and the Caliente Caldera Complex) providing a source of heat and the apparent long-traveled flow path, the high temperature and total dissolved solid concentrations observed in the wells are expected. However, where the groundwater comes from is not as pertinent as to where it is going. Stated differently, the groundwater flow does not stop at the Kane Springs Valley hydrographic basin boundary, rather it flows into Coyote Spring Valley where it mixes with other waters along a flow path to the regional discharge area in the MRSA.

Bushner (2019) states that groundwater in wells KPW-1 and CSV-4 are “...on similar groundwater flow paths...” But to where one must ask? There is only one correct answer to this question: groundwater flows downgradient to areas of lesser potential. Bushner (2019) cites CH2M HILL (2006) for an explanation as to where it does not flow; however, the quote is either misrepresented or misunderstood. It is as follows:

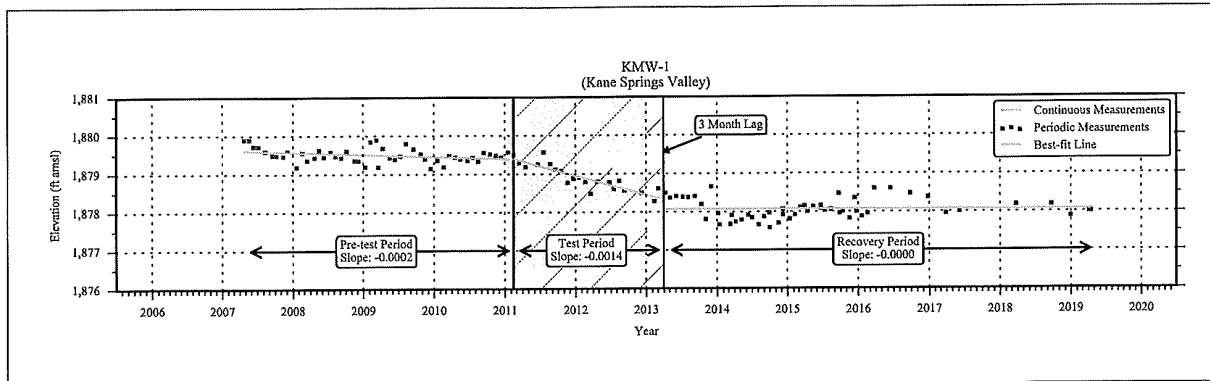
*“A comparison of these chemical and isotopic relationships with Big Muddy Springs and particularly Rogers Spring and Blue Point Spring indicates that the groundwater from KPW-1, assumed representative of the KSV groundwater, is too strongly attenuated with CSV to be identifiable in these springs.”*

In this quote, the authors recognize that groundwater from Kane Springs Valley, the type observed in well KPW-1, that flows into Coyote Spring Valley mixes with other sources of groundwater (i.e., Pahrangat and Delamar valleys) flowing into or sourced within Coyote Spring Valley (i.e., local recharge). This mixing of sources of different composition and volumes creates a water type that is slightly different from each of the original sources. The compositions of the original sources are indeed attenuated through this mixing process to yield the composition that is observed in the MRSA discharge. Further, the groundwater contribution from Kane Springs Valley is much smaller than the sum of contributions from the other sources. Therefore, it is expected that the end-member composition of groundwater discharging in the MRSA is different than that of KPW-1 groundwater and that the KPW-1 groundwater is not “*identifiable*” in this mixed water.

While it is true that the Kane Springs Fault Zone and associated faults in northern Coyote Spring Valley impede groundwater flow across them, they do not prohibit groundwater flow. Further, if there is pumping on the upgradient side of the faults, drawdown will reduce the gradient and groundwater that would otherwise flow southward in the LWRFS would be captured as a result. Pumping on the downgradient side causes the gradient to increase as drawdown reaches the boundary; consequently, more flow across the fault is induced. The effects of the latter were observed as water-level declines in KMW-1, which are presented in Figure 2-2, and discussed in several other Stakeholder reports (Davis and Lazarus, 2019; USFWS, 2019; Myers, 2019). This is discussed more in Section 3.0 of this report.

## **2.2 Central Coyote Spring Valley**

Reich and Moran (2019) present model interpretations of CSAMT data collected along new transects in central Coyote Spring Valley (A-A' and B-B') and western Upper Moapa Valley (a.k.a, MRSA; C-C'). These models corroborate the interpretations of previous investigators in which the northern extent of the Arrow Canyon Range plunges into eastern-central Coyote Spring Valley forming a



**Figure 2-2**  
**KMW-1 Response to Order 1169 Aquifer Test**

structural block of carbonate rocks (i.e., horst) with shallow basins on either side (i.e., grabens) (Page et al., 2006; Rowley et al., 2011; Rowley et al., 2017). The shallow basin on the west side of this structural block is bounded by the Elbow Range to the west (Figure 2-3). Within this shallow basin, Reich and Moran (2019) infer a new fault and assert that the north-south orientation of this fault and the basin-bounding faults, coupled with the presence of the structural block of carbonate rocks, provide evidence for two flow paths:

*“One flow path on the west side supports regional groundwater flow toward Hidden Valley, while the eastern flow path supports regional groundwater flow toward Muddy River Springs Area and California Wash.”*

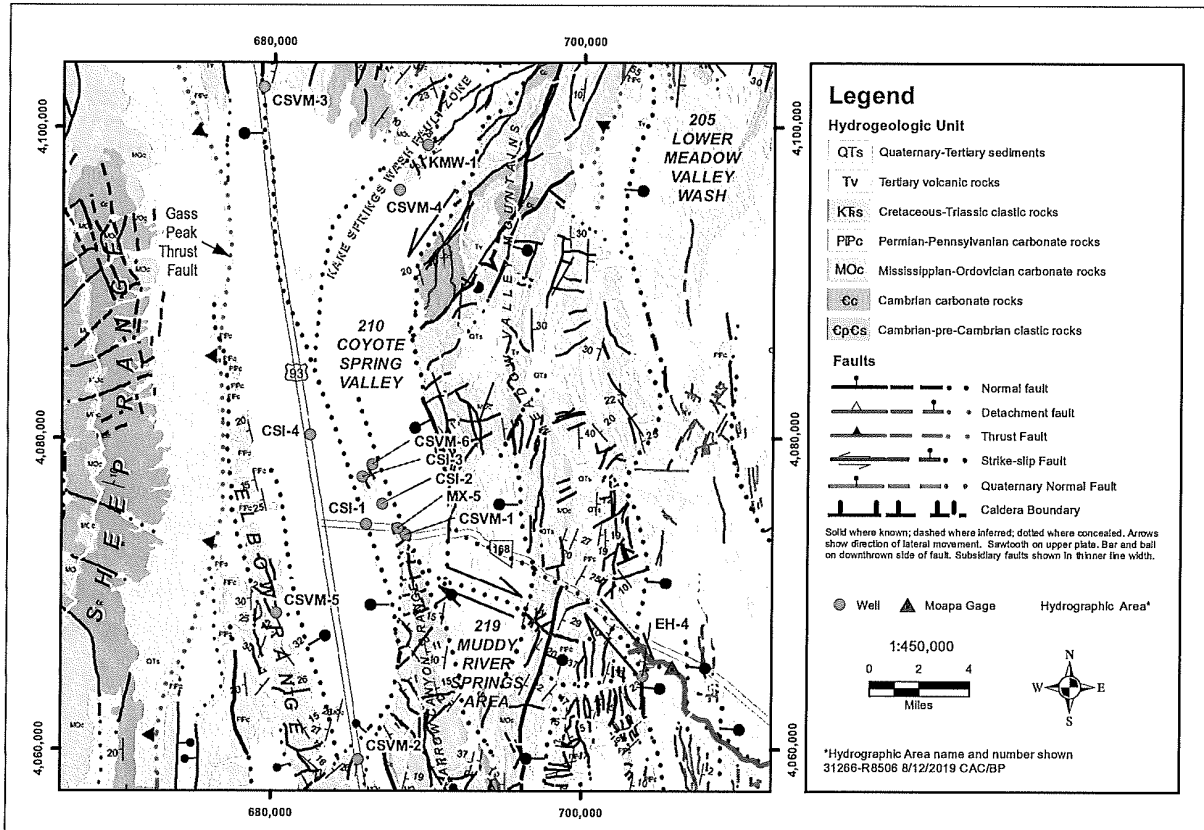
Reich and Moran (2019) go on to assert that the structural block:

*“...results in a division of groundwater inflow to Coyote Spring Valley from Pahranaagat, Delamar, and Kane Springs Valley. Interbasin groundwater outflow from Coyote Spring Valley is to both the Muddy River Springs Area and Hidden and Garnet Valleys.”*

The hydrogeologic framework and stable-isotope data within the LWRFS support a partitioning of groundwater flow from Coyote Spring Valley southeast to the MRSA and south to Garnet Valley (see additional discussion in Section 2.3). However, Reich and Moran (2019) rely on the framework to also conclude the following:

*“Production wells CSI-1, -3, and -4, which are on the same side of the structural block as CSVN-2, -3, -4, -5, and CE-VF-2 monitoring wells, are effectively isolated from groundwater resources in the eastern portion of Coyote Spring Valley. Therefore, groundwater pumping in CSI-1, -3, and -4 will not likely cause impact to groundwater resources in the Muddy River Springs Area.”*

*“Coyote Spring Valley monitoring wells CSVN-2, -3, -4, -5 (Figure 20), and CE-VF-2 (Appendix E) do not show a response to pumping that occurred in either Muddy River Springs Area or the eastern portion of Coyote Spring Valley.”*



**Figure 2-3**  
**Hydrogeologic Map of Central Coyote Spring Valley and Selected Carbonate Production and Monitor Wells**

Reich and Moran (2019) suggest the faults that control the geometry of the framework in this area act as barriers to groundwater flow in the west to east direction. As discussed in Burns et al. (2019, pp. 3-11 to 3-13) monitor wells CSVM-3 and CSVM-5 are completed within the structural blocks composing the south Delamar Mountains and Sheep Range, respectively, and not the Coyote Spring Valley structural basin. The groundwater elevation in CSVM-3 is more than 320-ft higher than the nearest wells, CSVM-4 and KMW-1. The CSVM-5 groundwater elevation is about 235-ft higher than wells on the valley floor. The hydrogeologic settings and disparate groundwater elevations indicate poor hydraulic connectivity between these wells and the carbonate aquifer underlying the valley floor. It is for these reasons that wells CSVM-3 and CSVM-5 did not respond to pumping stresses associated with the Order 1169 aquifer test, not for the reasons suggested by Reich and Moran (2019).

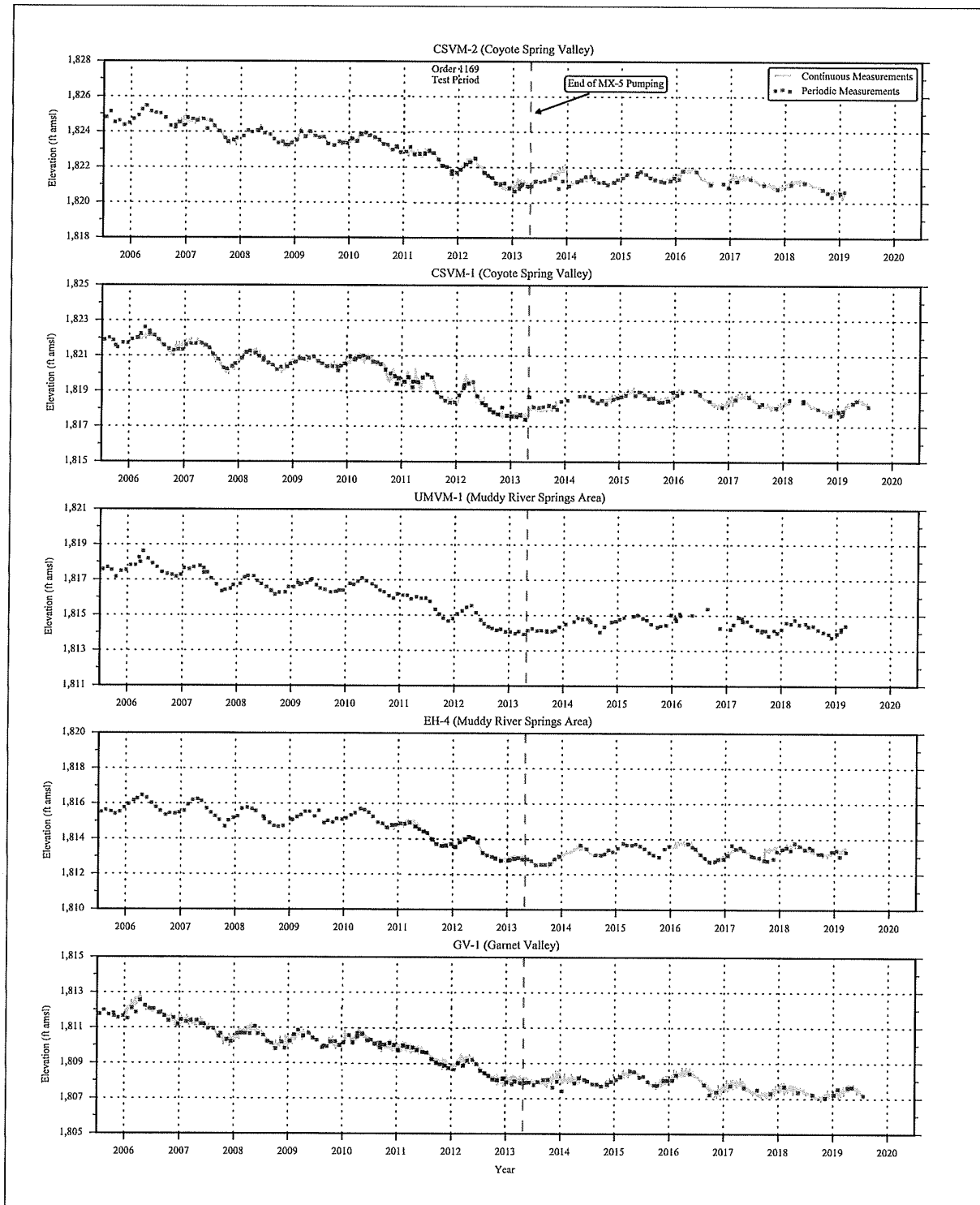
The available data do not support the conclusion by Reich and Moran (2019) that monitor wells CSVM-2 and CSVM-4 did not respond to pumping that occurred in the MRSA or eastern portion of Coyote Spring Valley. Bushner (2019) also suggests CSVM-4 (and KMW-1) did not respond to these pumping stresses. However, the responses in CSVM-4 were identified by several investigators (Davis and Lazarus, 2019; USFWS, 2019; Myers 2019) and are discussed in Burns et al. (2019, pp. 5-6 to 5-18). Responses observed in KMW-1 are also discussed in Section 2.1 of this report.

Monitor well CSVM-2, which as Reich and Moran (2019) report, is within the same structural block as production wells CSI-1, CSI-3, and CSI-4, and responds to natural and anthropogenic stresses in the same manner as all the other LWRFS wells completed in the carbonate aquifer. Figure 2-4 presents time-series charts of groundwater elevations measured in monitor wells CSVM-2, CSVM-1, UMVM-1, EH-4, and GV-1. These charts present the responses observed in the following wells in the spatial order of Coyote Spring Valley (CSVM-2 and CSVM-1) on the western side, to the MRSA (UMVM-1 and EH-4) to the east, and Garnet Valley (GV-1) to the south. It is abundantly clear from these charts that CSVM-2 responds in the same manner as all the other wells regardless of the stresses and despite their wide distribution throughout the LWRFS.

The water-level records for Coyote Springs Investment, LLC (CSI) production wells CSI-1, CSI-3, and CSI-4, which Reich and Moran (2019) claim are isolated from the rest of the LWRFS, are conspicuously absent from their report. It is, therefore, unclear how they reached the conclusion that the wells did not respond to pumping. The water-level data for these 3 wells are available on the Nevada Division of Water Resources (NDWR) website and the static measurements are presented in Figure 2-5. Although the records are poor because they are incomplete, the measurements taken pre- and post-Order 1169 aquifer test are informative and indicate water-level declines of 1.70, 3.69, and 2.14 ft in wells CSI-1, CSI-3, and CSI-4, respectively. The measurements used to compute these declines are listed in Table 2-1. It should be noted that the declines for CSI-1 and CSI-4 are apparently small because the post-test measurement was actually taken prior to the end of the test and 1-2 months before measurements in the other wells. Regardless, the responses of the CSI production wells are consistent with those observed in Coyote Spring Valley monitor wells during the same approximate time period. Well CSVM-1, which Reich and Moran (2019) acknowledge responded to the 2-year aquifer test, is shown in Figure 2-5 for comparison. The hydrographs of all 3 CSI wells and CSVM-1 exhibit the same general shape with the greatest declining trend occurring during the 2-year aquifer test, and the response to the MX-5 shutdown (01/15/2012) and restart (04/23/2012) in the middle of the test is unmistakable. These results indicate the CSI production wells are not hydraulically isolated from the rest of the valley or other LWRFS basins.

Lastly, Reich and Moran (2019) rely on their groundwater budget and interpretation of the geologic framework to assert that “...up to 5,280 AFY can be produced from the western side of Coyote Spring Valley without impact to the Muddy River Springs Area.” In their groundwater budget, this 5,280 afy is considered recharge that is locally derived from the Sheep Range which bounds Coyote Spring Valley to the west. If this recharge was indeed the source of water for CSI-1, CSI-3, and CSI-4, one would expect the hydrographs for these wells to be similar to monitor wells CSVM-5 (Burns et al., 2019, p. 5-8), which lies between the wells and the recharge source, and DDL-2 in Tikaboo Valley South which is located on the west side of the Sheep Range (see Figure 2-7). These wells are completed in the carbonate aquifer; however, the records for the CSI wells bear no resemblance to the records of these wells which are located directly downgradient of the recharge areas. This indicates that the CSI wells are not exclusively sourced by recharge from the Sheep Range and that the area is not hydraulically isolated from the rest of the LWRFS.

In conclusion, the available data indicate the faults and structural block composing the framework in east-central Coyote Spring Valley have no attenuating influence that would isolate pumping effects from CSI production wells to just the west side of Coyote Spring Valley.



**Figure 2-4**  
**Water-Level Responses in Representative LWRFS Carbonate Monitor Wells**

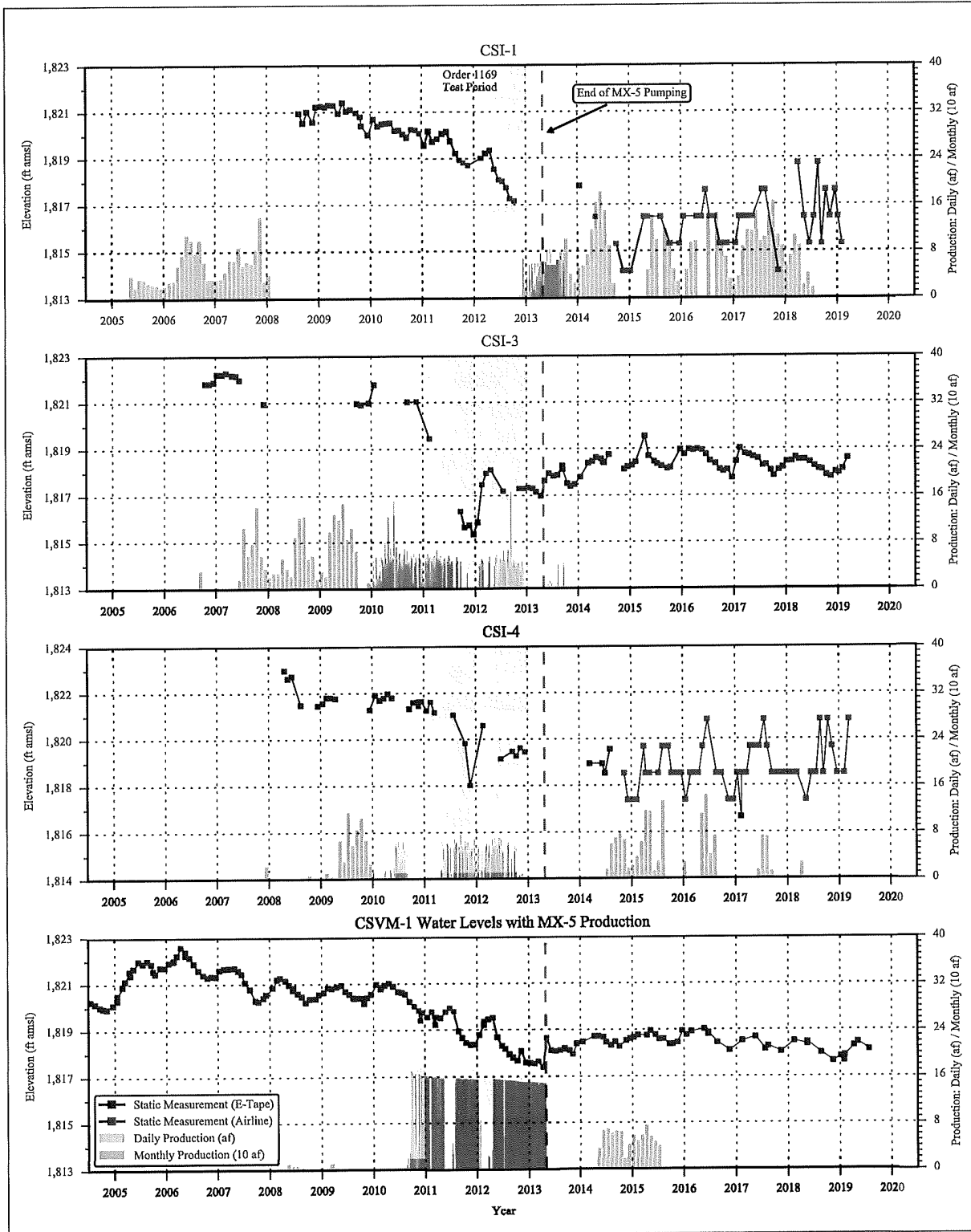


Figure 2-5  
CSI-1, CSI-3, CSI-4 and CSVM-1 Static Water-Level Measurements



### 2.3 Garnet Valley / California Wash

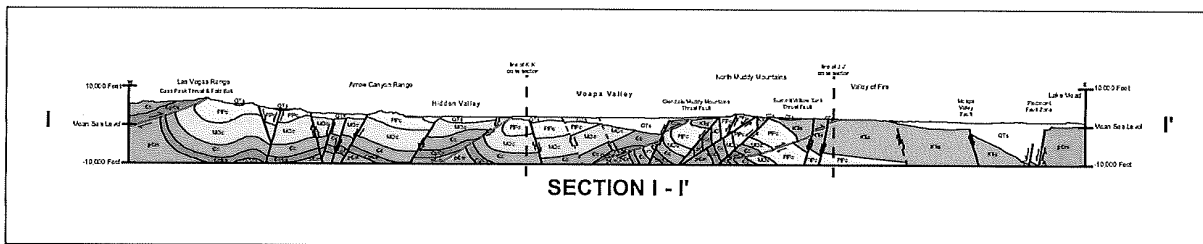
The available data do not support the interpretation of Smith and Terrell (2019) that Garnet Valley is isolated from the southeastern portion of the LWRFS by the Dry Lake thrust fault, nor do the data support the interpretation of Johnson and Mifflin (2019) that the California Wash basin is hydraulically isolated from other LWRFS basins.

The Dry Lake thrust fault strikes north-south along the western front of the Dry Lake Range. As illustrated by the hydrogeologic cross section (I-I') presented in Figure 2-6, the fault effectively increased the thickness of the carbonate-rock sequence, but did not juxtapose these rocks with lower permeability rocks as did the Gass Peak thrust on the west side of the Las Vegas Range or the Glendale/Muddy Mountain thrust fault on the western front of the Muddy Mountains. In the cases of the latter two, low permeability rocks (Precambrian-Cambrian siliciclastic rocks in Las Vegas Range; Triassic-Cretaceous clastic rocks in Meadow Valley Mountains) create boundary conditions in which groundwater flow is unlikely. The Dry Lake thrust fault itself does not appear to impede flow because carbonate-aquifer groundwater elevations on each side of the fault are essentially the same. Wells PAIUTES-M3 (located on the west side of the fault) and PAIUTES-TH2 (located on the east side of the fault) both had the same elevation of 1,812 ft amsl on 3/31/2019 (Burns et al., 2019, p. 3-12).

**Table 2-1  
Water-Level Declines in Select Coyote Spring Valley Wells**

Well	Pre-Test Measurements		Post-Test Measurements		Water-Level Decline (ft)
	Start Date	Water Level (ft amsl)	End Date	Water Level (ft amsl)	
CSVM-1	10/18/2010	1,820.03	01/09/2013	1,817.57	2.46
CSVM-2	10/18/2010	1,823.01	01/15/2013	1,820.65	2.36
CSI-1	10/18/2010	1,820.25	11/07/2012	1,818.55	1.70
CSI-3	09/15/2010	1,821.03	01/09/2013	1,817.34	3.69
CSI-4	10/18/2010	1,821.60	12/11/2012	1,819.46	2.14

Note: Water-level declines for CSI-1 and CSI-4 are apparently low because the end-date measurements were taken prior to the end of the aquifer test and 1-2 months before measurements taken at the other wells.



**Figure 2-6  
Hydrogeologic Cross Section I-I' of Rowley et al. (2011)**



Thomas (2011) addressed the sources of groundwater in Hidden and Garnet valleys and California Wash and concluded the sources could not be different based on observations of their deuterium and oxygen-18 isotopic compositions. Thomas (2011) summarized the observations and his conclusions regarding these basins as follows:

*Deuterium and oxygen-18 data for groundwater in carbonate wells in Hidden and Garnet Valleys (deuterium values ranging from -97.5 to -96.0 permil and oxygen-18 values ranging from -13.70 to -12.75 permil) are significantly more negative than the isotopic composition of local recharge water to the Sheep Range (average deuterium and oxygen-18 values of -92.7 and -12.83 permil) and Delamar Range (average deuterium and oxygen-18 values of -88.9 and -12.22 permil) the two main recharge areas near Hidden and Garnet valleys (Thomas and Mihevc, 2007, 2011). Furthermore, the isotopic composition of these groundwaters is similar to that of groundwater in Coyote Springs Valley and the Muddy River Springs area (discharge weighted average deuterium and oxygen-18 values of -97.8 and -12.92 permil). Thus, the most likely source of this groundwater is groundwater in the carbonate-rock aquifers of the WRFS from the Coyote Springs Valley and Upper Moapa Valley areas.*

*The two carbonate well waters in California Wash have deuterium and oxygen-18 values of -99.0 and -13.50 and -99.0 and -13.40 permil, and since Upper Moapa Valley carbonate aquifer groundwater has deuterium values that range from -99.0 to -96.5 permil and oxygen-18 values that range from -13.05 to -12.45 permil (Thomas and Mihevc, 2007), the isotopic differences between the groundwaters in these two areas is not different enough (analytical uncertainty for deuterium is +/- 1.0 permil and for oxygen-18 is +/- 0.1 permil) that these waters would be from different sources. The more negative oxygen-18 values of the California Wash waters than the Upper Moapa Valley waters may indicate slightly less evaporation of these waters during recharge than the Upper Moapa Valley groundwater. Furthermore, the groundwater in Hidden and Garnet valleys is isotopically similar to Upper Moapa Valley groundwater so these two potentially different sources cannot be differentiated on the basis of deuterium and oxygen-18 data.*

Johnson and Mifflin (2019) relied upon a “...groundwater scoping-model exercise...” that incorporated a domain encompassing almost the entirety of east-central to southern Nevada to delineate an expedient boundary that places California Wash (and the Moapa Band of Paiute wells), and Hidden and Garnet valleys in a separate “capture zone” than the rest of the LWRFS. The heavily-qualified model was based on numerous assumptions, gross simplifications of the hydrogeologic framework, and unverified hydrologic inputs. This renders the output and any conclusions drawn from the results unreliable. The “scoping-model exercise”, which involved almost a quarter of the state and apparently completed in two weeks, was unnecessary because the results of the Order 1169 study and aquifer test provide answers to the questions posed by the NSE. Rather than focus on the details of this “scoping-model exercise”, the following discussion addresses the fatal flaws of the analysis and the conclusions drawn from it.

Within the LWRFS, Johnson and Mifflin (2019) postulate a boundary that separates Coyote Spring Valley and the MRSA from the remaining four basins, with the former “tributary” to the MRSA and



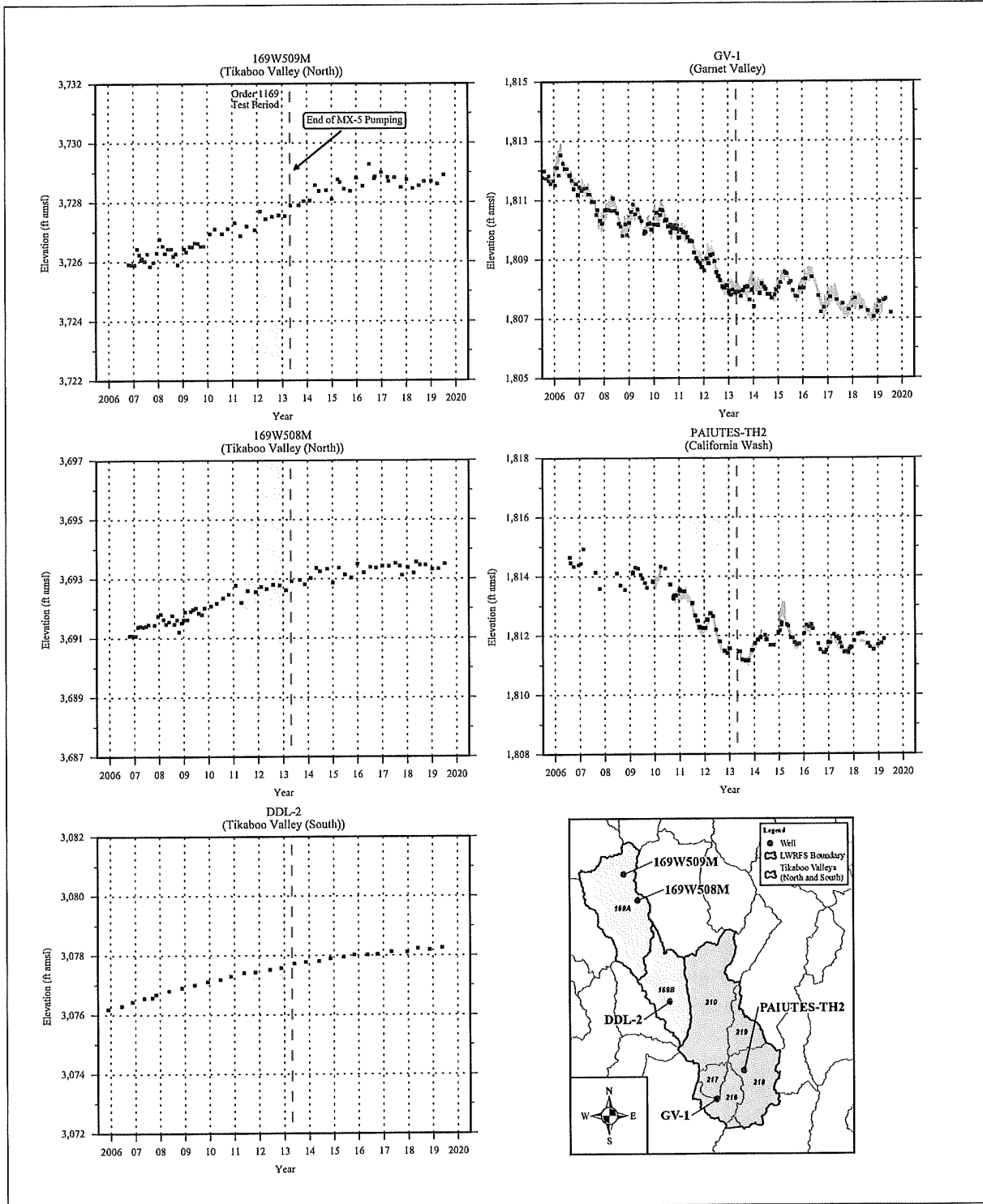
the latter “*tributary*” to the Las Vegas Valley. In this interpretation, groundwater in Hidden and Garnet valleys, the Black Mountains Area, and California Wash is apparently sourced from the north and west of Coyote Spring Valley, with flow paths crossing through the Gass Peak thrust fault and the low-permeability Precambrian-Cambrian siliciclastic rocks described previously. These rocks are widely considered the impermeable basement of the carbonate-rock sequence and often referred to as the “Lower Clastic Aquitard” or “Lower Clastic Confining Unit” (Winograd and Thordarson, 1975; DOE, 1997; Belcher et al., 2001). Figure 2-6 presents hydrogeologic cross section I-I’ from Rowley et al. (2011) that depicts the distribution of these rocks in the area of flow postulated by Johnson and Miffilin (2019). The rocks have been mapped at the surface and lie just below the surface where the supposed flow crosses into Coyote Spring, Hidden, and Garnet valleys.

If the Johnson and Miffilin (2019) interpretation were correct, one would expect water levels in Garnet Valley and California Wash to respond like wells along their postulated flow paths, not like the rest of the wells in the LWRFS. Figure 2-7 presents time-series plots of groundwater elevations for monitor wells 169W509M and 169W508M located in Tikaboo Valley North, well DDL-2 located in Tikaboo Valley South, and GV-1 and PAIUTES-TH2 located in Garnet Valley and California Wash, respectively. Groundwater elevations in Tikaboo North and South valleys range from about 1,260 to over 1,900 ft higher than the wells in the LWRFS, and the time-series trends of these wells bear no resemblance to those in the LWRFS. This is further repudiation of the Johnson and Miffilin (2019) interpretation.

The most damning evidence debunking the interpretations of Johnson and Miffilin (2019) are the results of the Order 1169 aquifer test. Groundwater levels measured in well PAIUTES-TH2 respond to natural and anthropogenic stresses in the same manner as all other LWRFS wells completed in the carbonate-aquifer (Myers, 2019; Smith and Terrell, 2019; Reich and Moran, 2019; Bell and Roy, 2019; Roerink, 2019; Bushner, 2019; Davis and Lazarus, 2019; Burns et al., 2019; Marshall and Williams, 2019; Macrae, 2019; Waddell, 2019; USFWS, 2019; NSE 2002, 2012, 2014 a through h, 2019). The exceptions are those wells completed in the upthrown structural blocks of mountain ranges (e.g., CSVN-3, CSVN-5). In fact, groundwater levels measured in PAIUTES-TH2 exhibit some of the highest correlations with groundwater levels in the MRSA (well EH-4;  $R^2=0.97$ ) and pumping levels measured in the Coyote Spring Valley MX-4 well during the aquifer test (well MX-4;  $R^2=0.92$ ) (Burns et al., 2019, pp. 5-12 and p. 5-18).

## **2.4 Boundary Flow to Las Vegas Valley**

In the interpretation of Johnson and Miffilin (2019), groundwater flows through Garnet Valley into California Wash where it does a u-turn and flows back to the west and Las Vegas Valley. They postulate an outflow to Las Vegas Valley of 40,000 afy. Reich and Moran (2019) also suggest outflow to Las Vegas Valley when they state that “*Groundwater outflow from Coyote Spring Valley towards Hidden and Garnet Valleys eventually discharges toward the Black Mountains Area and the Las Vegas Shear Zone....*” However, any outflow to Las Vegas Valley would be from the carbonate aquifer to the basin-fill, which is 3 to 4 kilometers thick north and west of Frenchman Mountain (Langeheim et al., 2001). One must ask, where this groundwater discharges in the Las Vegas Valley? It surely does not flow west and into the Las Vegas Principal Aquifer; it would have to flow upgradient through the Las Vegas Valley Shear Zone and its associated fine-grained materials, which are of low permeability.



**Figure 2-7**  
**Water-Level Responses in Representative Carbonate Monitor Wells**  
**in the LWRFS and Tikaboo Valleys (North and South)**



NDWR Well Driller's Reports indicate fine-grained materials are widely distributed throughout eastern Las Vegas Valley. Loeltz (1963) completed an investigation of the area in the vicinity of the Nellis Air Force Base (NAFB) to assess production well sites that would serve the water demands of the base. Loeltz (1963) concluded that "...the amount of water passing through the area under natural conditions is small" and "...wells having specific capacities of a few gallons per minute per foot of drawdown are not likely to be developed in the immediate area of the base." The U. S. Air Force developed three well fields, one 5.5 miles west of NAFB (Desert Wells), one on NAFB (Base Wells), and one east of NAFB (Area II Wells) (Grumbach, 1989). Sustainable production rates were highest in the western well field, ranging from 430 to 610 gpm, and lowest in the eastern well field with rates ranging from 110 to 250 gpm (Grumbach, 1989). It is telling that all municipal supply wells in the Las Vegas Valley are located in central, west, and northwest Las Vegas Valley and not on the eastern side where the low-permeability, fine-grained sediments are prevalent. This is further evidence that any significant groundwater flow from Garnet Valley to Las Vegas Valley is unlikely.

Lastly, a new well was recently completed in carbonate rocks near Apex, Nevada at the MMB Apex Auction site. This well was completed in March 2019 to 870 ft bgs, and the static depth to water was measured at 510 ft bgs after the well was constructed (NDWR Well Driller's Report 131985). The ground-surface elevation at the well was determined using a Digital Elevation Model (DEM) based on Light Detection and Ranging (Lidar) elevation data from calendar year 2016. The elevation extracted from the DEM at the location of the well site was 2,356 ft amsl with an accuracy of 0.64 ft. The groundwater elevation is estimated to be 1,846 ft amsl. Figure 2-8 presents the location and groundwater elevation of the MMB Apex Auction well with wells located in Garnet Valley and Black Mountains Areas that are also completed in the carbonate aquifer. The groundwater elevation in the new well ranges between 34 to 38 ft higher than those in Garnet Valley and the Black Mountains Area. This is further evidence that outflow from Garnet Valley to Las Vegas is highly unlikely.

## 2.5 Conclusions

The interpretations of Smith and Terrell (2019), Johnson and Mifflin (2019), and Reich and Moran (2019) are unsupported by the available data, and contrary to all previous scientific investigations. The available data all indicate the following:

- northern Coyote Spring Valley is hydraulically connected with Kane Springs Valley and the remainder of the LWRFS;
- the normal faults defining the shallow basin west of the structural block of carbonate-rocks in central Coyote Spring Valley, and the rocks themselves, are not barriers to groundwater flow;
- the Dry Lake thrust is not an important feature with respect to influencing groundwater flow;
- Garnet Valley is not hydraulically isolated from the rest of the LWRFS;
- California Wash basin is not only part of the LWRFS, but is highly connected to the MRSA;
- outflow to Las Vegas Valley is highly unlikely and at most, insignificant.

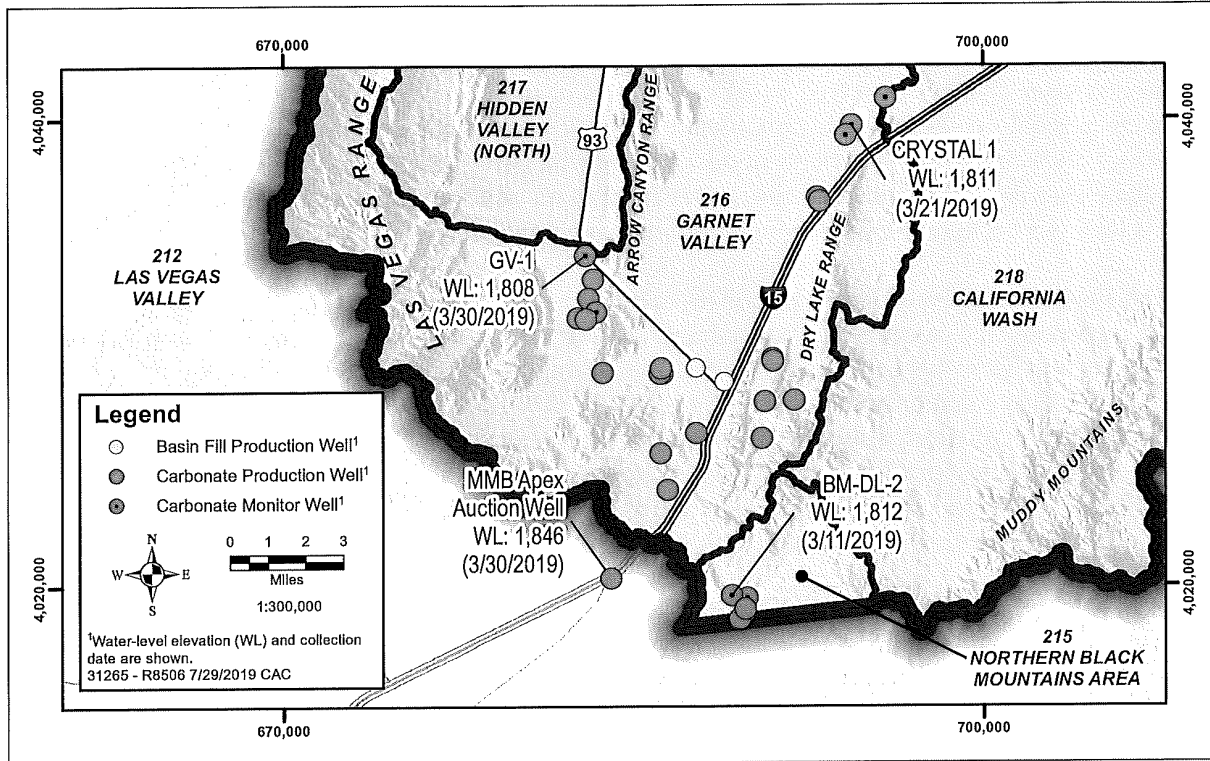


Figure 2-8  
Carbonate-Aquifer Groundwater Elevations in Garnet and Las Vegas Valleys

### 3.0 CARBONATE-AQUIFER RESPONSES

Some of the issues brought up by the Stakeholders concern the state of the LWRFS carbonate aquifer. These issues relate to the historical behavior of the aquifer in response to stresses and its current hydraulic state. To address these issues, the causes of observed declines are explored, followed by a discussion of the current state of the system to answer the question of whether it has attained a steady-state condition or not.

#### 3.1 Causes of Aquifer Level Declines

Some Stakeholders argue that dry-climate conditions and other stresses, rather than groundwater production, have been causing the declines observed in the carbonate aquifer. Data analysis presented in this section demonstrates that groundwater production from the carbonate aquifer has been the main cause of the declines observed since the early 1990s.

Johnson and Mifflin (2019) state that the “widespread water-level declines associated with Order-1169 pumping of the MX-5 well were mistakenly attributed entirely to pumping rather than to the superposition of local, fracture-controlled pumping responses with regional, climate-driven



*decline.*” Johnson and Miffilin (2019) further speculate that “*the most imminent risk to senior water-rights holders and Moapa dace habitat is continued drought.*” Bell and Roy (2019) claim that the groundwater declines observed in the distal parts of the LWRFS at the end of the 2-year aquifer test were possibly caused by “*regionally dry climatic conditions, coupled with known seasonality patterns, rather than from the effects of pumping and aquifer connectivity.*” Smith and Terrell (2019) also claim that the long-term declining water-level trend observed in Garnet Valley and throughout the LWRFS is a background condition, implying that climate may be the cause.

It is indisputable that the observed responses in the carbonate aquifer are the result of various natural and/or anthropogenic stresses and identifying the separate effects of each individual stress is not feasible for this flow system. However, the 2-year aquifer test and the extraordinary precipitation event of 2005 have demonstrated that when a local and dominant natural or anthropogenic stress is imposed on the carbonate aquifer, its impact on water levels and spring flows can be detected on the hydrographs, within short time periods, and everywhere within the interconnected carbonate aquifer (Burns et al., 2019, pp. 5-1 to 5-18). While the effects of less prominent stresses may not be readily observed on the hydrographs, they do affect the observed composite water-level and discharge values.

Many of the stresses affecting the carbonate aquifer can be discounted when data are analyzed at larger time scales. At the annual scale, the major drivers of the observed changes in the aquifer are the on-going groundwater production and recharge variability. Groundwater production from the carbonate aquifer is generally known, except during the early years of development, prior to 1993, when it is believed to have been minimal. It is therefore, possible to extract the effects of groundwater production from a given hydrograph by multiple linear regression (MLR). However, the sources and volumes of natural recharge can only be interpreted and estimated. The effects of recharge on the LWRFS is complex because recharge pulses caused by precipitation during a given year arrive at different times as they originate from different recharge areas within and external to the LWRFS. Thus, the effect of the normal variations in recharge on the LWRFS may not be readily identified from well and spring hydrographs. In a linear regression of aquifer response against groundwater production, the effects of recharge are part of the residuals.

The MLR method was applied to well EH-4 water levels to identify the contributions of groundwater production from the 5 basins during the period of 1992 to 2018. As previously described, annual data were used for the period of 1992 to 2018. The dependent variable is represented by the EH-4 average annual water level. The independent variables are annual carbonate-aquifer production from each of the 5 basins. As described above, the effect of variations in recharge cannot be isolated and are a component of the residuals in this analysis.

This section summarizes the results of the MLR, while the detailed analysis is presented in Appendix A. The MLR correlation coefficient equals 0.91 with an  $R^2$  of 0.83. A time-series chart presenting the MLR results is provided in Figure 3-1. The chart shows a partitioning of the observed EH-4 hydrograph into several hydrographs of responses to groundwater production from each of the 5 basins, and the residuals. As the graph shows, groundwater production in each basin creates a lowering of the water levels at EH-4 that is indicative of the magnitude of the production, the distance of the production center to EH-4, and the aquifer’s hydraulic properties between the two. Figure 3-1 demonstrates that, overall, groundwater production from the Black Mountains Area causes the least effect and that from Garnet Valley the most. However, it should be noted that production from the

Black Mountains Area was from wells located at the inferred southern boundary of the LWRFS and not BM-DL-2 (Figure 2-8). This monitor well (BM-DL-2) has high correlations with well EH-4 in the MRSA ( $R^2$  of 0.95) (Burns et al., 2019, p. 5-12) and well MX-4 in Coyote Springs Valley during the 2-year aquifer test ( $R^2$  of 0.91) (Burns et al., 2019, p. 5-18). This indicates that while well BM-DL-2 is undoubtedly within the carbonate aquifer of the LWRFS, the current production wells (Figure 2-8) are probably not. Starting in 2014, the groundwater production in Garnet Valley and California Wash caused the greatest effect on EH-4 water levels.

The strong correlation coefficient between EH-4 water-level responses and carbonate-aquifer production from 1992 to 2018 proves that most of the declines observed in the aquifer during this time period are caused by groundwater production rather than dry climate. The residuals shown in Figure 3-2 represent a combination of random errors from all sources and recharge variations. The residuals exhibit a pattern that is most probably dominated by variations in recharge, representative of local and regional climate.

It can be seen that variations in natural recharge can have a significant impact on the carbonate system during certain periods. For example, following the extraordinary precipitation event of 2005, the calculated water level at well EH-4, resulting from groundwater production only, remains lower than that observed (Figure 3-2), until 2012. This is because the recharge pulses resulting from the extraordinary precipitation event of 2005 appear to affect water levels well after they first appeared as a spike on the water-level hydrograph. This proves that the declines observed in the hydrographs of all groundwater sites, including distant wells, are not caused by dry climate. The effect of recharge variations is evident for the ongoing time period that starts in 2012 during which the observed water levels vary relative to those calculated (Figure 3-2). The lower than calculated water levels are most likely due to lower recharge pulses during this time period, while the higher than calculated levels are due to higher recharge pulses.

This analysis demonstrates that (1) groundwater production from the carbonate aquifer has been the main cause of the long-term observed declines in water levels and MRSA springflow since the start of development; and (2) climate variations have been a significant factor in attenuating or aggravating the observed changes in water levels.

The future impacts of a “continued drought” suggested by Johnson and Mifflin (2019) cannot be predicted with confidence at this time. As shown in Figure 3-2, a single extraordinary precipitation event can affect the aquifer system in a positive manner. The only stresses that can be controlled are anthropogenic in nature. The only actions that can be implemented to manage the effects of climate at this time, is continued monitoring and mitigation of impacts.

### **3.2 Current State of Carbonate Aquifer**

The Stakeholders do not agree about the current hydraulic state of the LWRFS. The disagreement relates to whether or not the flow system has reached a steady-state condition under the current groundwater production regime.

Davis and Lazarus (2019) argue that the whole flow system has stabilized under current groundwater conditions. They agree with the statement in Order 1303 (NSE, 2019) that, “...the current amount of



Mead) may be a discharge boundary as well. At this time, the volume of discharge to the Colorado River remains uncertain.

The available stress-response data, particularly the 2-year aquifer test data and their analysis indicate that, regardless of potential excess water by-passing the MRSA, groundwater cannot be withdrawn from the carbonate aquifer without capturing MRSA discharge. Burns et al. (2019) analyzed the stress-response data gathered during the 2-year aquifer test and derived the following observations:

- The carbonate aquifer is highly interconnected and has a relatively flat gradient (Burns et al., 2019, p. 3-13).
- Pumping the MX-5 well for 2 years at significantly larger rates than other production wells created an extensive shallow cone of depression throughout the carbonate aquifer. This cone could easily be discerned from the data despite the concurrent effects of other stresses. Scatter plots of MX-4 water levels, an observation well located near MX-5, and water levels in representative wells located throughout the LWRFS exhibit linear relationships with very high correlations (Burns et al., 2019, p. 5-18).
- Variations in the MRSA spring discharge are directly proportional to the variations in the hydraulic-head levels of the carbonate aquifer (Burns et al., 2019, p. 5-12).

Given the high hydraulic connectivity and relatively flat hydraulic gradient of the LWRFS carbonate aquifer, it is logical to conclude that any production well completed within the hydraulically connected aquifer will reduce hydraulic heads and, therefore, capture MRSA discharge. This is supported by the results of the MLR method used to extract the responses associated with production from each LWRFS basin from the response observed at well EH-4 (Section 3.1).

## **5.0 SUSTAINABLE YIELD**

In Interim Order 1303, the NSE requested input on the long-term annual quantity of groundwater that may be pumped from the LWRFS, including the relationships between the location of pumping on discharge to the Muddy River Springs and the capture of Muddy River streamflow (NSE, 2019). In essence, the NSE's description is a definition of sustainable yield for the LWRFS. In response to this request, some Stakeholders mistakenly reverted to compiling groundwater budgets and used them to derive sustainable yield estimates for the entire LWRFS (Reich and Moran, 2019) or individual valleys (Smith and Terrell, 2019). Other Stakeholders did not directly address the request but offered other insights regarding the interconnected nature of the carbonate aquifer (Bell and Roy, 2019; Davis and Lazarus, 2019). The following sections present the appropriate response to the NSE's request submitted by Burns et al. (2019), followed by responses to selected Stakeholder input regarding their estimates of sustainable yield.



### 5.1 Burns et al. (2019)

Burns et al. (2019, pp. 6-8, 6-9 and 8-4) used the historical data available for the LWRFS, including the data collected during the 2-year aquifer test, to develop an appropriate estimate of sustainable yield. Burns et al. (2019) recognized that the LWRFS is past the water-right appropriation process and has moved into the administrative process.

In the administration of LWRFS water rights, groundwater budgets are no longer meaningful because any originally unappropriated water has already been appropriated, and it has been determined that the groundwater system is significantly over appropriated based on the results of the Order 1169 Study. The sustainable yield of the LWRFS is therefore inexorably linked to the occurrence, or potential occurrence, of conflicts with senior rights that are caused by groundwater production. Muddy River water rights are the most senior water rights within the LWRFS and the hydrological record demonstrates that groundwater production from both the MRSA alluvial reservoir and LWRFS carbonate aquifer has measurably depleted spring discharge and Muddy River streamflow. These depletions conflict with senior rights. A sustainable yield estimate is meaningless if these depletions are not recognized as conflicts with senior rights and the administration of water rights is not coupled with management actions that satisfactorily mitigate impacts and address these conflicts.

As demonstrated in Burns et al. (2019), a very high correlation exists between hydraulic heads of the carbonate aquifer (e.g., EH-4) and discharge to the MRSA. Groundwater production from the carbonate aquifer reduces the hydraulic heads of the aquifer and causes a proportionate decrease in MRSA discharge. To avoid these impacts groundwater production from the aquifer should be minimized or eliminated; however, the latter is unreasonable given the current reliance on this groundwater for municipal and industrial uses. If impacts to spring discharge and Muddy River streamflow are mitigated and conflicts with senior water-right holders are adequately addressed, hydraulic heads and MRSA discharge could be managed so that long-term annual groundwater production could be sustained between 4,000 and 6,000 afy.

### 5.2 Reich and Moran (2019)

Reich and Moran (2019) performed an elaborate analysis of the LWRFS groundwater budget. Using their groundwater budget, Reich and Moran (2019) conclude the following:

*As previously stated above, the amount of water available for appropriation can be calculated based on capture of evapotranspiration and groundwater outflow. The water budget for the LWRFS indicates that pre-development evapotranspiration is 11,930 AFY and outflow toward the Lower Moapa Valley is 51,700 AFY. These values provide a basis for initiating long-term sustainable management in the region. Subsurface outflow from California Wash is estimated by subtracting 32,000 AFY of surface discharge from the 51,700 AFY to yield 19,700 AFY. The amount of evapotranspiration for the LWRFS is estimated to be 11,930 AFY; resulting in the total evapotranspiration and groundwater outflow of 30,630 AFY. Operating under sustainable management techniques that include monitoring, management, and mitigation will allow existing water rights holders to exercise their rights in priority and assess impacts over time and allow the NSE and stakeholders to assess and*



*protect resources as pumping increases toward the maximum value of 30,630 AFY. This initial estimate of sustainable yield allows for senior rights along the Muddy River to be exercised.*

Reich and Moran (2019) assert that there are up to 30,630 afy that can be developed from the capture of evapotranspiration and groundwater outflow, and recommend an initial development rate of 5,280 afy for Coyote Spring Valley. For these estimates, Reich and Moran (2019) apparently do not consider the results of the Order 1169 aquifer test. Monitoring data collected prior to, during and after the test demonstrate widespread responses throughout the LWRFS, including measurable impacts to MRSA spring discharge shortly after the test started. These responses are well documented in several reports prepared by the Study participants and various LWRFS Stakeholders. Reich and Moran (2019) miss the point. Impacts have already occurred and any additional groundwater production beyond the current rates will only increase the magnitude of these impacts. Any lowering of the hydraulic heads in the MRSA (e.g., at EH-4) will cause a proportional reduction in spring discharge. Reduced spring discharge results in reduced Muddy River streamflow and, consequently, conflicts with senior water rights. The only way to capture evapotranspiration and the supposed groundwater outflow is to significantly reduce the hydraulic heads in the carbonate aquifer, which will cause additional conflicts with senior water rights. Reich and Moran (2019) suggest an approach of monitoring, management, and mitigation, yet offer no specifics on how existing and future impacts will be mitigated or how current and future conflicts will be addressed. The sustainable yield estimates of Reich and Moran (2019) are unequivocally too high.

### **5.3 Smith and Terrell (2019)**

Smith and Terrell (2019) did not offer an opinion on the long-term annual quantity that may be produced from the LWRFS, but stated preliminary indications are that 1,500 to 2,000 afy of groundwater may be produced from Garnet Valley. Smith and Terrell (2019) base their conclusion on the total production volumes in 2016 and 2017 and their opinion that the increase in production between the years has not resulted in a downward inflection in water levels within the MRSA. In fact, as Figure 3-3 demonstrates, groundwater levels in Garnet Valley, as well as the other basins of the LWRFS, have declined since the peak recovery in late 2015 - early 2016. These declines have occurred despite two years of above average winter-season precipitation in 2017 and 2019 and reduced production. Smith and Terrell (2019) make this conclusion while also stating there is a long-term declining water-level trend in Garnet Valley of approximately 0.3 ft/yr that is also observed in the rest of the LWRFS. Smith and Terrell (2019) incorrectly attribute the decline to climate factors. The conclusion of Smith and Terrell (2019) is contrary to their recognition that the carbonate aquifer responds rapidly to pumping and that the effects of the groundwater production associated with the Order 1169 aquifer test were identifiable within Garnet Valley (Smith and Terrell, 2019).

### **5.4 Myers (2019)**

Myers (2019) addressed the sustainable yield question in terms of the amount of groundwater that may be produced from the carbonate aquifer and basin fill. Similar to Burns et al. (2019), Myers (2019) concludes that all groundwater production from the carbonate aquifer will capture spring discharge; therefore, the NSE should not allow pumping from the carbonate aquifer. Myers (2019)

also mentions that as a result of decreasing spring flow resulting from carbonate-aquifer production, flows in the Muddy River have not been enough to satisfy the requirements of the 1920 Muddy River Decree. Myers (2019) concludes that 4,000 afy of groundwater production from the basin fill within the MRSA is probably acceptable. Myers (2019) makes this conclusion based on the fact that the alluvial groundwater is derived from the carbonate system and that the alluvial pumping would not impact the Moapa dace habitat. However, Burns et al. (2019), Reich and Moran (2019), Bushner (2019), Johnson and Mifflin (2019), Davis and Lazarus (2019), Smith and Terrell (2019), and USFWS (2019) have all concluded that groundwater production from the MRSA basin fill has impacted Muddy River streamflow on a 1:1 basis. These impacts conflict with the senior surface-water rights, and groundwater production from the MRSA basin fill should only be permitted if the related impacts are mitigated and conflicts are adequately addressed.

### **5.5 U.S. Fish and Wildlife Service (USFWS, 2019)**

The U.S. Fish and Wildlife Service (USFWS) addressed the sustainable yield question by suggesting an initial threshold of 9,318 afy for carbonate-aquifer and alluvial production combined (USFWS, 2019). They relied upon observations of spring discharge and Muddy River streamflow to reach their conclusions, and asserted that during the period 2015 to 2017 annual total groundwater production averaged 9,318 afy while surface-water flows remained stable. Based on these observations, they concluded the groundwater production was no longer impacting the surface-water flow and the 9,318 afy is an acceptable initial threshold for the LWRFS sustainable yield. However, USFWS (2019) acknowledges that flow rates at the Plummer, Pederson, Jones, and Baldwin springs were lower than before the Order 1169 test and may be trending downward. These declining trends can be observed in the discharge records of Pederson Spring and Warm Spring West gages (Burns et al., 2019, p. 5-9). The carbonate aquifer cannot be in equilibrium if spring flows are declining. During this period, Muddy River streamflow was stable because surface-water diversions were reduced to near zero and production from the alluvial reservoir was reduced by more than 80 percent. As a result, the flow rates remained stable during this period. Discharge measured by the Pederson Spring and Warm Springs West gages compose only a small percentage of the streamflow measured at the MR Moapa gage. The fact that observed declines in these gage records can not be discerned in the MR Moapa gage record does not mean the groundwater system has attained steady-state conditions. The sustainable yield estimate provided in USFWS (2019) is flawed and too high because groundwater elevations in the carbonate aquifer and spring discharge in the MRSA have declined since late 2015 - early 2016 (the time of peak recovery), despite above average winter-season precipitation in 2017 and 2019.

The USFWS (2019) sustainable yield volume also makes no mention of the allowable spatial distribution of groundwater production. As described in Burns et al. (2019), in the long-term, it is expected that any groundwater production from the carbonate system within the LWRFS will ultimately capture discharge to the MRSA. The timing of impacts from groundwater production centers located farther from the MRSA may take longer, but the properties of the aquifer are such that impacts will eventually reach the MRSA. Burns et al. (2019, pp. 6-4 to 6-11) provide limits on carbonate-aquifer production based on selected discharge rates at the Warm Springs West gage. If the USFWS (2019) volume of 9,318 afy were to be selected as the amount of allowable groundwater production from the carbonate aquifer, then not only would that volume of water be removed from the Muddy River but the flow at the Warm Springs West gage would, in the long-term, drop to between



2.9 and 2.8 cfs. If 9,318 afy of water were removed solely from the MRSA alluvial reservoir, there may be no impact to the springs, but the Muddy River streamflow would be reduced by a like amount resulting in conflicts with senior water rights.

### **5.6 Waddell (2019)**

Waddell (2019) states that “...*the annual, sustainable quantity of groundwater available is less than 14,500 afy.*” This number was based on a series of model runs that were performed using the Tetra Tech (2012a and b) numerical groundwater flow model (Waddell, 2019). No changes were made to the material properties of the 2012 model (Waddell, 2019) despite the results of the 2013 post audit review. The review indicated that the model under-simulates the amount of drawdown and reduction in spring discharge than was actually observed during the Order 1169 aquifer test (Waddell, 2019). This defect makes the model inappropriate for use in quantifying pumping impacts and estimating the sustainable yield. This conclusion is supported by the qualifying statement in Waddell (2019) regarding the use of the model: “*Because the model underpredicted the drawdown and reduction in discharge caused by the Order 1169 pumping, it should not be used in its current state to determine what the safe yield of the LWRFS aquifer is.*” Given these limitations and the ambiguous “...*less than 14,500 afy*” quantification, Waddell (2019) effectively does not determine a sustainable yield value for the LWRFS.

### **5.7 Johnson and Mifflin (2019)**

Johnson and Mifflin (2019) do not provide a value for sustainable yield, rather they offer an opinion that there may be a volume of water that could be developed without impacting the Muddy River Springs. Johnson and Mifflin (2019) offer this opinion based on a “*scoping-model exercise*” that was refuted in Section 2.0 of this report. The widespread responses to groundwater production in the LWRFS have been documented by Burns et al. (2019), Smith and Terrell (2019), Davis and Lazarus (2019), Bell and Roy (2019), Myers (2019), and USFWS (2019) and indicate there is no location where pumping may occur that does not eventually impact either the MRSA spring discharge or Muddy River streamflow. The 2-year aquifer test and the extraordinary precipitation event of 2005 have demonstrated that when a local and dominant natural or anthropogenic stress is imposed on the carbonate aquifer, its impact on water levels and springs discharge can be detected on the hydrographs, within short time periods, and everywhere within the interconnected carbonate aquifer (Burns et al., 2019, pp. 5-6 to 5-18).

### **5.8 Summary and Conclusions**

Development of LWRFS water resources has followed a logical process based on principles of adaptive management. The individual basins were managed separately and reconnaissance-level groundwater budgets were compiled and initially used to determine the perennial yield and volume of unappropriated water. Water-rights were permitted based on the initial estimate of unappropriated groundwater. However, management of the LWRFS is well beyond this stage. At this time, conflicts analysis and limitations of groundwater production based on observed effects on important resources and senior water rights must be the approach.

The Order 1169 Study has proven that (1) the individual basins are hydraulically connected; (2) groundwater production in these basins has impacted MRSA spring discharge and Muddy River streamflow which has resulted in conflicts with senior water rights; and (3) the LWRFS is over-appropriated. It is because of these facts that the NSE has requested estimates of “...the long-term annual quantity of groundwater that may be pumped from the Lower White River Flow System, including the relationships between the location of pumping on discharge to the Muddy River Springs, and the capture of Muddy River flow.”

As previously mentioned, the sustainable yield of the LWRFS is inexorably linked to the occurrence, or potential occurrence, of conflicts with senior rights. If impacts to spring discharge and Muddy River streamflow are mitigated and conflicts with senior water-right holders adequately addressed, hydraulic heads and MRSA discharge could be managed so that long-term annual groundwater production could be sustained between 4,000 and 6,000 afy (Burns et al., 2019). Without addressing these conflicts, annual carbonate groundwater production should be managed to reduced, rather than current or increased volumes.

## **6.0 ASSESSING RISK TO MOAPA DACE HABITAT**

CSI incorrectly concludes that groundwater pumping in the MRSA and surface-water diversions on the Muddy River have a much greater impact on the spring and surface flows that support Moapa dace than pumping in Coyote Spring Valley (Reich and Moran, 2019). As explained above and in Burns et al. (2019), this is not the case. Maintaining spring flows in the Warm Springs Area is critical to protecting Moapa dace and avoiding Endangered Species Act violations (Marshall and Williams, 2019).

CSI also incorrectly concludes that flow data at the MR Moapa gage shows that resources supporting Moapa dace can be managed sustainably with pumping up to 5,280 afy in Coyote Spring Valley (Reich and Moran, 2019). CSI attempts to support this conclusion in-part by saying that flows at the gage did not decline during the aquifer test (Reich and Moran, 2019). However, this errant analysis ignores the large Warm Springs Area fire that killed many trees and reduced vegetative uptake of water in 2010 (Burns et al., 2019, p. 5-2; Marshall and Williams, 2019, Appendix C p. C-3), and the large reductions in Warm Springs Area surface-water diversions that occurred in 2011-2013 (Burns et al., 2019, pp. 4-5 and Appendix B p. B-1). CSI also appears to suggest that as long as flows at the MR Moapa gage are maintained, the needs of Moapa dace will be met. However, CSI does not acknowledge the ecology of the species, or the fact that the triggers established to protect Moapa dace under the Muddy River Memorandum of Agreement (MOA) (MOA, 2006), described in both Marshall and Williams (2019) and USFWS (2019), are established at the Warm Springs West gage, not the MR Moapa gage.

It is inadequate to assess risk to Moapa dace based solely on conditions at the MR Moapa gage. Surface-water diversions near that gage can have large effects on flow measurements while having very limited effects on Moapa dace habitat. For example, the diversion directly above the MR Moapa gage historically had large impacts on flow measurements (Burns et al., 2019, pp. 4-4 to 4-5, 5-4, and Appendix B p. B-1), but the diversion point is already in sub-optimal habitat, and it is located downstream of 97 percent of the species' range (Marshall and Williams, 2019, pp. 2-2 and 3-1 to 3-3).

**Issues Related to Conjunctive Management of the Lower White River Flow System**

**Presentation to the Office of the Nevada State Engineer  
in Response to Order 1303**

U.S. Fish and Wildlife Service

July 3, 2019

## Overview

The U.S. Fish and Wildlife Service (USFWS) respectfully submits this report in response to the State Engineer's request for information regarding conjunctive management of water resources of the Lower White River Flow System (LWRFS), including but not limited to the following questions posed in Order 1303 (NSE 2019):

- a. The geographic boundary of the hydrologically connected groundwater and surface water systems comprising the LWRFS;
- b. Information obtained from the Order 1169 aquifer test and subsequent to the aquifer test, including changes in Muddy River headwater spring flows, as it relates to aquifer recovery since completion of the aquifer test;
- c. The long-term annual quantity of groundwater that may be pumped from the LWRFS, including relationships between the location of pumping and capture of the Muddy River Springs and Muddy River;
- d. Effects of the movement of water rights between alluvial wells and carbonate wells on deliveries of senior decreed rights to the Muddy River; and,
- e. Any other matter believed to be relevant to the State Engineer's analysis.

Section 1 of this report presents our current assessment of hydrologic issues and considerations related to the development of an effective conjunctive water management program for the LWRFS, including the five questions posed in Order 1303. Section 2 summarizes the current status of the Moapa dace and our understanding of habitat conditions required within the Muddy River Springs Area for its continued protection and recovery.

## Summary of Conclusions

*What is the geographic boundary of the hydrologically connected groundwater and surface water systems comprising the LWRFS?*

Based on information developed in Sections 1.1 and 1.3.1, revisions to the areal extent of the LWRFS should be considered as shown in Figure 1 to include the following basins and parts of basins:

- the MRSA;
- most of Coyote Spring Valley;
- Hidden Valley;
- Garnet Valley;
- most of California Wash;
- northwest Black Mountains Area;
- Kane Springs Valley; and
- most of LMVW

We acknowledge the National Park Service's (NPS's) concern that there may be impacts from future pumping, particularly from wells located further south and east in the LWRFS. Based on our evaluation of the available geologic and hydrologic information, we believe that, to the extent that outflow occurs across any portion(s) of the Glendale and Muddy Mountain thrusts (or the northern strand of the Las Vegas shear zone), differences in head in carbonate and other rocks on either side of the thrusts mean that any outflow is fairly constant and unlikely to change with water management in the LWRFS. See Section 1.3.1, Lateral Outflow. However, we are open to any new evidence that would counter this view.

*What information has been obtained from the Order 1169 aquifer test and subsequent to the aquifer test, including changes in Muddy River headwater spring flows, as it relates to aquifer recovery since completion of the aquifer test?*

The high-elevation springs on the Moapa Valley National Wildlife Refuge continue to respond to fluctuations in carbonate water levels as expected and described in the Department of the Interior (DOI) 2013 interpretation of the Order 1169 pumping test. In contrast, the flow of the Big Muddy Spring, a major contributor to the Muddy River, appears to be unrelated to carbonate water levels in basins currently recognized as the LWRFS, including the MRSA, and may be responding primarily to a climate signal that has yet to be characterized. Moreover, a time lag was observed in the recovery of carbonate water levels and spring flows following the cessation of Order 1169 aquifer test which is consistent with basic hydrologic principles, but based on those same principles, is not a constant and depends on a great many things affecting conditions in the carbonate aquifer at the time, in addition to the location of the pumping and resource(s) in question (See Section 1.3.5).

*What is the long-term annual quantity of groundwater that may be pumped from the LWRFS, including relationships between the location of pumping and capture of the Muddy River Springs and Muddy River?*

An initial threshold of combined carbonate and alluvial pumping within the LWRFS of 9,318 afy appears to be the best initial estimate of the sustainable yield of the system, based on the optimum method currently available for arriving at an estimate of the maximum allowable rate of pumping in the LWRFS, i.e., the average annual rate of pumping from 2015-2017. See Section 1.4, Sustainable Levels of Pumping in the LWRFS for more discussion.

*What are the effects of movement of water rights between alluvial wells and carbonate wells on deliveries of senior decreed rights to the Muddy River?*

Since the Muddy River Springs (at least the refuge springs) are derived almost entirely from the carbonate aquifer, total carbonate pumping should not be increased (e.g., in exchange for reductions in alluvial pumping), even if total carbonate and alluvial pumping is maintained at a "sustainable" overall level. Additionally, existing carbonate pumping should not be moved closer to any springs (or the river), which could reduce the time lag in the development of



impacts possibly before the impacts are detected based on periodic data collection and processing.

Since (in addition to the contributions of the springs) the remainder of water in the river comes from alluvium adjacent to the river in the MRSA and California Wash, alluvial pumping should not be increased (e.g., in exchange for reductions in carbonate pumping elsewhere), even if total alluvial and carbonate pumping is maintained at a “sustainable” overall level. Beyond that, existing alluvial pumping in the vicinity of the river should not be moved closer to the river, reducing the time lag in the development of impacts possibly before the impacts are detected based on periodic data collection and processing (Section 1.5).

*Additional issues, considerations, and conclusions regarding the development of an effective conjunctive water management program for the LWRFS.*

See Sections 1.1 through 1.6, Hydrologic Considerations Related to Conjunctive Management of the LWRFS, and Section 2, Status and Recovery of Moapa Dace. The results from our Section 1.6 on groundwater/spring relationships demonstrate that the system continues to behave as hypothesized, with the highest elevation springs being the most sensitive to changes in carbonate water levels. This implies that the triggers for flows measured at the Warm Springs West gage established in the 2006 Memorandum of Agreement between the Southern Nevada Water Authority, the USFWS, Coyote Springs Investment LLC, the Moapa Band of Paiute Indians, and the Moapa Valley Water District (2006 MOA, USFWS 2006a) are still valid and important for protecting the springs on the refuge. Protecting the most sensitive springs in the system should protect springflow, and habitat of the endangered Moapa dace as well. Recovery of Moapa dace is dependent on maintaining stream flows within the Moapa Valley National Wildlife Refuge and in the Muddy River Springs Area generally, and available information indicates that any reduction in current flow levels would result in reduced habitat for the species.

## Section 1 – Hydrologic Considerations Related to Conjunctive Management of the LWRFS

### 1.1 Groundwater-Surface Water Interactions in the LWRFS

#### 1.1.1 Sources of the Muddy River Springs and Muddy River

##### The Muddy River Springs

It is well established that the source of the Muddy River Springs is the regional carbonate-rock aquifer (NSE 2014a-f, NSE 2002, and Eakin 1964 and 1966); specifically, that portion of the “central corridor” of the carbonate-rock province of southern and eastern Nevada identified by Dettinger et al. (1995) as effectively terminating in the area of the Muddy River Springs, including the whole of the roughly 240-mile long White River Groundwater Flow System which includes Kane Springs Valley (Eakin 1966), as well as possibly Lower Meadow Valley Wash (Page et al. 2006, NSE 2002, Dettinger et al., 1995, and Eakin 1964)<sup>1</sup>, and additionally Hidden and Garnet valleys, California Wash, and the northwest part of the Black Mountains Area identified in the DOI (2013) analysis of the Order 1169 pumping test<sup>2</sup>.

##### The Muddy River

It is also clear that the springs and intermittent runoff of local precipitation are not the only sources of water in the Muddy River (as proposed by Eakin 1964 and 1966). Synoptic discharge measurements made in February 2001 by Beck and Wilson 2006 on the Muddy River and a large number of Muddy River Spring tributaries show that the river was gaining from the confluence of its North and South Forks to below its confluence with the last spring tributary in the Muddy River Springs Area (MRSA), absent the contributions of the spring tributaries. Since the study was conducted during a period of “steady baseflow” on February 7, 2001 (presumably, no local precipitation or runoff and minimal irrigation return flows), this gain must have largely, if not entirely, occurred as natural seepage from alluvial aquifer adjacent to the river (in this case within the MRSA); which on the day of the study represented at least 17.6 cubic feet per second (cfs) or 42 percent of the 41.8 cfs measured in the river just below the last spring tributary<sup>3</sup>; the other roughly 24.2 cfs or 58 percent attributable to surface discharges from Muddy River Spring

<sup>1</sup> Deuterium calibrated mixing-cell modeling by Thomas et al. 1996 suggests that Lower Meadow Valley Wash is a source of the Muddy River Springs (about 22 percent); although the authors were unclear regarding the extent to which their findings were influenced by deuterium samples collected in Lower Meadow Valley Wash where carbonate wells appear to be unavailable, or by samples collected from the Big Muddy Spring in the MRSA which may be uniquely influenced by Lower Meadow Valley Wash based on hydrogeologic considerations. The same can be said of the deuterium-calibrated mixing-cell modeling of Kirk and Campana 1990 which suggests broadly that Lower Meadow Valley Wash contributes underflow to the MRSA.

<sup>2</sup> In addition to the regional carbonate-rock aquifer, streams issuing from the Muddy River Springs are known to include at least some cold water inputs (e.g., along lower elevation portions of Pederson stream) which are attributable to gains from the local alluvial aquifer based on distributed water temperature measurements made in 2011 and 2012 for U.S. Fish and Wildlife Service (USFWS) by the University of Nevada-Reno and U.S. Geological Survey Biological Resources Division (USFWS 2012); the latter supporting an earlier observation by NSE 2002 that the alluvial aquifer may have some influence on the discharge of the Muddy River Springs.

<sup>3</sup> This temporary station located about one mile above the Moapa gage; the contributions of the alluvial aquifer to discharge at this location likely somewhat greater than 17.6 cfs or 42 percent given the documented occurrence of cold water seeps along low elevation portions of at least some spring tributaries in the MRSA (USFWS 2012).

tributaries.<sup>4</sup> The river was also gaining over about 11 of the next 15 river miles from the Moapa gage in the MRSA, through California Wash, to the vicinity of Anderson Wash above Bowman Reservoir in Lower Moapa Valley<sup>5</sup> through an area where a lack of permitted spring rights (NDWR 2018d) suggests no significant spring tributaries exist. The Muddy River Springs, seepage from alluvial aquifers adjacent to the river, and to a much lesser extent intermittent runoff of local precipitation, are the immediate sources of water in the Muddy River from its headwaters in the MRSA to the vicinity of Bowman Reservoir in Lower Moapa Valley. Maxey et al. 1966 proposed these same sources in the MRSA, although no supporting data were provided.

#### *Sources of Water in Alluvial Aquifers Adjacent to the River – the MRSA*

Within the MRSA, sources of water in the alluvial aquifer were originally thought to be limited to infiltration of Muddy River Spring flows, subsurface seepage from the springs, and to a lesser degree recharge of local precipitation<sup>6</sup> (Eakin 1964). Based on early mapping, Maxey et al. (1966) believed that Quaternary sediments in the MRSA (the alluvial aquifer) were bound from beneath and on most sides by low permeability Muddy Creek Formation, precluding significant upward movement of groundwater from the carbonate-rock aquifer into the overlying alluvium (consistent with known good water quality in the alluvial aquifer, better than in Muddy Creek Formation). Consequently, Maxey et al. (1966), in contrast to Eakin (1964), concluded that two washes in the northwest part of the basin (i.e., Arrow Canyon and a north-trending wash) were the primary sources of water in the alluvial aquifer of the MRSA, the bulk of inflows occurring during storm events. Some 30 years later (based on this limited review of the literature), Dettinger et al. (1995) was the first to acknowledge the potential for significant upward leakage from the regional carbonate-rock aquifer into local alluvial aquifers, generally. In 2014, the Nevada State Engineer (NSE 2014a-f) similarly concluded that “the alluvial aquifer surrounding the Muddy River ultimately derives virtually all of its water supply from the carbonates, either through spring discharge that infiltrates into the alluvium or through subsurface hydraulic connectivity between the carbonate rocks and the alluvium”; this presumably based on the occurrence of minimal precipitation recharge in the combined MRSA, Coyote Spring Valley, and California Wash area, any amount of which is significantly exceeded by local groundwater evapotranspiration (SNWA 2009a, Table I-7).

Since the release of the Eakin (1964) report, four (surficial) geologic maps have been constructed covering the MRSA: Longwell et al. 1965 (1:250,000), Stewart and Carlson 1978 (1:500,000), Page et al. 2005 (1:250,000), and Crafford 2007 (1:250,000). All show that alluvium is in lateral contact with outcrop of Permian to upper Mississippian Bird Spring Formation (typically

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<sup>4</sup> Note: The Cardy Lamb Springs were the only major spring group or spring tributary not included in Beck and Wilson’s 2006 seepage study.

<sup>5</sup> Of the approximate 15 river miles between the Moapa gage in the MRSA and Anderson Wash in Lower Moapa Valley, the Muddy River was losing for 3 miles across the Moapa Indian Reservation and a one mile reach one to two miles below the Glendale gate during the February 2001 seepage run (Beck and Wilson 2006).

<sup>6</sup> Precipitation recharge in the MRSA is an estimated 41 afy (SNWA 2009a).

associated with the “upper” carbonate-rock aquifer) at the land surface about one mile west of the river<sup>7</sup>. However, given the depth to water in the basin’s alluvial wells (10 to 25 feet minimum, NDWR 2018a), all located in “channel alluvium” near the center of the basin (Page et al. 2005) and roughly aligned with the Muddy River, the water table may be located in Muddy Creek Formation, rather than alluvium, at the contact with Bird Spring Formation carbonates<sup>8</sup>.

What is clear is that groundwater level data collected over the last two decades (NDWR 2018a) show that water levels in alluvial and carbonate monitoring wells in the MRSA respond more or less in sync to significant increases / decreases in carbonate pumping in an area that includes, but is not limited to, the MRSA: i.e., the four-fold increase in pumping at the Arrow Canyon wells in the MRSA in May 1988; the start of pumping by Coyote Spring Investments (CSI) in Coyote Spring Valley in May 2005; and start and stop of pumping at MX-5 by the Southern Nevada Water Authority (SNWA) in southern Coyote Spring Valley for the Order 1169 pumping test in September 2010 and April 2013, respectively. Whereas groundwater level fluctuations due to local alluvial pumping dominate water levels in the alluvial wells, as expected, responses to the major changes in carbonate pumping listed above are also discernable in nearly all of the basin’s alluvial wells based on simple inspection of water level hydrographs (e.g., Lewis 1 Old, Lewis 2, Lewis North, Lewis South, LDS West, Perkins Old, Behmer MW, and Abbott); although carbonate pumping signals are more clear where alluvial pumping signals are less pronounced in Lewis North, Perkins Old, Behmer Monitoring, and Abbott (Figure 2). Water levels in carbonate wells (i.e., EH-5b and EH-4<sup>9, 10</sup>) are also tens to more than 100 feet (ft) higher than in alluvial wells in the MRSA (NDWR 2018a). Given the existence of a clear hydraulic connection between the carbonate-rock and basin-fill aquifers in the MRSA (their roughly synchronized response to carbonate pumping), and higher hydraulic head in the underlying carbonate aquifer, leakage (whether at contacts between Bird Spring Formation carbonates and saturated alluvium, upward through the Muddy Creek Formation, or by way of fault damage zones) must occur from the carbonates into the alluvial aquifer in some volume within the basin.

Available geologic maps (Longwell et al. 1965, Tschanz and Pampeyan 1970, Stewart and Carlson 1978, Page et al. 2005, and Crafford 2007) show that in western MRSA, as well as elsewhere in the vicinity of the Order 1169 study area, Permian Bird Spring Formation carbonates are in contact with Mississippian to Cambrian carbonate rocks composing the

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<sup>7</sup> Page et al. 2005 depicts considerably more Muddy Creek Formation in eastern MRSA than the other three geologic maps (at the land surface), but still interprets that alluvium and Bird Spring Formation carbonates are juxtaposed from the area of Lewis South well or Cardy Lamb Springs south about 1.5 miles to Battleship Wash.

<sup>8</sup> The Muddy Creek Formation has been variously mapped in eastern MRSA (Longwell et al. 1965, Stewart and Carlson 1978, Page et al. 2005, and Crafford 2007). No consensus exists regarding its surficial expression, but a significant amount of Muddy Creek Formation has been mapped by all investigators in western MRSA.

<sup>9</sup> Both EH-5b and EH-5 appear to be completed in Bird Spring Formation carbonates based on their depths of completion (NDWR 2018a) and geologic cross-section D of Page et al. 2006.

<sup>10</sup> Water levels in carbonate monitoring wells EH-5b and EH-4, which vary only a fraction of a foot across the MRSA (~1,813 feet amsl), have been historically more than 10, and as much as about 110 feet higher, than water levels in alluvial monitoring wells from northwest to southeast across the basin (NDWR 2018a).

regional (“lower”) carbonate-rock aquifer (cross-sections C – F, Page et al. 2006, 1:250,000). Moreover, there is limited to no evidence of confining units (common elsewhere in the carbonate-rock province of Nevada and western Utah) in the study area.

Specifically, in the study area west of the Meadow Valley Wash Fault and Muddy Mountain thrust, no outcrop of Mississippian Scotty Wash Quartzite or Cambrian Dunberberg or Pioche shale has been mapped (Page et al. 2005 and Crafford 2007). Only outcrop of strata that may contain Chainman Shale (Mississippian), Pilot Shale (Mississippian to Devonian), Eureka Quartzite (Ordovician), and undifferentiated Ely Spring Dolomite, Eureka Quartzite, and / or Pogonip Group (Ordovician) (Crafford 2007) have been identified, and then only in the Arrow Canyon Range and south part of the Meadow Valley Mountains in the area of Arrow Canyon in the MRSA. The geologic maps of Crafford (2007) and Page et al. (2005) are inconsistent with respect to mapping of Eureka Quartzite (or strata that may include it), but the presence of Eureka Quartzite, a potential confining unit, is possible in the vicinity of Arrow Canyon. Nonetheless, southeasterly groundwater flow is known to occur in the carbonates through Arrow Canyon from central Coyote Spring Valley into the MRSA based on trends in measured groundwater levels (NDWR 2018a)<sup>11</sup>. Given the depths of completion of the carbonate wells involved (NDWR 2018a) and information contained in geologic cross-section D of Page et al. 2006 (passing through the area of the wells), southeasterly flow appears to pass through any Eureka Quartzite that is present unimpeded<sup>12</sup>. Eureka Quartzite is either absent through Arrow Canyon (i.e., between the Arrow Canyon Range and Meadow Valley Mountains) or not sufficiently continuous in the regional carbonates to be an impediment to flow. If based only on geologic considerations, the lack of significant confining units in the MRSA, as well as the remainder of the Order 1169 study area, suggests that the Paleozoic carbonates, Permian through Cambrian, function as one aquifer. As such, a hydraulic connection between the alluvial aquifer of the MRSA (or other basins within the study area) and any of the Paleozoic carbonates is a hydraulic connection with the regional carbonate aquifer as a whole. In particular, the portion of the regional carbonate aquifer underlying the MRSA is in hydraulic connection with the basin’s alluvial aquifer and a source of water in alluvium adjacent to the river, notwithstanding that the exact nature of the connection between the alluvial and carbonate aquifers is unknown.

Alluvial inflow from Lower Meadow Valley Wash (LMVW) also appears to be a source of water in the alluvial aquifer of the MRSA based on the continuity of alluvium between the two basins (“QTs” in Figure 3, interpreted from Crafford 2007) and trends in alluvial groundwater levels (Heilweil and Brooks 2011, SNWA 2012, and NDWR 2018a) which decrease in a southerly direction through LMVW and into the MRSA. Although limited as evidence goes, carbonate

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<sup>11</sup> Measured water levels decrease gradually in a southeasterly direction from carbonate monitoring wells MX-4, CVS-RW2, and CSVM-1 in southern Coyote Spring Valley, to UMVM-1, MX-6, EH-5b, and finally EH-4 in the MRSA (NDWR 2018a).

<sup>12</sup> Due to the truncation of south-trending folds and vertical offsets at one or more north-striking faults (seen in cross-section “D”, Page et al. 2006), southeasterly flow from MX-4, CVS-RW2, and CSVM-1 in southern Coyote Spring Valley (likely completed in Devonian to Silurian carbonates) to UMVM-1 (likely completed in Cambrian carbonates), and then on to MX-6 (likely completed in Devonian to Silurian carbonates), of necessity involves flow through the Ordovician Pogonip Group mapped in outcrop (Crafford 2007, Page et al. 2005), including any Eureka Quartzite.

pumping signals, identifiable in all other alluvial wells in the MRSA, appear to be “swamped out” in LDS Central and LDS East by alluvial inflows from LMVW (based on simple inspection of the hydrographs); the two wells located immediately downgradient of the alluvial channel connecting LMVW and the MRSA, most clearly depicted in Crafford (2007) and Stewart and Carlson (1978). Less clear is the continuity of (saturated) alluvium between the MRSA and Coyote Spring Valley where shallow groundwater flow may be impeded at the mouth of Arrow Canyon by outcrop of Muddy Creek Formation (shown in all available geologic maps).

Notwithstanding the above, the extent to which groundwater in the alluvial aquifer of the MRSA is derived from the alluvial aquifers of LMVW and possibly Coyote Spring Valley versus the underlying regional carbonate-rock aquifer cannot be determined using available groundwater level data, or water budget estimates prepared at the scale of whole basins wherein no distinction is made between carbonate, alluvial, and surface flows.

#### *Sources of Water in Alluvial Aquifers Adjacent to the River – California Wash*

No or minimal precipitation recharge is believed to occur in California Wash, any amount of which is significantly exceeded by local groundwater evapotranspiration (SNWA 2009a, Table I-7). As such, the source of water in alluvium adjacent to the river in California Wash, including that documented seeping into the river during the February 2001 seepage study (a net gain of 2.0 cfs or 1,448 acre-feet per year, Beck and Wilson 2006), can only be alluvial inflows from adjacent basins, local leakage from the carbonate-rock aquifer, or both.

California Wash is bordered by four basins: Coyote Spring Valley, Garnet Valley, the MRSA, and LMVW. Alluvial inflow from Coyote Spring Valley is precluded by carbonate outcrop (Page et al. 2005 and Crafford 2007). Available water level measurements (SNWA 2012, and Heilweil and Brooks 2011) are insufficient to determine if alluvial inflow occurs from eastern Garnet Valley (the area of a dry playa) into California Wash. However, the continuity of mapped “alluvium” (Page et al. 2005 and Crafford 2007) and trends in alluvial groundwater levels (Heilweil and Brooks 2011, SNWA 2012, and NDWR 2018a) suggest that alluvial inflow does occur from both LMVW and the MRSA into California Wash, proximal to the river. In fact, two-thirds of total gains documented to the river in California Wash during the February 2001 seepage run (Beck and Wilson 2006), 3.10 of 4.70 cfs, occurred in a reach of the Muddy River intersected by the axis of LMVW.

The regional carbonate-rock aquifer is also a local source of water to the alluvial aquifer of California Wash. Indirect evidence of this leakage is available today in the form of basin-fill groundwater level measurements that decrease roughly 200 feet (ft) from south to north through the basin toward the river (SNWA 2012 and USGS 2019b), indicative of south to north groundwater flow through the fill. Since no net precipitation recharge is believed to occur in the basin (SNWA 2009a, Table I-7), including its southern part where basin fill water levels are at a maximum, the regional carbonate-rock aquifer must be the source of this south to north alluvial flow. While all available geologic maps (Longwell et al. 1965, Stewart and Carlson 1978, Page et al. 2005, and Crafford 2007) show that basin fill is in lateral contact with outcrop of Bird

Spring Formation carbonates at the land surface over most of western California Wash, the depth to water in the fill at the south end of the basin is about 800 ft (218 S18 E65 18CC 1 USBLM; SNWA 2012 and USGS 2019b); about 300 ft in the central part of the basin (218 S16 E65 31AA 1 and 218 S16 E65 32AB 1, SNWA 2012; and 218 S16 E65 33ACAA1 USBLM, USGS 2019b); and 10 ft or less in alluvium adjacent to the river in the northernmost part of the basin (218 S14 E65 36BADA1, 218 S15 E66 06 1, 218 S15 E66 09BADB1, and 218 S15 E66 04AA 1, USGS 2019b; and 218 S15 E66 02CA 1 MV-4, SNWA 2012). Any leakage that occurs from the regional carbonate-rock aquifer into basin fill, on the west side of California Wash or elsewhere in the basin, must occur at significant depths<sup>13,14</sup>.

The regional carbonate-rock aquifer extends from south to north beneath the basin fill all the way to the Muddy River, and as far east as the Muddy Mountain thrust (cross-sections E – G, Page et al. 2006)<sup>15</sup>; the depth of burial of the carbonates generally increasing from south to north and at a maximum on the east side and north end of the basin, 2,000 ft or more (cross-sections E, F, G, and H, Page et al. 2006). Despite these depths of burial, this portion of the regional carbonate aquifer, like other parts of this fractured rock aquifer, is transected by a not insignificant number of normal, reverse, and strike-slip faults (Page et al. 2005, Page et al. 2006), which may provide conduit(s) for the movement of groundwater from the underlying carbonate aquifer into the alluvium and other basin fill in California Wash. Although limited, there is direct evidence of leakage from the regional carbonate-rock aquifer into overlying basin fill in the southernmost part of the basin where the depth of burial of the carbonates is at a minimum (cross-section G, Page et al. 2006). Water levels in two wells, both reportedly 860 ft deep, one completed in carbonates (218 S18 E64 25AACC1) and one in basin fill about one mile north (218 S18 E65 18CC 1 BLM), were identical at one time (i.e., 1,772 ft amsl, 1949, USGS 2019b); the two wells in apparent equilibrium, indicative of a direct hydraulic connection between the regional carbonate-rock aquifer and basin fill in southern California Wash.

Additionally, although lateral hydraulic gradients are anomalously flat in the carbonate-rock aquifer through Garnet and Hidden valleys and California Wash, and even flatter from the area of MX-5 in southern Coyote Spring Valley through the MRSA based on recent, as well as historical, groundwater level measurements<sup>16</sup>, water levels in the regional carbonate-rock aquifer

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<sup>13</sup> Note: No or little outcrop of Permian redbeds, a potential confining unit between the alluvium and carbonates, has been mapped in the vicinity of the Order 1169 study area west of the Meadow Valley Wash fault and Glendale and Muddy Mountain thrusts on the east side of California Wash (Page et al. 2005).

<sup>14</sup> Whereas the depth to the water table is minimal in northernmost California Wash, the depth of the contact between fill and the carbonates is great in this area (Page et al. 2006, cross-section D).

<sup>15</sup> In California Wash, no Mississippian Chainman Shale, Scotty Wash Quartzite, or other siliciclastic rocks, which may act as a local confining unit between Permian to Mississippian carbonate rocks and Mississippian to Cambrian carbonate rocks, are present based on detailed geologic mapping by Page et al. (2005) and Crafford (2007) at locations where (less detailed) geologic cross-sections by Page et al. 2006 (D and E) indicate Mississippian siliciclastic rock outcrop should occur if present.

<sup>16</sup> This first observed over 20 years ago by Thomas et al. 1996 and Dettinger et al. 1995 based on groundwater level measurements collected largely in the 1960's to 1980's (as well as some older measurements). More contemporary measurements suggest a possible shift in equipotentials defining the potentiometric surface of the carbonate aquifer northward

are as much as 150 ft higher than in overlying basin fill in central California Wash and about 240 ft higher than in the alluvium close to the river (SNWA 2012, NDWR 2018a, and USGS 2019b). Given these significant differences in head, the potential exists for upward leakage from the regional carbonate-rock aquifer into overlying basin fill and / or alluvium in northern and central California Wash, if only by way of fault damage zones (in addition to direct leakage from the carbonates in the southern part of the basin).

Whereas the majority of gains documented to the Muddy River in California Wash during the February 2001 seepage study occurred in a reach intersected by the axis of LMVW (from which alluvial inflows from LMVW can safely be inferred), this same reach is also traversed by two south-southwest trending faults: a regional-scale strike-slip fault and at least one fault associated with the Glendale thrust (Page et al. 2006, cross-section D), either or both of which may provide conduit(s) for groundwater flow from the underlying carbonate-rock aquifer into the alluvium.

Notwithstanding the above, as in the MRSA, the extent to which groundwater in the alluvial aquifer of California Wash is derived from the alluvial aquifers of LMVW and the MRSA versus the underlying regional carbonate-rock aquifer cannot be determined using currently available groundwater level data, or water budget estimates prepared at the scale of whole basins wherein no distinction is made between carbonate, alluvial, and surface flows.

#### Summary – Sources of the Muddy River Springs and Muddy River

The source of the Muddy River Springs is the regional carbonate-rock aquifer, which in this area includes some Permian to upper Mississippian carbonate rocks of the Bird Spring Formation. Immediate sources of water in the Muddy River, from its headwaters in the MRSA through California Wash to uppermost Lower Moapa Valley, are the Muddy River Springs (surface discharges), seepage from alluvial aquifers adjacent to the river (in the MRSA, California Wash, and likely uppermost Lower Moapa Valley), and to a much lesser extent intermittent runoff of local precipitation. Sources of water in alluvium adjacent to the river, in turn, are: infiltration of surface discharges of the Muddy River Springs and subsurface seepage from the springs (within the MRSA); the regional carbonate-rock aquifer, specifically those portions underlying the MRSA and California Wash; and alluvial inflows from basins bordering the MRSA and California Wash (LMVW and perhaps Coyote Spring Valley). Recent estimates of precipitation recharge and groundwater evapotranspiration (SNWA 2009a, Table I-7) suggest that net recharge of precipitation to alluvium adjacent to the river in the MRSA, California Wash, or Lower Moapa Valley is unlikely. Consequently, the sources of water in the river, from the MRSA to uppermost Lower Moapa Valley, are the Muddy River Springs (derived nearly entirely from the regional carbonate-rock aquifer), leakage from the regional carbonate-rock aquifer into alluvium of the MRSA and California Wash, alluvial inflows from basins bordering the MRSA and California Wash (LMVW and maybe Coyote Spring Valley), and to a much lesser degree runoff of local precipitation.

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within Garnet, Hidden, and Coyote Spring valleys (based on an inspection of carbonate water levels compiled by NDWR 2018a and SNWA 2012 by this author).



## *Findings and Limitations*

The DOI 2013 SeriesSEE estimates of MX-5 induced drawdown as of December 2012, the official end of the test, are shown in Figure 5 (as reported in 2013 with the exception of CE-VF-2).

Several of the analyzed water level records (i.e., locations) were chosen because the wells were anticipated, based on geologic considerations and trends in measured groundwater levels, to be completed in carbonates or other geologic / hydrogeologic units located outside the area in which groundwater levels are responsive to carbonate pumping in southern Coyote Spring Valley; confirmed by the results of these analyses. Specifically, no MX-5 induced drawdown could be isolated in the water level records for carbonate wells EH-7 or Byron-1, or clastic well BM-ONCO-1; suggesting that locations east of faults and offsets associated with the Glendale and Muddy Mountain thrusts in Lower Moapa Valley and California Wash, and east of the Muddy Mountain thrust and south of the northern strand of the Las Vegas Shear Zone in the Black Mountains Area, are outside the area responsive to carbonate pumping in Coyote Spring Valley<sup>20</sup>. Likewise, no MX-5 induced drawdown could be isolated in the water level record for carbonate well CSVM-5 in Coyote Spring Valley, located just upgradient of an overturned anticline, one of a series, on the east side of the northern part of the Las Vegas Range (Page et al. 2005), which appears to act as a local barrier to flow and the propagation of drawdown in southern Coyote Spring Valley<sup>21</sup>. SeriesSEE estimates of MX-5 induced drawdown in carbonate monitoring wells CSVM-3 and CSVM-4 in northern Coyote Spring Valley are discussed in Section 1.1.3.

To the west, north, and east of the above no-flow boundaries, the test pumping clearly resulted in the development of a drawdown cone in the regional carbonate-rock aquifer (as shown in distance drawdown hydrographs presented in DOI 2013, Figures 1.11 and 1.12). Nevertheless, a remarkably uniform 1.5 to 1.6 ft of drawdown was induced by the MX-5 pumping during the Order 1169 test across multiple basins in the regional carbonate aquifer, irrespective of distance from MX-5: in CSVM-6, three miles north in Coyote Spring Valley; CSVM-2, nine miles south in Coyote Spring Valley; GV-1, twenty-seven miles south in Garnet Valley; M-1, fifteen miles southeast in California Wash; and CSV-2, nine miles east in the MRSA. This can only occur if the field-scale transmissivity of the regional carbonate aquifer is exceptionally high in an area that at a minimum includes the above wells<sup>22, 23</sup>. Moreover, there is no evidence that wells

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<sup>20</sup> This result also consistent with the known areal extent of the regional carbonates (Page et al. 2005, Page et al. 2006, and Crafford 2007). Note, the northern strand of the Las Vegas Shear Zone and Muddy Mountain thrust also delineate the extent of the regional carbonates in the Black Mountains Area; limited to the northwest part of the basin.

<sup>21</sup> CSVM-5 is also located at the mouth of a drainage that may be contributing to steadily rising water levels observed in the well since 2003.

<sup>22</sup> This conclusion consistent with anomalously flat hydraulic gradients long observed in this portion of the aquifer Thomas et al. (1996) and Dettinger et al. (1995) and the lack of mapped confining units noted earlier.

<sup>23</sup> Although exceptionally high based on the response to the MX-5 test pumping, the field-scale transmissivity of this portion of the regional carbonate-rock aquifer cannot, and consequently was not, estimated as part of this SeriesSEE analysis. To date, estimates of the transmissivity of this portion of the carbonate-rock aquifer are limited to model-calibrated values (SNWA 2009b,

CSVM-6, CSVM-2, GV-1, M-1, and / or CSV-2 are located in or connected by a few high permeability structures within the carbonates (Page et al. 2005 and Crafford 2007). This pattern of near uniform drawdown in response to the test pumping, and the high transmissivity inferred by it, must be the result of permeable secondary structures that are pervasive throughout this portion of the carbonate aquifer.

This is not to say that local low transmissivity zones and structures are not present within the regional carbonate aquifer. The estimation of relatively low transmissivities based on the interpretation of small-scale pumping tests at carbonate well CE-VF-2 in Coyote Spring Valley (3,100 ft<sup>2</sup>/d, USGS 2019a), carbonate well CSV-2 in the MRSA (1,000 ft<sup>2</sup>/d, USGS 2019a), and reportedly carbonate production well CSI-3 (also Coyote Spring Valley), are good examples. Lesser amounts of MX-5 induced drawdown in carbonate monitoring well M-2 (western California Wash), 1.1 ft (Figure 5), is likely another example of the effects of local low transmissivity zones within the regional carbonate aquifer, in this case at the scale of the screened or gravel-packed interval of the well. Despite the inevitable presence of localized low permeability zones and structures within this fracture-rock aquifer, the response to the MX-5 test pumping could not have occurred if not for exceptionally high field-scale transmissivity in the portion of the aquifer which includes CSVM-6, CSVM-2, GV-1, M-1, and CSV-2.

What is more, considering that the drawdown cone created by the MX-5 test pumping was as “flat” as it was, but nonetheless a drawdown “cone”, drawdown created by the test pumping must have extended some distance east of M-1 and CSV-2, south of GV-1, and west of CSVM-6, CSVM-2, and GV-1 in the regional carbonate-rock aquifer; at least to nearby no-flow boundaries (given that drawdown generally decreases logarithmically with distance). Those no-flow boundaries include<sup>24</sup>:

- the Muddy Mountain thrust on the east side of California Wash;
- Muddy Mountain thrust on the east side of northernmost Black Mountains Area;
- northern strand of the Las Vegas Shear Zone within northeastern Las Vegas Valley and northern Black Mountains Area;
- Gass Peak thrust from the northern strand of the Las Vegas Shear Zone through northeast Las Vegas Valley, along the western boundary of Garnet and Hidden valleys, and along the southernmost portion of the western boundary of Coyote Spring Valley;
- a series of anticlines on the east side of the northern part of the Las Vegas Range in southern Coyote Spring Valley, particularly where overturned (vicinity of CSVM-5); and

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Tetra Tech 2012, and Brooks et al. 2014) which vary considerably from model to model, but are anomalously high based on the calibration of all models to present (e.g., up to 1,000,000 ft<sup>2</sup>/day per SNWA 2009b).

<sup>24</sup> Known and likely no-flow boundaries identified based on geologic considerations; confirmed by differences in groundwater levels where available (see Section 1.3.1).

- Gass Peak thrust through the northern half of Coyote Spring Valley (beyond the series of anticlines in the northern part of the Las Vegas Range) to the Pahrangat Shear Zone or, if not, the groundwater divide along the crest of the Sheep Range.

Based on the 2013 interpretation of the Order 1169 pumping test, the following “five-plus” basins (or parts of basins) are known to be underlain by a portion of the regional carbonate-rock aquifer possessing exceptionally high field-scale transmissivity (DOI 2013 and NSE 2014a-f):

- the MRSA;
- most of Coyote Spring Valley;
- Hidden Valley;
- Garnet Valley;
- most of California Wash; and
- northwest Black Mountains Area.

The latter encompasses an area of about 1,050 square miles, as much as 24 miles from west to east and 60 miles from north to south; most of which is underlain by the full or nearly full sequence of Paleozoic carbonates (Page et al. 2006, cross-sections B through G).

In conclusion, inasmuch as the alluvial aquifers of the MRSA and California Wash have been demonstrated to be in hydraulic connection with this portion of the carbonate-rock aquifer (Section 1.1.1), and a similar connection likely exists in Coyote Spring Valley and possibly in Garnet Valley<sup>25</sup>, and the basin-fill aquifers in some of the above basins are themselves connected: the alluvial aquifers of the “five-plus” basins listed above, as well as the underlying carbonate-rock aquifer, function for all practical purposes as one groundwater basin that is connected to and the source of the Muddy River Springs and Muddy River. The alluvial and carbonate aquifers of this collection of basins are currently known as the Lower White River Flow System (LWRFS).

### 1.1.3 *Kane Springs Valley and Lower Meadow Valley Wash as Likely Parts of the LWRFS*

Kane Springs Valley and LMVW are not currently recognized as part of the Lower White River Flow System (LWRFS) based on the results or lack thereof of the Order 1169 pumping test. Kane Springs Valley was excluded from the pumping study in 2007 (NSE 2007) prior to the 2010 to 2012 test. Groundwater level monitoring was conducted in LMVW as part of the test, but limited to basin-fill wells MW-1a, b, and c. No carbonate wells were monitored in either basin as part of the Order 1169 test.

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<sup>25</sup> Based on the roughly synchronized response of water levels in basin-fill monitoring well CE-VF-1 and carbonate monitoring well CE-VF-2 to significant increases / decreases in carbonate pumping (prior to November 2011 when CE-VF-2 was breached, NDWR 2018a), a hydraulic connection likely exists between the alluvial aquifer of Coyote Spring Valley and the underlying carbonate aquifer. Basin-fill groundwater level data (NDWR 2018a and SNWA 2012) are insufficient to determine if a similar hydraulic connection exists in Garnet Valley.

### Kane Springs Valley

Kane Springs Valley was excluded from the Order 1169 pumping test following a February 2007 finding that a low permeability structure or change in lithology likely exists between Kane Springs Valley and central Coyote Spring Valley<sup>26</sup> which should allow for limited pumping in Kane Springs Valley without “any measurable impact on the Muddy River Springs” (NSE 2007). The 2007 finding was based on an interpretation of groundwater levels at two generalized locations within the carbonate aquifer between which water levels drop about 50 to 75 ft. However, upon reexamination of carbonate water level measurements available as of the time of the finding (late 2006), the data suggest a different set of conclusions or at least a high degree of uncertainty.

#### *The 2007 Finding*

The 2007 finding (NSE 2007) was based on an interpretation of groundwater levels at two generalized locations within the carbonate aquifer: “near” the boundary between Kane Springs Valley and Coyote Spring Valley (water level approximately 1,875 ft in elevation) and an unspecified location (or locations) further south in Coyote Spring Valley and / or other basins of the Order 1169 study area (water levels about 1,800 to 1,825 ft in elevation).

As of late 2006, carbonate water level measurements were available in two monitoring wells “near” the boundary between Kane Springs Valley and Coyote Spring Valley: KMW-1 in southern Kane Springs Valley located about 1,000 ft from the boundary with Coyote Spring Valley, water level 1,880 to 1,881 ft above mean sea level (amsl)<sup>27</sup>; and CSVM-4 in northern Coyote Spring Valley, water level 1,875 ft amsl (NDWR 2018a). During this same period, carbonate water levels in the range of 1,800 to 1,825 ft amsl were first encountered in central Coyote Spring Valley (the most northerly location with carbonate water levels in this range); specifically, the area of CSVM-6 (1,819 ft amsl), MX-4 (1,821.5 ft amsl), MX-5 (1,822 ft amsl), and CSVM-1 (1,821.5 ft amsl) (NDWR 2018a).

Separated by a distance of roughly two miles, the hydraulic gradient between KMW-1 in southern Kane Springs Valley and CSVM-4 in northern Coyote Spring Valley was about 2.75 ft/mile, while the gradient between CSVM-4 and CSVM-6 in Coyote Spring Valley (distance approximately 11 miles) was about 5.1 ft/mile; both gradients considerably steeper than at more southerly locations in the Order 1169 study area where the transmissivity of the carbonate aquifer has been determined to be exceptionally high (Section 1.1.2). Steeper gradients in the area of CSVM-4 to CSVM-6, and KMW-1 to CSVM-4, could be due to significant changes in lithology within the carbonate sequence (e.g., confining units) or discrete low permeability structures (fault gouge) as suggested in 2007; or alternatively, simply a relative scarcity of the

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<sup>26</sup> Described in NSE 2007 as southern Coyote Spring Valley, but presumably in reference to the vicinity of CSVM-6, MX-5 and CSVM-1 in central Coyote Spring Valley where carbonate water levels drop to 1,819 to about 1,821.5 in elevation (late 2006), or more recently (2017) 1,817.4 to about 1,819.7 ft in elevation (NDWR 2018a).

<sup>27</sup> Estimated from monitoring data collected beginning in early 2007 (NDWR 2018c).

types and numbers of permeable secondary structures giving rise to exceptionally high transmissivity in the carbonate aquifer to the south and east.

Eureka Quartzite, Pilot Shale, strata that may contain Chainman Shale, and undifferentiated Ely Spring Dolomite, Eureka Quartzite, and / or Pogonip Group have been mapped in carbonate outcrop in the Arrow Canyon Range and Meadow Valley Mountains (Crafford 2007). Likewise, two faults are mapped between KMW-1 and central Coyote Spring Valley (the area of CSVM-6, MX-4, MX-5, and CSVM-1): the Kane Springs Wash Fault near the boundary of Kane Springs and Coyote Spring valleys, and a north-northwest striking normal fault located just east of CSVM-6, MX-4, MX-5, and CSVM-1 (Figure 6). Nonetheless, prior to the 2007 finding, water level trends in CSVM-4 mirrored those in the central Coyote Spring Valley wells, and trends in KMW-1 mirrored those in CSVM-4; the similarity of carbonate water level responses continuing post-2007 through the Order 1169 pumping test (Figures 7, 8a and 8b). Based on the continuity of water level responses across this portion of the carbonate aquifer, any changes in lithology or discrete low permeability structures present in the carbonate aquifer between KMW-1 and central Coyote Spring Valley are not sufficiently impermeable to preclude or significantly minimize the impacts of carbonate pumping in KPW-1 (or KMW-1) on carbonate water levels in Coyote Spring Valley (or the other basins currently recognized as the LWRFS), consequently the Muddy River Springs or Muddy River.

Moreover, to the extent that the completion of KMW-1 (the only carbonate well in Kane Springs Valley) relative to the Kane Spring Wash Fault is unclear, broad conclusions should not be drawn concerning the effects of pumping in Kane Springs Valley based on water level responses, or the response to pumping, in KMW-1 alone. Well KMW-1 is located about 150 to 200 ft northwest of the mapped location of the Kane Springs Wash Fault (Page et al. 2005), but is completed from 955 to 2,013 ft bgs (NDWR 2018b) in an area where the dip of the fault is unknown<sup>28</sup>.

### *Beyond the 2007 Finding*

What is known with certainty is that the carbonate aquifer (the full or nearly full sequence of Paleozoic carbonates) extends north to south through Coyote Spring Valley from the Pahrangat Shear Zone to Hidden Valley (and beyond), and west to east from the Gass Peak thrust (if not the crest of the Sheep Range) into LMVW, the MRSA, and California Wash (SNWA 2009b, hydrogeologic framework model; and cross-section B, C, D, and F, Page et al. 2006); and that large amounts of groundwater flow into the north end of Coyote Spring Valley through the carbonates at the Pahrangat Shear Zone (Eakin 1964, Dettinger et al. 1995, and SNWA 2009a), the majority likely between the Gass Peak thrust and a north-striking normal fault that passes through the areas of CE-VF-2 and CSVM-3<sup>29</sup> (Figure 6). Additionally, much of the groundwater

<sup>28</sup> Well KMW-1 located intermediate between cross-sections B and C, Page et al. 2006.

<sup>29</sup> The full sequence of Paleozoic carbonate units preserved over this section of northernmost Coyote Spring Valley, but not east of the north-striking normal fault passing near CE-VF-2 and CSVM-3 and not west of the Gass Peak thrust (cross-section B, Page et al. 2006).

flowing into northern Coyote Springs Valley at the Pahranaagat Shear Zone is known to discharge at the Muddy River Springs (Eakin 1964 and Dettinger et al. 1995). Consequently, large volumes of groundwater must flow through the carbonate aquifer across the Kane Springs Wash Fault from northern into central Coyote Spring Valley (before flowing into the MRSA). The Kane Springs Wash Fault must be permeable over much of central Coyote Spring Valley.

What is also known with reasonable certainty is that the full or nearly full sequence of Paleozoic carbonates is continuous on the southeast / east side of the Kane Springs Wash Fault from south of the caldera complex in Kane Springs and northern Coyote Spring valleys (an area corresponding to about forty percent of the way up Kane Springs Valley) into central Coyote Spring Valley (SNWA 2009b, hydrogeologic framework model; and cross-sections B, C, and D, Page et al. 2006). It follows, if based only on geologic continuity, that pumping in the carbonate aquifer on the southeast side of the Kane Springs Wash Fault in Kane Springs Valley can be expected to impact water levels in the carbonate aquifer on the east side of the fault in central Coyote Spring Valley (e.g., the area of production wells CSI-3, CSI-2, CSI-1, RW-2, and MX-5), and other basins currently recognized as the LWRFS, consequently the Muddy River Springs and Muddy River. The similarity of water level trends in CSVM-6 and CSVM-4 is evidence of the hydraulic continuity of the carbonate aquifer from central to northern Coyote Spring Valley on the east side of the Kane Springs Wash Fault (Figure 7)<sup>30</sup>. Confirmation of the hydraulic continuity of the carbonates on the southeast side of the fault in Kane Springs Valley will depend on the installation of additional monitoring wells.

What is not known are the potential impacts of pumping within a “wedge” of the carbonate aquifer located northwest of the Kane Springs Wash Fault and east of the north-striking normal fault that passes through the areas of CE-VF-2 and CSVM-3 (and south of the caldera complex); some of which is located in Kane Springs Valley and some in northernmost Coyote Spring Valley (Figure 6). What is more, this “wedge” of carbonates may be “compartmentalized” by the Delamar thrust fault (east and west of the thrust) in view of the potential for significant gouge in the reverse fault zone, which may account for the dissimilarity of water level trends in CSVM-3 versus KMW-1 and all other carbonate monitoring wells in the area (e.g., prior to and during the Order 1169 pumping test). Given that interpreting water level responses (and responses to pumping) in KMW-1 is key to resolving this and other questions, downhole geophysical surveys should be conducted in the well and interpreted, if not already available, to determine whether the well is completed on the northwest side, southeast side, or through the Kane Springs Wash Fault zone.

#### *Proposed KMW-1 Pumping Test*

Whereas a pumping test has reportedly been performed in KMW-1, the details and results of the test are not widely known or evaluated. In view of existing, but yet undeveloped, underground

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<sup>30</sup> Additionally, while only 0.4 to 0.5 ft of MX-5 induced drawdown was estimated in CSVM-4 in northern Coyote Spring Valley during the DOI 2013 SeriesSEE analysis (substantially less than the 1.6 to 1.5 ft estimated in CSVM-6 and other carbonate wells in Garnet Valley, the MRSA, and California Wash), the fit to measured water levels in CSVM-4 during the SeriesSEE curve fitting was poor (in retrospect); that particular estimate of MX-5 induced drawdown unreliable.

water rights in Kane Springs Valley, and the interest in additional applications of significant magnitude, a long-term pumping test should be performed in carbonate monitoring well KMW-1 after determining whether the well is completed on the northwest side, southeast side, or through the Kane Springs Wash Fault zone. If KMW-1 is completed outside the fault zone and on its northwest side, the test would allow the potential impacts of carbonate pumping on the northwest side of the fault in Kane Springs Valley to be evaluated. If KMW-1 is completed outside the fault zone and on its southeast side, the test would allow the effects of carbonate pumping on the southeast side of the fault in Kane Springs Valley to be confirmed and more fully characterized. If KMW-1 is instead completed through the Kane Springs Wash Fault zone (i.e., on both sides of the fault and within the fault), then the test would provide information about both of the above, although more difficult to interpret.

If undertaken, the test should utilize at a minimum the following observation wells: carbonate monitoring wells CSVM-4, CSVM-3, CSVM-6, and if available and un-pumped CSI-4; and basin-fill monitoring wells CSV30011, CSV3009, CSVM-7, and CE-VF-1 (Figure 9). If possible, the value of the test would be significantly enhanced by installing and utilizing two additional carbonate observation wells at locations previously specified in USFWS (2006). Pending the outcome of the pumping test, that portion of Kane Springs Valley located outside the caldera complex (the plutonic core; SNWA 2009b, hydrogeologic framework model), and northwest, southeast, and / or on both sides of the Kane Springs Wash Fault zone, as applicable, should be considered for incorporation into the LWRFS for conjunctive water management.

#### *Proposed CSVM-3 Pumping Test*

Given past interests in moving existing Coyote Spring Valley underground water rights from the central to the northern part of the basin, specifically north of the Kane Springs Wash Fault and east of the north-striking normal fault that passes through the areas of CE-VF-2 and CSVM-3 (and outside the caldera complex), as well as uncertainties regarding the impacts of pumping in this “wedge” of the carbonate aquifer, a long-term pumping test should be performed in carbonate monitoring well CSVM-3<sup>31</sup>. The test would allow the potential impacts of carbonate pumping in this area to be evaluated prior to the approval of change applications.

If undertaken, the test should utilize at a minimum the following observation wells: carbonate monitoring wells CSVM-4, KMW-1, CSVM-6, and if available and un-pumped CSI-4; and basin-fill monitoring wells CSV30011, CSV3009, CSVM-7, and CE-VF-1 (Figure 10). If possible, the value of the test would be significantly enhanced by installing and utilizing two additional carbonate observation wells at locations previously specified in USFWS (2006).

#### *Lower Meadow Valley Wash*

No wells appear to be completed in the regional carbonate aquifer in LMVW (NDWR 2018a, NDWR 2018c, SNWA 2012, and USGS 2019b), although the carbonate aquifer is present beneath the southern three-quarters of the basin as far east as the Meadow Valley Wash Fault

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<sup>31</sup> If feasible to temporarily install a pump of sufficient capacity in this 6-inch diameter well.

conditions in the Humboldt River Basin more than 200 miles north in Nevada Climate Division 2, which is not physically tenable.

### *Climatic Trends – The Last 48 Years*

Conditions in both Climate Division 4 (the immediate area of the LWRFS) and Climate Division 3 (areas which are the primary source of groundwater in the LWRFS) appear to have been “drying” for at least the last 48 years since 1970 (Figure 11). However, more analysis is needed to determine if this trend is real or not since neither linear trend line in Figure 11 is statistically significant. If conditions are getting warmer and drier, as expected with increasing air temperatures and decreasing precipitation, this would have significant practical ramifications for the availability of water in the LWRFS and determinations of its “sustainable yield”.

## **1.3 Hydrogeologic Conceptual Model of the LWRFS**

### *1.3.1 Boundaries and Boundary Conditions*

Geologic mapping (Page et al. 2005 and SNWA 2007), geologic cross-sections (Page et al. 2006), the three-dimensional hydrogeologic framework of SNWA 2009b, and groundwater level data from readily available published sources (Heilweil and Brooks 2011, SNWA 2012, and NDWR 2018a), are used to identify the physical locations of the boundaries of the LWRFS and conditions on the boundaries.

#### *Lateral Inflow Boundaries*

##### *Pahranagat Shear Zone*

It is well established that groundwater flows across the Pahranagat shear zone into Coyote Spring Valley, supported by trends in groundwater elevations, water budget analyses, and deuterium calibrated mixing-cell modeling (e.g., Eakin 1964, 1966, SNWA 2009a Table I-7, Kirk and Campana 1990, Thomas et al. 1996). Moreover, this inflow must occur largely from Pahranagat Valley into Coyote Spring Valley west of the Delamar thrust fault due to the presence of the Kane Springs Wash caldera complex with its plutonic core to the east (SNWA 2009b, hydrogeologic framework model; Page et al. 2006, cross-section A); the latter all but precluding inflow from Delamar Valley to Coyote Spring Valley. Likewise, inflow across the shear zone from Delamar Valley into Kane Springs Valley is largely, if not entirely, precluded by the caldera complex and outcrop of basement rocks (SNWA 2009b, hydrogeologic framework model; and Crafford 2007)<sup>37</sup>.

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<sup>37</sup> Although some local recharge to Kane Springs Valley may occur in the Delamar and Meadow Valley mountains (SNWA 2012).



There are no carbonate wells in southern Pahrnatag Valley or northernmost Coyote Spring Valley (other than CSVM-3)<sup>38</sup>. Basin-fill water levels drop about 800 ft from the southern end of Pahrnatag Valley (Maynard spring pool) to a location roughly 9 miles south in Coyote Spring Valley (Eakin 1964), but may not be representative of gradients in the carbonate aquifer or, in particular, across the shear zone. Rather, assuming water levels in the basin fill and underlying carbonates of southern Pahrnatag Valley are in equilibrium (a location where the water table is very close to the land surface and roughly 3,150 ft amsl; SNWA 2012 and Heilweil and Brooks 2011), and projecting carbonate water levels from the area of CSVM-4 in northern Coyote Spring Valley (about 1,875 ft amsl; NDWR 2018a) to the boundary with Pahrnatag Valley using a gradient of 5 ft/mile, the difference in head across the Pahrnatag shear zone in the carbonate aquifer is conservatively 1,200 ft. Consequently, changes on the order of many tens of feet in carbonate water levels in Pahrnatag and / or Coyote Spring valleys (i.e., on either or both sides of the shear zone) would have no significant effect on the hydraulic gradient or rates of groundwater inflow across the shear zone into Coyote Spring Valley. The Pahrnatag shear zone, at the boundary between Pahrnatag and Coyote Spring valleys, is a constant inflow boundary for the foreseeable future.

#### *Meadow Valley Flow System above LMVW*

Although somewhat inconsistent with surficial geologic mapping by Crafford (2007), the hydrogeologic framework model of SNWA (2009b) shows that groundwater from Lake and Patterson valleys in the northern part of the Meadow Valley Flow System flows south through Panaca Valley (between and around plutonic rocks of the Caliente caldera complex and highs in basement rocks) through “upper valley fill”, “lower valley fill”, and the underlying carbonates into LMVW. Basin-scale water budget analyses by SNWA (2009a, Table I-7) estimate that about 4,700 afy of groundwater flow from Panaca Valley into LMVW. Whereas water level hydrographs for wells in the northern two-thirds of LMVW are not readily available (NDWR 2018c), and most if not all wells in northern LMVW and southern Panaca Valley are shallow and located along the wash, records for alluvial wells in southern Panaca Valley include long-term, as well as seasonal, variations in water level (e.g., wells 203 S02 E67 35A 1 and 203 S02 E67 02CD 1; NDWR 2018c). Groundwater inflows at the boundary between Panaca Valley and LMVW, unlike those across the Pahrnatag shear zone, vary from year to year.

#### *Lateral No-Flow Boundaries*

The locations of likely no-flow boundaries, which largely define the areal extent of the LWRFS, are identified using a combination of geologic mapping (Page et al. 2005, SNWA 2007), geologic cross-sections (Page et al. 2006), the three-dimensional hydrogeologic framework of SNWA (2009b), and groundwater level data readily available from published sources (Heilweil

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<sup>38</sup> CSVM-3 likely not representative of water levels elsewhere in the carbonate aquifer in northernmost Coyote Spring Valley (see Section 1.1.3).

and Brooks 2011, SNWA 2012, NDWR 2018a). The locations of likely no-flow boundaries on the LWRFS are as follows [basis for identification provided in brackets]:

- boundary of Delamar Valley with northern Coyote Spring Valley and Kane Springs Valley [groundwater flow precluded by plutonic rocks of the Kane Springs Wash caldera complex (SNWA 2009b, hydrogeologic framework model; Page et al. 2006, and cross-section A)];
- boundary of northern LMVW with Delamar and Dry Lake valleys [coincident with the likely direction of groundwater flow];
- boundary of northern LMVW with Clover Valley and northern Tule Desert to the intersection with a west-striking strike-slip fault intersecting Meadow Valley Wash Fault [coincident with likely directions of groundwater flow, then a strike-slip fault intersecting Meadow Valley Wash Fault shown in Page et al. (2005)];
- Meadow Valley Wash Fault south to its intersection with the boundary of Lower Moapa Valley [carbonates discontinuous across this portion of the fault from west to east, cross-sections A, B, and C of Page et al. (2006)];
- boundary of LMVW with Lower Moapa Valley from the Meadow Valley Wash Fault to the Muddy River near the Glendale thrust [carbonates discontinuous across the fault and thrust from west to east, cross-section D of Page et al. (2006); water levels in Lower Moapa Valley near the Muddy River and boundary with LMVW in carbonate wells EH-7 and EH-3 about 250 ft lower than in northern California Wash at carbonate well M-1, NDWR (2018a)];
- Muddy Mountain thrust on the east side of California Wash from the Muddy River south to the northern strand of the Las Vegas shear zone in northwest Black Mountains Area [carbonates discontinuous across a series of faults associated with the thrust, cross-sections E, F, and G of Page et al. (2006); water level in carbonate well Byron on the east side of a fault associated with the thrust 150 ft lower than in carbonate well M-1 in northern California Wash, NDWR (2018a); and water level in carbonate well EBM-3 in the northwest part of the Black Mountains Area 100 feet higher than in wells BM-ONCO-1 and BM-ONCO-2 completed in clastic rocks to the southeast, (NDWR 2018a)];
- northern strand of the Las Vegas shear zone from the Muddy Mountain thrust in northwest Black Mountains Area to the Gass Peak thrust in northern Las Vegas Valley [carbonates discontinuous across the shear zone, Page et al. (2006, cross-section H)];
- Gass Peak thrust from the northern strand of the Las Vegas shear zone to a location intermediate between cross-section F of Page et al. (2006) and CSVM-5 in southern Coyote Spring Valley [carbonates discontinuous across this portion of the thrust, cross-sections G and F of Page et al. (2006)]; and

- crest of the Sheep Range from a location intermediate between cross-section F of Page et al. (2006) and CSVN-5 in southern Coyote Spring Valley to the Pahrangat shear zone [no-flow conditions coincident with the topographic divide].

### Lateral Outflow

Whereas some groundwater outflow may occur from the carbonate aquifer of California Wash to Lower Moapa Valley and / or the Black Mountains Area (or as suggested across some part of the Las Vegas shear zone), available estimates of the rate of outflow are based on Darcy flux approximations<sup>39</sup> and basin-scale water budget analyses (SNWA 2009a, Table I-7). Hence, the rate of any such outflow is poorly known (uncertain). Notwithstanding the potential for some outflow from the area currently recognized as the LWRFS, the difference in head in carbonate rocks on the west and east sides of the Glendale and Muddy Mountain thrusts is on the order of 100 to 150 ft as described in the previous section (based on water level measurements in wells M-1 and EBM-3 versus Byron and BM-ONCO-1 and BM-ONCO-2, respectively), while water levels in the carbonate aquifer in the LWRFS<sup>40</sup> have declined only two to five feet over the last 16 to 20 years through several periods of significant drought (e.g., 2.5 ft in GV-1 in Garnet Valley and 4.5 ft in MX-4 in Coyote Spring Valley, NDWR 2018a). Therefore, to the extent that outflow occurs across any portion(s) of the thrusts (or the northern strand of the Las Vegas shear zone), hydraulic gradients and rates of outflow are, for all practical purposes, constant, short of a change in head on either or both sides of the thrusts (or shear zone) of at least several tens of feet; the latter highly unlikely in the LWRFS given the significant areal extent of the carbonate aquifer underlying the LWRFS basins. Any outflow that occurs to Lower Moapa Valley or the Black Mountains Area from the LWRFS is fairly constant and, in particular, unlikely to change significantly with water management in the LWRFS.

### 1.3.2 Areal Extent of the LWRFS – Proposed Boundaries

Based on information developed in Sections 1.1.1, 1.1.2, 1.1.3, and 1.3.1, revisions to the areal extent of the LWRFS should be considered as shown in Figure 1 to include the following basins and parts of basins:

- the MRSA;
- most of Coyote Spring Valley;
- Hidden Valley;
- Garnet Valley;
- most of California Wash;
- northwest Black Mountains Area;
- Kane Springs Valley; and

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<sup>39</sup> Testimony provided by Terry Katzer and David Donavan in a July 2001 administrative hearing on Las Vegas Valley Water District applications (NSE 2014a-f and NSE 2002).

<sup>40</sup> Specifically, that portion of the regional carbonate aquifer located west of the Glendale and Muddy Mountain thrusts and north of the northern strand of the Las Vegas Shear Zone.

- most of LMVW

### 1.3.3 *Relative Aquifer Transmissivities, Storativities, and Hydraulic Diffusivities*

Only an understanding of the relative transmissivities, storativities, and hydraulic diffusivities of the carbonate and alluvial aquifers of the LWRFS are required to address questions “b” and “d” posed in Order 1303 (NSE 2019).

#### *Regional Carbonate-Rock Aquifer*

Based on the DOI 2013 interpretation of the Order 1169 pumping test, the transmissivity of a large portion of the regional carbonate-rock aquifer underlying the LWRFS is exceptionally high at field-scales. The storativity of the aquifer is limited since composed of fractured consolidated rocks (elastic storage where confined and otherwise largely arising from secondary structures). As such, the hydraulic diffusivity of the carbonate aquifer is high (at least in this area), but finite; consistent with the 4 to 6 month lag observed in the initiation of measurable recovery at the Pederson springs and carbonate well EH-4 in the MRSA following the cessation of MX-5 pumping in southern Coyote Spring Valley (12 miles away) during the Order 1169 pumping test (Figures 12 and 13).

#### *Alluvial Aquifers*

The transmissivity of the alluvial aquifers of the LWRFS is considerably lower, storativity considerably higher, and hydraulic diffusivity considerably lower than that of the underlying regional carbonate aquifer.

### 1.3.4 *Groundwater Flow and General Response to Pumping and Climatic Conditions*

#### *Pumping in the Carbonate Aquifer*

A sizable portion of the carbonate-rock aquifer of the LWRFS has been demonstrated to possess exceptionally high field-scale transmissivity (Section 1.1.2); i.e., transmissivity of exceptional magnitude within the carbonate-rock province of southern and eastern Nevada. Based on the response to the Order 1169 pumping test (Section 1.1.2) and anomalously flat lateral hydraulic gradients documented in the carbonate aquifer over many years (Dettinger et al. 1995, NDWR 2018a), the high transmissivity portion of the aquifer extends from CSVM-6 in central Coyote Spring Valley to the east and south beneath the whole of MRSA and Hidden and Garnet valleys, most of California Wash, and the northwest part of the Black Mountains Area. Due to its exceptionally high transmissivity (and for no other reason), pumping in this portion of the carbonate aquifer creates nearly uniform drawdown throughout the high transmissivity part of the aquifer.

North of CSVM-6 in central Coyote Spring Valley, the carbonate aquifer has been demonstrated to be of lesser transmissivity, but nonetheless transmissive and in hydraulic connection with the exceptionally high transmissivity portion of the aquifer (Section 1.1.3). As a result, pumping in the high transmissivity portion of the carbonate aquifer creates drawdown in the carbonates of northern Coyote Spring Valley (e.g., the area of CSVM-4), but of lesser magnitude (the

## 2.2 Current Status of the Moapa Dace

### 2.2.1 Historical and Current Population Estimates of Moapa Dace

The population size of Moapa dace is estimated bi-annually in the spring and fall seasons. Early surveys for this species (Scoppetone et al. 1998) found that snorkeling was an effective method to estimate population size without handling stresses associated with other methods. Surveys are conducted from downstream to upstream in 16 stream segments (Figure 22) to eliminate turbid conditions caused by upstream counters. In recent years snorkel surveys have been conducted using trained representatives from USFWS, Nevada Department of Wildlife, and the Southern Nevada Water Authority. Surveys of Moapa dace have indicated fluctuations in population size. Figure 21 shows the biannual estimates for Moapa dace from 2005 to spring 2019. Abundance appears to be strongly influenced by both habitat restoration, restored or lack of connectivity, and the biological interactions of predatory non-native fishes, the impacts of which depend on site-specific habitat characteristics and species-specific interactions. Although the Muddy River Springs Area is now free of blue tilapia, western mosquitofish and short-fin mollies remain in the system.

The gradual increase in population size after 2012 (Figure 21) is suspected to correspond to the period following population expansion after blue tilapia was eradicated from the system. Concurrently, significant habitat improvements were completed between 2013 and 2016 on the Warms Springs Natural Area in reach 5.5 (Figure 22). Also noteworthy is that the mainstream Muddy River and upper areas of the North and South Fork (reaches 15 and 16, respectively), at present, do not support significant numbers of Moapa dace. The upper reaches have not been recolonized since the piscicide treatments to remove blue tilapia. The larger habitat of the mainstream Muddy River (reaches 11, 12 and 13) likewise do not support dace. Given the historical importance of the mainstream channel to support large numbers of large dace (and associated higher fecundity typical of larger fishes), understanding the causes for the current low numbers of fish in these reaches remain a research priority.

## 2.3 Summary

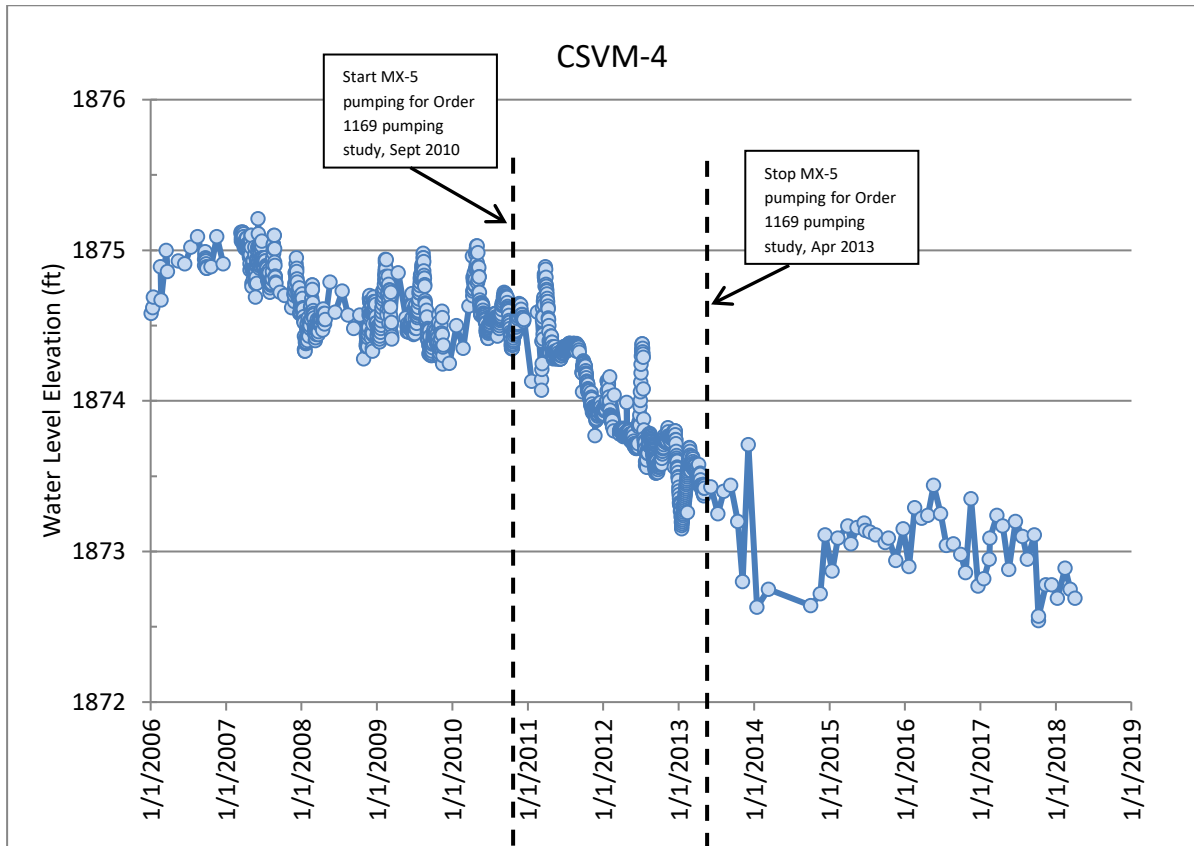
The Muddy River Springs Area support several rare and endemic aquatic species that occur nowhere else. The relative scarcity of water in the Mohave Desert and the long-term isolation of these springs has resulted in the evolution of unique species, among them the endangered Moapa dace. This species became endangered due to the combined threats of habitat modification and the introductions of invasive species in the Muddy River Springs Area.

This stream minnow is characterized by an unusual life-history, where its existence depends on the high temperature springs and their outflow streams. Even more specialized for the Moapa dace is its complex habitat requirements, whereby this species uses the spring headwaters to

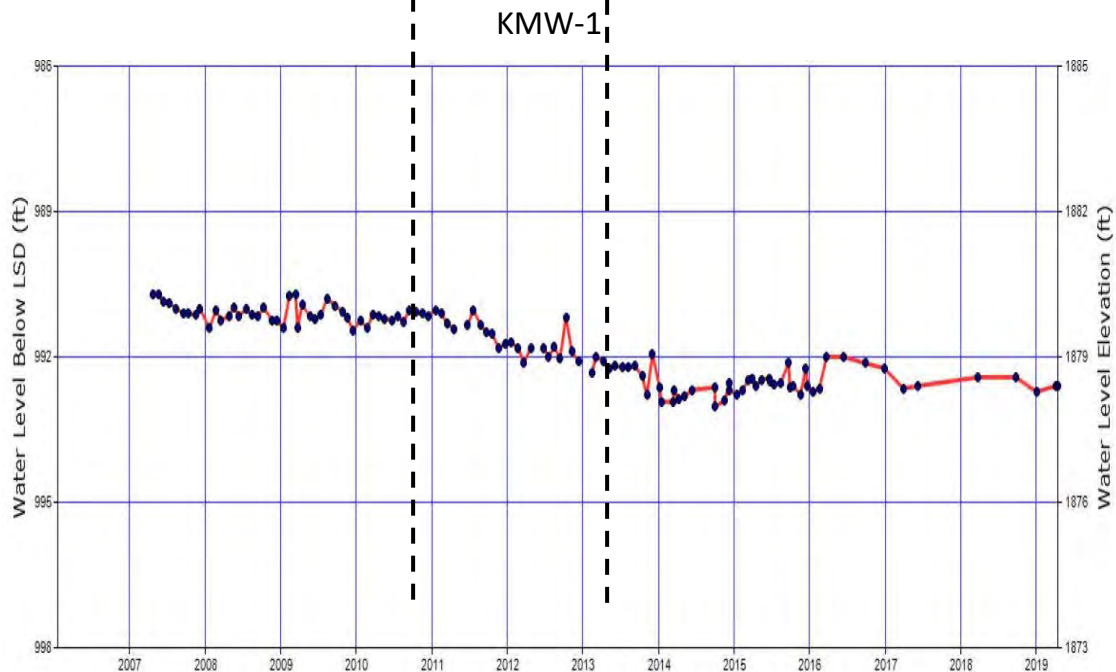
reproduce, the larger downstream habitats to effectively grow, and unobstructed fish passage to continually move between these habitat types during the lifespan of individual fish.

The USFWS established the Moapa Valley National Wildlife Refuge to protect water resources and improve habitat for this species. Over the course of 40 years (1979-2019) the Refuge and adjacent Warm Springs Natural Area have significantly improved the habitat for Moapa dace. Among the major recovery actions include the removal of non-native fishes by piscicide treatment, and the repair of barriers that prohibit fish passage between upper and lower sections of the streams. Estimates of population size for Moapa dace have fluctuated in different stream segments over time as recovery efforts have restored habitat and removed the invasive and predatory fishes from the system. Recovery success over the most recent decade as indicated by surveys, shows the population size of Moapa dace has increased from its lowest point of 500 fish in 2008 to approximately 1500 fish in 2019.

Integral to the recovery and future management of the Moapa dace beyond restoring streams to natural conditions and removing non-native fishes is the maintenance of adequate flow in the Muddy River. Several water-use agreements among water users and the United States Fish and Wildlife Service have afforded protection to aquatic species of the Muddy River Springs Area, based on evidence discussed above in this report (Section 1.1.3). The first agreement, the 2006 MOA, ensures that flows in the system are maintained at approximately the current rate that has maintained Moapa dace as measured at the Warm Springs West near Moapa gauge. The 2006 MOA provides for formal discussion among stakeholders to reduce groundwater pumping in the Muddy River Springs Area and Coyote Springs Valley when the flow drops below 3.2 cfs, and a curtailment at 3.0 cfs or below. The second agreement, an Amended Stipulation for Withdrawal of Protests between the Lincoln County Water District, Vidler Water Company, and USFWS pertains to groundwater pumping in the upstream Kane Springs Valley, and similarly initiates discussion of reduced groundwater pumping and total cessation of pumping at 3.2 cfs and 3.0 cfs, respectively. These agreements are important protective measures to ensure the maintenance of the endangered Moapa dace for several reasons. The first is that restoring streams via habitat improvement, although necessary, is not sufficient to recover the species. Water level is also important. Recent published studies (Hatten et al. 2013) show that water depth predicts the distribution of Moapa dace, and most importantly, water flow is directly related to the amount of habitat available. This study shows via simulations that any reduction in flow results in reduced habitat for Moapa dace. At present, most stream habitat has been significantly improved by ongoing restoration efforts by the USFWS and partners agencies over the last 40 years, and thus the most important factor likely to influence the successful recovery of this species moving forward is the maintenance of surface flows in the system.



**Figure 8a.** Change in water level in carbonate monitoring well CSV-4, northern Coyote Spring Valley, during the Order 1169 pumping test (~1.2 ft), September 2010 to December 2012 (NDWR 2018a).



**Figure 8b.** Change in water level in carbonate monitoring well KMW-1, southern Kane Springs Valley, during the Order 1169 pumping test (~1.1 ft), September 2010 to December 2012 (hydrograph after NDWR 2019c).

Testimony of  
Richard K. Waddell, Jr.  
on behalf of the  
U.S. National Park Service



# Kane Springs Valley

- Water levels responded to Order 1169 pumping

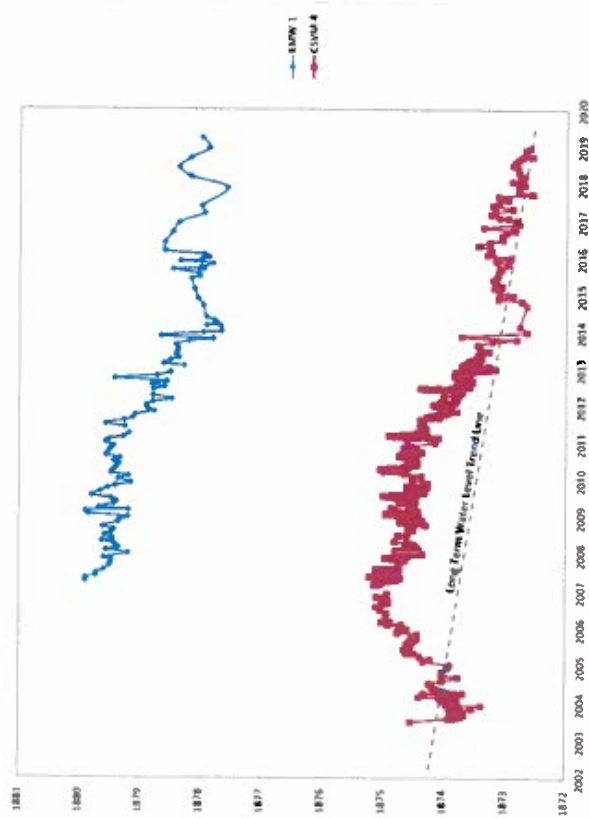
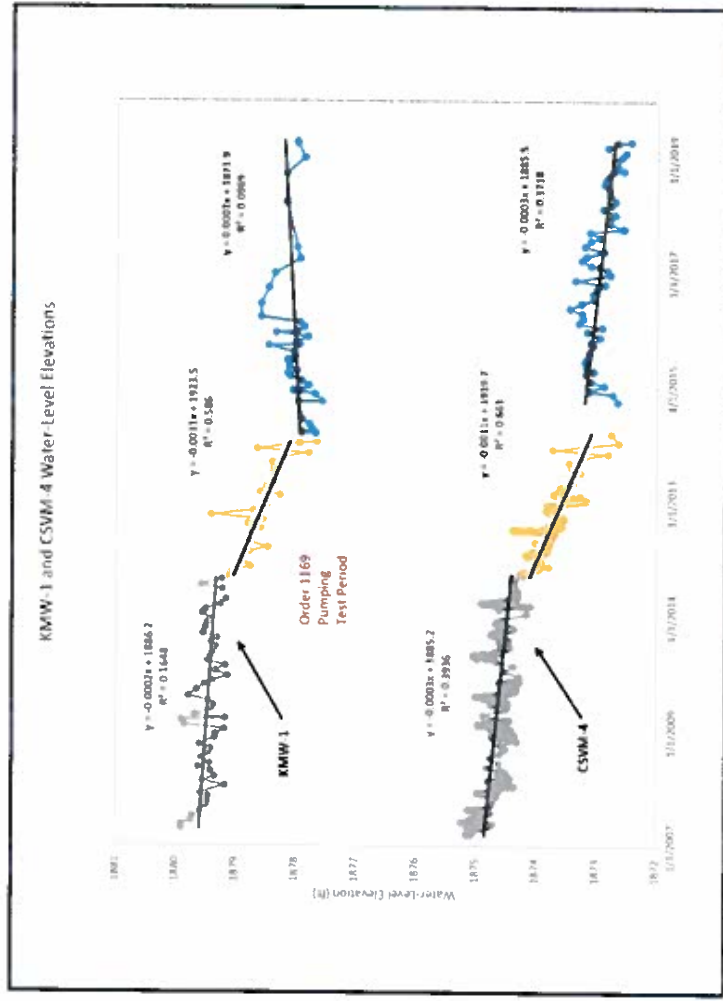


FIGURE 3-9. COMBINED HYDROGRAPHS OF WELLS KMW-1 AND CSVM-4

Ex. LC-V\_001



NPS Ex. No. 3

# Kane Springs Valley (continued)

- Faults are present in northern Coyote Spring Valley and Kane Springs Valley that may reduce permeability

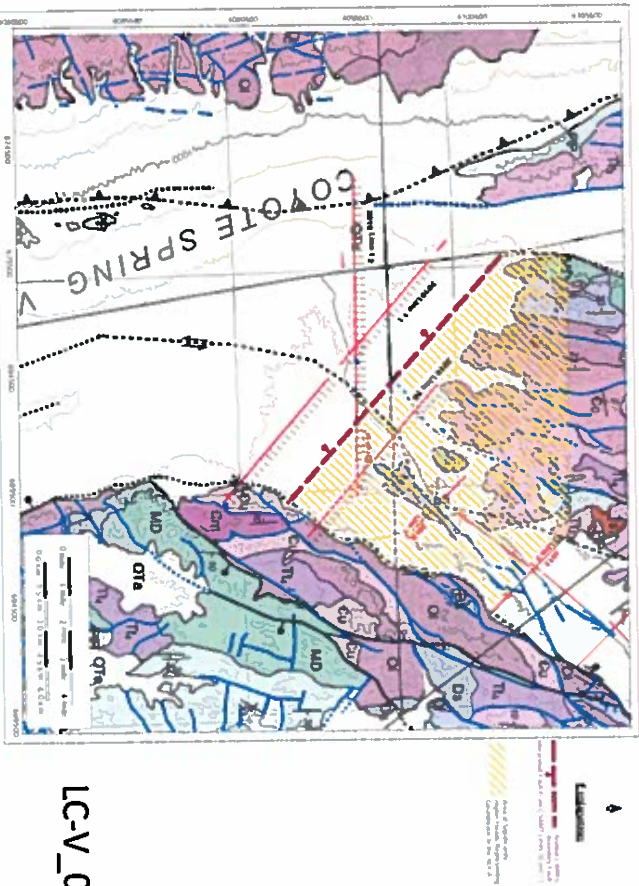


FIGURE 4-9: LOCATION MAP SHOWING THE NORTHERN LIFT'S BOUNDARY FAULT

LC-V\_001

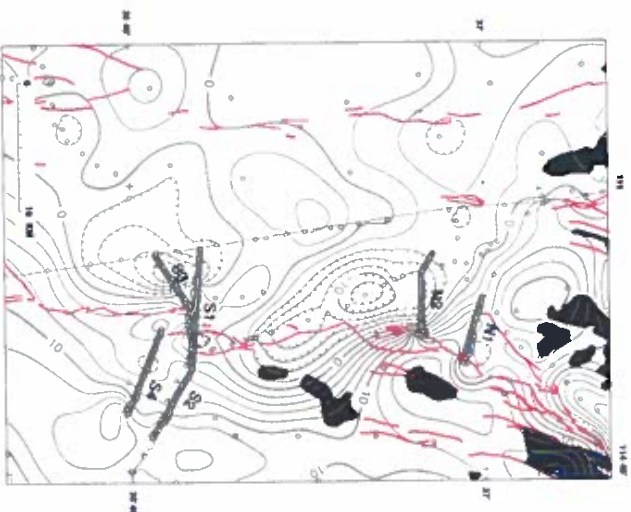
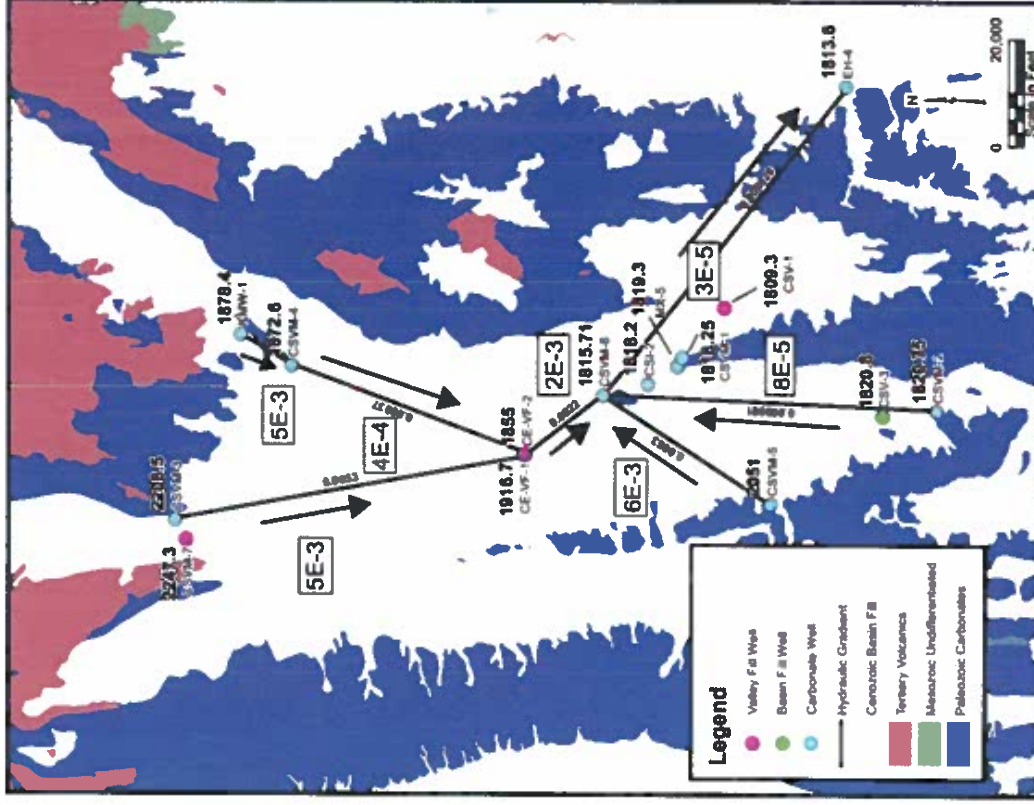


Figure 2 Map showing possible structural grain of Coyote Spring Valley and vicinity. Contour interval = 2 m. Open circles show gravity stations. Elevations under N1, N2 and S1-S4 are detailed gravity profiles that were recorded in other basin studies. Red lines indicate faults mapped by Cosentino and others (1989). The map is based on geology and culture. Refer to Plate 1 for upper basin preservation of these data.

NPS EX. No. 3

## Kane Springs Valley (continued)

- Hydraulic gradients are higher in the northernmost part of Coyote Spring Valley
- But not enough to create a significant barrier, based on observed pumping responses in KMW-1 and CSVM-4



**Figure 2** Horizontal Hydraulic Gradients Between Selected Well Points, Coyote Springs Valley and Vicinity  
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IN THE MATTER OF THE ADMINISTRATION  
AND MANAGEMENT OF THE LOWER WHITE  
RIVER FLOW SYSTEM WITHIN COYOTE  
SPRING VALLEY HYDROGRAPHIC BASIN  
(210), A PORTION OF BLACK MOUNTAINS  
AREA HYDROGRAPHIC BASIN (215), GARNET  
VALLEY HYDROGRAPHIC BASIN (216),  
HIDDEN VALLEY HYDROGRAPHIC BASIN  
(217), CALIFORNIA WASH HYDROGRAPHIC  
BASIN (218), AND MUDDY RIVER SPRINGS  
AREA (AKA UPPER MOAPA VALLEY)  
HYDROGRAPHIC BASIN (219).

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WRITTEN CLOSING STATEMENT OF  
LINCOLN COUNTY WATER DISTRICT  
AND  
VIDLER WATER COMPANY, INC.

ALLISON MacKENZIE, LTD.  
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1 LINCOLN COUNTY WATER DISTRICT (“LINCOLN COUNTY”) and VIDLER WATER  
2 COMPANY, INC. (“VIDLER”), by and through their attorneys, DYLAN V. FREHNER, ESQ. the  
3 LINCOLN COUNTY DISTRICT ATTORNEY and KAREN A. PETERSON, ESQ. of the law firm of  
4 ALLISON MacKENZIE, LTD., in accordance with the State Engineer’s order at the conclusion of the  
5 hearing on October 4, 2019, respectfully provide their written closing statement.

6 1. **INTRODUCTION**

7 A. **Interim Order #1303**

8 In Interim Order (IO) #1303, the Nevada State Engineer (NSE) requested reports be submitted  
9 to address: (a) the geographic boundary of the hydrologically connected groundwater and surface water  
10 systems comprising the Lower White River Flow System (LWRFS), (b) an analysis regarding aquifer  
11 recovery since the completion of the Order 1169 aquifer test, (c) the long-term annual quantity of  
12 groundwater that may be pumped from the LWRFS and how that would affect the hydrology of the  
13 Muddy River Springs Area (MRSA), (d) the effects of movement of water rights between alluvial wells  
14 and carbonate wells on deliveries of senior decreed rights to the Muddy River, and (e) any other matter  
15 believed to be relevant to the State Engineer’s analysis. [NSE Ex. 1 Order 1303, at 13-14]. The NSE  
16 will make a determination on the above five matters using the best available science. *Id.* at 10.

17 B. **Scope Of This Proceeding**

18 At the prehearing conference held on August 8, 2019, the following statements were made by  
19 the NSE’s office regarding the scope of this proceeding:

- 20 • “...this is a threshold reporting aspect, that this is part of a multi-tiered process in terms  
21 of determining the appropriate management strategy to the Lower White River Flow System.” [8-08-19  
22 Tr. 10:8-10 (Prehearing Conference)].
- 23 • The four specific matters listed in IO #1303 are threshold matters; larger substantive  
24 policy determinations are not part of this proceeding. [8-08-19 Tr. 10:16-19 (Prehearing Conference)].
- 25 • This part of the proceeding is based on scientific analysis and data analysis; [8-08-19 Tr.  
26 11:1-2 (Prehearing Conference)].
- 27 • Future policy considerations which are not encompassed within the issues specifically  
28 identified in IO #1303 will not be considered during these proceedings; the NSE anticipates the order

1 from this proceeding will address the four specific matters identified in Order 1303. [8-08-19 Tr. 11:8-  
2 22 (Prehearing Conference)].

3 • “And the purpose of the hearing is not to resolve or address allegations of conflict  
4 between groundwater pumping within the LWRFS and Muddy River decreed rights. That is not the  
5 purpose of this hearing and that’s not what we are going to be deciding at this point in time...” [8-08-  
6 19 Tr. 12:6-10 (Prehearing Conference)].

7 • The State Engineer is looking for the following information, however it is not an  
8 exhaustive list: 1. How conclusions are supported by the available data; 2. How those conclusions differ  
9 from positions the NSE’s office has previously taken; 3. Whether there are new interpretations of data  
10 based upon what has been observed since the conclusion of the Order 1169 aquifer test; 4. Whether  
11 conclusions drawn are sufficiently supported by the available data and cited to data; 5. Whether the  
12 conclusions and data and evidence relied upon in rendering those conclusions are independently  
13 reproducible and verifiable; 6. If NSE’s office can’t go through and reproduce the data relied upon in  
14 terms of making conclusions, it will be difficult for NSE to substantiate those findings; and 7.  
15 Commonalities and conclusions amongst the various participants. [8-08-19 Tr. 12:20-13:17 (Prehearing  
16 Conference)]. Parties were directed to distill their reports and conclusions into a succinct presentation  
17 of the salient opinions and direct the NSE to the data and other information supporting those conclusions.  
18 [8-08-19 Tr. 8:10-13; 14:10-15 (Prehearing Conference)].

19 2. LINCOLN COUNTY WATER DISTRICT and VIDLER WATER COMPANY  
20 (LINCOLN/VIDLER)

21 A. Reasons Why Lincoln/Vidler Participated In This Hearing

22 Lincoln/Vidler have existing groundwater rights (Permit Nos. 72220, 72221, 82727 and 82728)  
23 and the following pending applications Nos. 74147, 74148, 74149, and 74150 in Kane Springs Valley  
24 (KSV). [LC-V\_001, July 3, 2019 Report Submittal at 2-1 ]. Because KSV is adjacent to the defined  
25 LWRFS administrative unit and groundwater flows from KSV into Coyote Spring Valley (CSV), some  
26 participants want to include KSV as part of the LWRFS administrative unit. Lincoln/Vidler oppose  
27 including KSV in the LWRFS administrative unit or that KSV be part of any next management phase  
28

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1 in this proceeding. No participant provided any new evidence, data or information supporting a change  
2 in the NSE's past determinations to exclude KSV from the LWRFS.

3 B. Previous Determinations By The NSE Excluding Kane Springs Valley From The  
4 LWRFS

5 Every NSE has excluded KSV from the LWRFS since the issuance of Order No. 1169 in 2002  
6 requiring the Order 1169 aquifer test through the issuance of Order 1169A in 2012 declaring the  
7 completion of the aquifer test. [NSE Ex. 2 Order 1169A, NSE Ex. 3 Order 1169]. Order 1169A  
8 specifically references that Southern Nevada Water Authority (SNWA) was ordered to submit model  
9 simulations results showing the predicted effects of pumping both existing rights and current  
10 applications in numerous basins, including Kane Springs Valley. [NSE Ex. 2 at 2]. Based upon the  
11 information provided pursuant to the pump test, the NSE determined SNWA was not required to update  
12 Exhibit No. 54, its model, from the July 2001 hearing. Kane Springs Valley was not included in Order  
13 1169A. Further, the 2006 Memorandum of Agreement (MOA) does not include KSV water right  
14 holders. [NSE Ex. 236 2006 MOA]. The NSE affirmed that KSV should not be included in the Order  
15 1169 proceedings in Ruling # 5712 issued in 2007.

16 In Ruling #5712, the NSE made several findings about KSV, the effects of pumping from KSV  
17 on springs in the LWRFS, and further south of the LWRFS. The NSE ruled on the issue of whether the  
18 appropriation of groundwater from KSV would affect the MRSA, or for that matter other surface water  
19 sources (springs) of interest. Ruling #5712 stated:

20 "The State Engineer finds there is not substantial evidence that the appropriation of the  
21 limited quantity [of water] being granted under this ruling will likely impair the flow at  
22 Muddy River Springs, Rogers Springs or Blue Point Springs."

23 [NSE Ex 12 Ruling 5712 at 20]. No party appealed the NSE's determinations in Ruling #5712, including  
24 National Park Service (NPS), a protestant to Lincoln/Vidler's applications. [LC-V 001, July 3, 2019  
25 Report Submittal at 2-2].

26 The NSE's determination that there would be no impairment from pumping in KSV was affirmed  
27 seven years later in NSE Ruling #6254 issued in 2014. The NSE concluded and found that where no  
28 significant impact would be felt for hundreds of years, the upgradient groundwater could be

1 appropriated. KSV groundwater can be developed because there will be no significant impact, if any,  
2 from appropriation of the groundwater for hundreds of years. [NSE Ex 14 Ruling 6254 at 23].

3 The NSE spoke explicitly to the difference between KSV and the Order 1169 groundwater basins  
4 further in Ruling #5712 by stating:

5 “The State Engineer finds the evidence indicates a strong hydrologic connection between  
6 Kane Springs Valley and Coyote Spring Valley, specifically, that ground water flows from  
7 Kane Springs Valley into Coyote Spring Valley. However, carbonate water levels near the  
8 boundary between Kane Springs Valley and Coyote Spring Valley are approximately 1,875  
9 feet in elevation, and in southern Coyote Spring Valley and throughout most of the other  
10 basins covered under Order No. 1169, carbonate-rock aquifer water levels are mostly  
11 between 1,800 feet and 1,825 feet. This marked difference in head supports the probability  
12 of a low-permeability structure or change in lithology between Kane Springs Valley and  
13 the southern part of Coyote Spring Valley. The State Engineer finds there is not substantial  
14 evidence that the appropriation of a limited quantity of water in Kane Springs Valley  
15 Hydrographic Basin will have any measurable impact on Muddy River Springs that  
16 warrants the inclusion of Kane Springs Valley in Order No. 1169. Therefore, the State  
17 Engineer denies the request to hold these applications in abeyance and include Kane Spring  
18 Valley within the provision of Order No. 1169.”

19 [NSE Ex 12 Ruling 5712 at 21]. That finding was not challenged by any of the Order No. 1169  
20 participants, including SNWA or Las Vegas Valley Water District (LVVWD). Subsequently, neither  
21 SNWA or LVVWD provided any information or data in their October 5, 2018 letter indicating that  
22 appropriation of water in KSV will impact any of the springs in the MRSA. [LC-V 001, July 3, 2019  
23 Report Submittal, pages 2-3 and 2-4].

24 3. **KANE SPRINGS VALLEY SHOULD NOT BE INCLUDED IN THE PROPOSED**  
25 **LOWER WHITE RIVER FLOW SYSTEM ADMINISTRATIVE UNIT**

26 Lincoln/Vidler provided the NSE with extensive evidence, testimony and analysis of new and  
27 existing data that supports why KSV should not be included in the proposed LWRFS administrative  
28 unit. These data include:

- Existing water level data in the form of hydrographs for wells throughout the LWRFS,
- Climate effects and its impacts on groundwater elevations in the LWRFS,
- Existing historical geochemical data, and
- New geophysical data collected in northern CSV combined with existing geophysical data collected in KSV.



1 All of the new and existing data provide a better understanding of the groundwater flow system in KSV.  
2 [LC-V 001, July 3, 2019 Report Submittal at 2-1].

3 A. No Response in CSVN-1 and KMW-1 Groundwater Elevation Data To Order 1169  
4 Pumping

5 The groundwater elevations in monitor wells CSVN-4 and KMW-1 were not responsive to the  
6 Order 1169 Aquifer Test, but were responsive to local climatic events. [LC-V 001, July 3, 2019 Report  
7 Submittal at 3-3 and 3-4]. There was no response in well CSVN-4 to the cessation in MX-5 pumping  
8 during the Order 1169 Aquifer Test - - not once but twice. [9-30-19 Tr. 1298:2-5, 1298:7-8 (Umstot  
9 Testimony); LC-V Umstot Demonstrative Exhibit Slide 7]. The MX-5 well went through two periods  
10 of time where it stopped pumping. [9-30-19 Tr. 1298:4-5 (Umstot Testimony)]. Further, "...if you  
11 compare the pumping signal to the hydrographs, you don't see any response to when MX-5 well stopped  
12 pumping." [9-30-19 Tr. 1298:2-4 (Umstot Testimony)]. There was no recovery signal seen and the water  
13 levels in well CSVN-4 continued to rise after the completion of the MX-5 pumping test. [9-30-19 Tr.  
14 1298:9-17 (Umstot Testimony); LC-V Umstot Demonstrative Exhibit Slide 7]. Dr. Johnson testified  
15 "...that mid-test recovery is what is diagnostic and it's absent here." referring to wells in the southern  
16 [LWRFS] flow field. [9-26-19 Tr. 743:5-15 (Johnson Testimony)]. Dr. Johnson also stated that  
17 "...there's no mid-test recovery from that 2012, 5-month shutdown." referring to both monitor wells  
18 KMW-1 and CSVN-4. [9-26-19 Tr. 743:16-19 (Johnson Testimony)].

19 Referring to the hydrograph for monitor well CSVN-4: "But it's very clear during the period of  
20 recovery that you don't have a response to the MX-5 [cessation of pumping]. So I think that's very  
21 diagnostic that this well is not connected to pumping of the MX-5 location." [9-30-19 Tr. 1298:20-24  
22 (Umstot Testimony)]. For the monitor well located at the mouth of KSV, KMW-1 "You don't see any  
23 recovery responses in KMW-1.... But you can definitely see because a lack of recovery signal that the  
24 MX-5 is not connected to the KMW-1 well location." [0-30-19 Tr. 1299:11, 1299:13-15 (Umstot  
25 Testimony)]. Furthermore, regarding the seasonal pumping patterns, Mr. Umstot testified "You don't  
26 see that seasonal pattern from the carbonate wells pumping before the MX-5 test began." [9-30-19 Tr.  
27 1301:1-3 (Umstot Testimony)].

28

1 In comparison, there is a difference in response in the water levels in several other wells after  
2 the MX-5 well was shut off at the end of the Order 1169 Aquifer Test, meaning that these wells show a  
3 recovery response or an identifiable rise in water levels at the end of the MX-5 test. [9-30-19 Tr. 1300:5-  
4 22 (Umstot Testimony); LC-V Umstot Demonstrative Exhibit Slides 11, 12, and 13]. Several wells in  
5 the vicinity of MX-5, the pumping well, showed a recovery response by rising water levels in response  
6 to the end of the Order 1169 Aquifer Test. Other wells further to the north in CSV showed no response  
7 to pumping in the "...vicinity of CE-VF-1 or CE-VF-2 and areas to the north." [9-30-19 Tr. 1301:24-  
8 1302:10 (Umstot Testimony); LC-V Umstot Demonstrative Exhibit Slide 15].

9 In summary Mr. Umstot concluded "...there's too much error in the data to be able to discern  
10 drawdown response from the MX-5 test [represented by water level data from well MX-4] and to  
11 determine that there's a hydraulic connection to the southern carbonate pumping in the LWRFS to the  
12 location of KMW-1 to CSV-4 and that climate conditions would explain the general trends, the  
13 downward trends, that you do see in the groundwater elevations. So, I don't see any evidence, hydraulic  
14 connection, to southern LWRFS." [9-30-19 Tr. 1318:7-15 (Umstot Testimony)].

15 B. Climate Affects And Impact On Groundwater Elevations In The LWRFS

16 During the Order 1169 Aquifer Test, southern Nevada was experiencing drought conditions as  
17 documented by the National Oceanic and Atmospheric Administration (NOAA), publisher of the Palmer  
18 drought data. [9-30-19 Tr. 1293:6-13 (Umstot Testimony)]. Based on this data "There was a general  
19 increase in drought conditions that would be expected to cause the decline in groundwater elevation [s  
20 in wells in CSV].<sup>1</sup> So, if you look at the...one-year period, before the MX-5 pumping began, there were  
21 drought conditions about 42 percent of the time. And if you look at the period when the 1169 aquifer  
22 test took place and the additional time the MX-5 pumped beyond that into April 2013, drought occurred  
23 82 percent of the time. So you had drought conditions occurring twice as often during the test as you  
24 had occurring in the year just before the test started." [9-30-19 Tr. 1295:5-16 (Umstot Testimony); LC-  
25 V Umstot Demonstrative Exhibit Slide 4]. This was also noted by the City of North Las Vegas "...[the]  
26 Climate Drought Severity Index for climate zone three, which is to the north, the northern part of the  
27

28 <sup>1</sup> The text in brackets within quoted testimony represents explanatory text that was added to make the testimony clearer or  
to insert a word that was either left out or misspelled by the court reporter.

1 White River Flow System that I see in this record that you have a dominance of negative values. So  
2 moving into the dryer regimes for the last two decades as contrasted to the decade prior.” [10-01-19 Tr.  
3 1451:13-19 (Smith Testimony); CNLV Smith Demonstrative Slide 26].

4 Just as drought conditions affected regional groundwater elevations, intense precipitation events  
5 that occurred in the LWRFS and surrounding groundwater basins affected groundwater levels in the  
6 opposite way. Mr. Umstot noted “You also have in 2005 a very wet period. Precipitation that occurred  
7 in 2005 water year is probably the first or second highest precipitation in the hundred years that occurred  
8 in this area. So you had a very large recharge pulse to happen in 2005. Smaller recharge pulses in 2010.  
9 But overall a general decline in groundwater elevations that occurred to this generally increasing level  
10 of drought.” [9-30-19 Tr. 1295:17-24 (Umstot Testimony); LC-V Umstot Demonstrative Exhibit Slide  
11 4;]. Mr. Umstot testified further “But, again, you see a similar effect where there’s wet conditions just  
12 before the MX-5 pumping began and then increasing the level of drought as you go in to the period of  
13 time the MX-5 was pumping.” [9-30-19 Tr. 1296:7-11 (Umstot Testimony)].

14 Both the drought and the recharge that occur in the LWRFS and surrounding basins have a  
15 definite affect on the groundwater hydrographs for wells in these areas. Mr. Umstot further testified that  
16 “...what you’re going to see in the groundwater elevations, they’re going to see a combination of these  
17 different processes, depending on where the recharge in the system is sourced. If the recharge is sourced  
18 from further away, it’s going to be a more dense [dampened] response that’s going to reach the well. If  
19 it is recharge that is coming from an arroyo that’s right next to the well, then that’s going to be a quicker  
20 response for the well.” [9-30-19 Tr. 1294:10-17 (Umstot Testimony)].

21 The overall effect of these hydrologic processes, both the occurrence of drought and the intense  
22 precipitation events, cause the variations that are seen in the hydrographs of these wells [in the LWRFS].  
23 [9-30-19 Tr. 1294:18-23 (Umstot Testimony)].

24 C. Groundwater Elevations In The Lower White River Flow System

25 The water level elevations in monitor well KMW-1 are 55 to 60 feet higher than the water level  
26 elevations of wells in the current LWRFS basins. The carbonate wells within the LWRFS are all  
27 connected as demonstrated by the water level response from hydrographs of these wells in the LWRFS.  
28 [LC-V 001, July 3, 2019 Report Submittal at 3-2]. During the administrative hearing for groundwater

1 rights in KSV in 2006, Lincoln/Vidler identified the differences in hydraulic heads between wells drilled  
2 in the LWRFS versus wells drilled in KSV and northern CSV. A “break,” or local increase, in the  
3 regional hydraulic gradient was shown between KSV/northern CSV and the LWRFS administrative unit  
4 groundwater basins. Groundwater elevation data from wells completed in the Regional Deep Carbonate  
5 Aquifer (RDCA) in southern CSV are remarkably flat across the LWRFS groundwater basins, whereas  
6 water levels in KSV/northern CSV have a steeper gradient.

7 In summary, a key finding is that groundwater levels in the RDCA wells are very similar in  
8 elevation (pre-pumping or minimal pumping of Order 1169 groundwater basins) everywhere  
9 downgradient of the Kane Springs Wash Fault Zone, using the most current water level measurements.  
10 Since northern CSV is downgradient of KSV, the difference in water levels indicates that KSV is not  
11 directly connected to the LWRFS. Just as in the 2006 testimony before the NSE and after several  
12 thousands of acre-feet pumped from wells in the LWRFS, the same groundwater elevation pattern  
13 persists. [LC-V 001, July 3, 2019 Report Submittal at 3-2].

14 Also notable is that when all the hydrographs from wells in the LWRFS are plotted at the same  
15 scale groundwater pumping from groundwater basins in the LWRFS has very little impact on water  
16 levels across these groundwater basins illustrating how exceptionally stable water levels in this aquifer  
17 system are. [LC-V 001, July 3, 2019 Report Submittal at Figure 3-7].

18 Bushner (2018) noted another significant difference in the response in groundwater levels from  
19 wells in southern CSV compared to the response of water levels in wells in northern CSV and KSV by  
20 stating:

21 “...monitor wells in the southern portion of CSV responded immediately to the start and  
22 end of the [Order No. 1169] aquifer test. However, this is not what occurred in CSV-4  
23 ... which reflects a downward trend even after the end of the test. This is not reflective of  
recovery after an aquifer test especially given the significantly high hydraulic  
conductivities that exist south of the Kane Springs Wash Fault.”

24 [LC-V 001, July 3, 2019 Report Submittal at 3-2].

25 Given all these data and information, the NSE does have reason to include the already identified  
26 basins in the LWRFS as a single “unit” based on the remarkably consistent groundwater levels among  
27 wells completed in the RDCA. The NSE clearly noted this in Ruling #6254:

28

1 “Changes in the potentiometric surface in any one of these basins [referring to the Order  
2 No. 1169 (NSE 2002) groundwater basins] occur in lockstep directly affecting the other  
basins, further demonstrating the regional nature of the aquifer across these basins.”

3 [NSE Ex 14 Ruling 6254 at 12].

4 Although Lincoln/Vidler concur with the effective administration of these basins collectively  
5 based on the hydrogeology, we disagree that the effects are all the same across the entire LWRFS  
6 administrative unit. In particular, northern CSV should be excluded from the LWRFS administrative  
7 unit as was done for most of the Black Mountains Area Hydrographic Basin. KSV should remain  
8 excluded from the proposed LWRFS administrative unit. [LC-V 001, July 3, 2019 Report Submittal at  
9 3-3].

10 There was much testimony and reliance on water levels from monitor well CSV-4, however  
11 SNWA had previously identified issues with measurements collected from this well as documented in  
12 its Order 1169 Report: “CSV-4 may be showing a slight response with December 2012 water levels  
13 approximately 1 ft lower than September 2010 water levels, but the transducer in CSV-4 had a high  
14 failure rate due to the high water temperature in the well, so fluctuations of a foot or less should not be  
15 used to infer an absolute response.” [NSE Ex. 245 SNWA Order 1169 and 1169A Report dated June  
16 2013 at 36]. SNWA witness Andrew Burns responded to questioning about this: Q. “And has anybody  
17 that you’ve heard testify earlier this week indicated in any of their hydrographs that they’ve accounted  
18 for this transducer error failure of a foot or so?” A. “Not that I heard.” Q. “All right. And the drawdowns  
19 that were – or the impacts, I guess, or the effects that everybody’s been talking about this week with  
20 regard to CSV-4 are in that one-foot range; aren’t they?” A. “Yes.” [9-27-19 Tr. 978:2-10 (Burns  
21 Testimony)].

22 D. Geochemistry Data Shows KSV Water Is Not Similar To MRSA Water

23 On behalf of Lincoln/Vidler, Mr. Butler provided extensive testimony on a mixing model that  
24 used all of the geochemistry data from both monitor well KMW-1 and CSV-4. This data shows that  
25 the groundwater from these wells “...do compare...[and] that they are very similar.” [9-30-19 Tr.  
26 1282:20-22 (Butler Testimony); LC-V Butler Demonstrative Exhibit Slide 4; LC-V 001, July 3, 2019  
27 Report Submittal, Appendix C]. Mr. Butler further demonstrated from the available geochemistry data  
28 using a geochemical mixing model and a piper diagram that “KPW-1 and CSV-4 appear to be unique

1 and not a significant component of groundwater in central CSV or MRSA.” [LC-V Butler Demonstrative  
2 Exhibit Page 4, Mixing Model]. Also Mr. Butler testified: “Piper Diagram suggest KSV groundwater is  
3 NOT a significant component of recharge to the MRSA.” [LC-V Butler Demonstrative Exhibit Page 5,  
4 Piper Diagram]. Mr. Butler also testified that “In the Kane Springs and the CSV-4 are chemically  
5 unique and do not appear on any of those mixing relationships. That would indicate that they are not a  
6 part of that mixing relationship. Not likely a significant component of water to the MRSA.” [9-30-19  
7 Tr. 1284:17-21 (Butler Testimony)].

8 Using the general chemistry data analyses that includes Total Dissolved Solids as represented by  
9 a Durov Diagram “...suggest that Kane Valley [groundwater] is not a significant component of water  
10 entering the MRSA (sic) or is mixing with it.” [9-30-19 Tr. 1285:13-15 (Butler Testimony); LC-V Butler  
11 Demonstrative Exhibit Page 6, Durov Diagram]. Furthermore, KSV groundwater is not represented by  
12 samples from Blue Point and Rogers Springs noting that “If we were to plot them, they would plot about  
13 right here way off the graph.” [9-30-19 Tr. 1286:1-2 (Butler Testimony); LC-V Butler Demonstrative  
14 Exhibit Page 6, Durov Diagram].

15 The Percent Modern Carbon (pmc) values indicate groundwater from KSV is older in age than  
16 the spring water in the MRSA, meaning that “...the groundwater would have to get younger, not older,  
17 as it flowed along the groundwater flow path.” Suggesting “...that Kane Springs Valley is not a  
18 significant component of water to the MRSA....” [9-30-19 Tr. 1286:20-22 (Butler Testimony)].

19 The geochemical findings taken collectively “...suggests that the MRSA is not dominated by  
20 Kane [ground]water but it’s more likely dominated by water from central CSV or the Lower Meadow  
21 Valley Wash area.” [9-30-19 Tr. 1290:20-23 (Butler Testimony)].

22 Cross examination of Mr. Butler by Mr. Berley of the Moapa Band of Paiutes (MBOP) provided  
23 the following exchange: “Q. And you saw that the chemistry indicated that the carbonate aquifer water  
24 in Kane Springs was distinct from what was going on closer to the Muddy River Springs area; is that  
25 correct? A. That’s correct. Q. Where do you see that the water in Kane Springs is going, if anywhere?  
26 A. ‘...It is clear there is a chemical link between...CSV-4 in the northeastern Coyote Valley and Kane  
27 Springs. I don’t see it anywhere else. I don’t see it – That could mean it’s so greatly attenuated you don’t  
28 see it elsewhere or has some alternate flow path that I’m not aware of.” [9-30-19 Tr. 1333:6-12,

1 1333:15-20 (Butler Testimony)]. Further cross examination of Mr. Butler by Mr. Berley of the MBOP  
2 highlights the use of the geochemical data: Q. “You didn’t see any other place other than – You didn’t  
3 look to see where this water might go if it didn’t go to the Muddy Springs -- A. I was specifically looking  
4 at chemical signatures. I wasn’t looking at groundwater. I wasn’t looking at basin deposits. I wasn’t  
5 looking at structure. I wasn’t looking at groundwater flow paths particularly, other than just a generalized  
6 gradient in the Kane Springs Valley. And the chemical signatures are quite different. I mean, it wasn’t  
7 – it’s not like we were just looking at one particular chemical signature. We’re looking at soluble  
8 chemistry, isotope data, everything pointing to the same conclusion.” [9-30-19 Tr. 1334:3-15 (Butler  
9 Testimony)].

10 E. New Geophysical Data Confirms the Boundary Fault Between KSV and CSV

11 Lincoln/Vidler collected new geophysical data in northern CSV to compliment the existing  
12 geophysical data that Lincoln/Vidler has in KSV. [LC-V 001, July 3, 2019 Report Submittal (Section  
13 4)]. The importance and usefulness of this data is that it provides insight into the geologic structures that  
14 are covered by alluvium, i.e., “hidden” and not identified by surficial geologic mapping. [9-23-19 Tr.  
15 34:22-35:1 (Carlson Testimony)]. This was also recognized by the NPS’s witness Dr. Richard Waddell:  
16 “I like CSAMT. I think that is does a very good job of picking up changes in electrical resistivity which  
17 can provide clues as to not only the geology but the hydrology.” [9-25-19 Tr. 532:19-22 (Waddell  
18 Testimony)].

19 Although the geophysics alone cannot tell you what the hydrologic properties are of the material  
20 that has been surveyed, its usefulness cannot be understated when trying to determine geologic structures  
21 near surface and at depth. The geophysical data in combination with the known geologic data, the known  
22 aquifer property data and the known hydraulic property data provide a very robust picture of the  
23 hydrogeologic system in KSV and northern CSV. [LC-V 001, July 3, 2019 Report Submittal (Section  
24 6)].

25 The Northern LWRFS Boundary Fault (NB Fault) is identified by the change in material types,  
26 i.e., resistivity, between geophysical lines 10 and 11 that were conducted for Lincoln/Vidler. The new  
27 geophysical data collected in northern CSV showed “...high resistivity ground...” referring to all of  
28 Line 10. This is interpreted to be “...almost entirely carbonate in the subsurface.” [9-30-19 Tr. 1266:12-

1 21 (Carlson Testimony); LC-V 012 Carlson Power Point Presentation Slide 12]. Line 10 crosses  
2 northern CSV just south of the mouth of KSV. Line 11 however, shows "...primarily moderately low  
3 resistivities...that can be interpreted as basin fill." [9-30-19 Tr. 1267:8-13 (Carlson Testimony); LC-V  
4 012 Carlson Power Point Presentation Slide 14]. The resistivity results also provide "good ground truth"  
5 where the geophysics crew went up on the carbonate outcrop and the resultant plot is solid blue,  
6 representing carbonate rocks as shown on Line 11. [9-30-19 Tr. 1267:14-18 (Carlson Testimony); LC-  
7 V 012 Carlson Power Point Presentation Slide 14].

8 Mr. Carlson further testified: "It has to be a major fault and it has to -- Since the carbonates and  
9 the higher resistivity material on line ten are virtually right up to the surface, almost, but on line 11  
10 they're down at the depth of 2500 feet, that means that that fault has to be a big step downward of 2500  
11 feet some place in between line ten and 11. So very significant fault." [9-30-19 Tr. 1272:4-9 (Carlson  
12 Testimony)].

13 To further substantiate the NB Fault, Mr. Carlson reviewed and compared the geophysical data  
14 collected by Lincoln/Vidler to the U.S. Geological Survey (USGS) gravity data that covers portions of  
15 the LWRFS documented in Open File Report 00-420. Mr. Carlson testified: "But I wish we had seen  
16 the USGS report before we laid out our line. Similar to Coyote Springs, we would have laid things out  
17 a little differently, because it's unusual when we get two different data sets from two different groups  
18 that are measuring two different physical properties of the ground and you're seeing the same surprising  
19 unexpected thing. They see this high density change in low density over a very short distance. We see  
20 high resistivity change to low resistivity over a very short distance. And the only thing I can come up  
21 with is a very significant fault in between lines ten and 11." [9-30-19 Tr. 1278:17-1279:4 (Carlson  
22 Testimony); LC-V 012 Carlson Power Point Presentation Slides 30 and 31]. This is supported by  
23 testimony from Coyote Springs Investment's witness Stephen Reich: "My understanding – or my review  
24 of the data indicates that there's a series of en echelon faults that help to create a – some type of a  
25 hydraulic barrier or a barrier to groundwater flow in this area that isolates the Kane Springs Valley area  
26 from the – from the Coyote Spring Valley." [9-23-19 Tr. 160:5-9 (Reich Testimony)]. And also  
27 supported by the NPS: "And the two lines that trend from southeast to northwest have a different  
28



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1 response. They show different geology. That was their interpretation. That’s my interpretation.” [9-25-  
2 19 Tr. 537:5-8 (Waddell Testimony)].

3 The existence of this structure, appropriately named the Northern LWRFS Boundary Fault  
4 causes groundwater flowing from KSV into CSV to be greatly retarded, as demonstrated by the  
5 significant change in heads. This is due both to the change in lithology and the structure. The heads in  
6 wells in the LWRFS show responses that are similar to each other but not to wells CSVM-4 and KMW-  
7 1. [9-30-19 Tr. 1318:7-15 (Umstot testimony)]. Nevada Energy (NV Energy) witness Richard Felling  
8 agreed: “And I agree that that evidence is fairly compelling that there is a range front structure there.”  
9 [10-4-19 Tr. 1760:13-14 (Felling Testimony)].

10 The combined existing and new geophysical data collected in and around KSV allows the  
11 recognition of significant geologic structures in southern KSV and northern CSV that explain why  
12 groundwater level elevations are different in KSV and northern CSV than in the LWRFS groundwater  
13 basins to the south. [9-30-19 Tr. 1300:23-1301:7 (Umstot Testimony)]. The explanation for this is  
14 supported by the NPS: “So we’re basically in agreement with CSI that there’s faulting in this area and  
15 that those faults may impede flow through Kane Spring Valley into Coyote Spring Valley.” [9-25-19  
16 Tr. 540:7-10 (Waddell Testimony)]. NPS also agreed that pumping from KSV would not impact the  
17 Muddy River Springs: “...if you could test it by pumping only Kane Spring[s] Valley and not other  
18 wells, then you would detect that at Muddy River Springs. My opinion is that you wouldn’t...” [9-25-  
19 19 Tr. 644:7-10 (Waddell Testimony)]. The geophysical data identified significant changes in  
20 resistivities between southern KSV and northern CSV. These changes are consistent and correlate well  
21 with the distribution of existing geochemistry and groundwater temperature data that can be used to  
22 identify different groundwater flow paths. The extensive faulting that occurs in southern KSV and  
23 northern CSV, explained by the interpretation of the geophysical data forms the basis for the continued  
24 exclusion of KSV from the LWRFS administrative basin. [LC-V 001, July 3, 2019 Report Submittal at  
25 4-8 – 4-9]. Dr. Peter Mock summarized his testimony “...Kane Spring[s] Valley is outside of and distant  
26 from the Muddy River Springs Area.” [09-30-19 Tr. 1321:23 - 1322:1 (Mock Testimony)] “So  
27 conjectures about Kane Springs Valley being an effective important place to manage and so as to protect  
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1 the springs and associated surface flows of the Muddy River Springs area are erroneous.” [09-30-19 Tr.  
2 1322:23 – 1323:2 (Mock Testimony)].

3 4. **UNSUBSTANTIATED THEORIES BASED ON FALSE PREMISES BY OTHER**  
4 **PARTICIPANTS**

5 The regression analysis developed by SNWA, and supported by other participants, cannot be  
6 relied upon to determine hydraulic connections throughout the LWRFS. Also, the water level  
7 measurements that are used to create the hydrograph of monitor well CSVM-4 that are relied upon by  
8 SNWA and others for the regression analysis should not be used other than for a general trend analysis  
9 due to faulty measurements. SNWA relied on a correlation analyses to support hydraulic connection and  
10 then combined the correlation analysis with a linear regression to estimate drawdown [9-30-19 Tr.  
11 1302:12-16 (Umstot Testimony)]. SNWA referenced a USGS report that does not support the use of  
12 linear regression to estimate water level drawdown from an aquifer test [9-30-19 Tr. 1302:24-1303:2  
13 (Umstot Testimony)]. A regression of CSVM-5 (not connected to the MX-5 pumping region) and  
14 KMW-1 yielded a “...fairly high R-squared value of 0.68 and is similar to the type of regression that  
15 you get using between EH-4 and KMW-1....” This is deemed a “spurious correlation” and is not  
16 “...enough evidence to show hydraulic connection and it’s not sufficient to be used to predict  
17 drawdowns from an aquifer test [9-30-19 Tr. 1303:8-18 (Umstot Testimony); LC-V Umstot  
18 Demonstrative Exhibit Slide 17].

19 Mr. Umstot states further “And simply having correlation is not proof of causation. Causation is  
20 neither proved nor evaluated in a regression analysis.” [9-30-19 Tr. 1303:19-21 (Umstot Testimony)].  
21 To this point, a linear regression analysis done between MX-4 had a higher correlation to a well in Cave  
22 Valley than between MX-4 and CSVM-4, leading to the conclusion that “...this is just not sufficient  
23 evidence to support hydraulic connection or to estimate impacts from MX-5 pumping at the CSVM-4  
24 location.” [9-30-19 Tr. 1303:22-1304:5 (Umstot Testimony); LC-V Umstot Demonstrative Exhibit Slide  
25 18]. Even SNWA’s witness Drici doesn’t believe its regressions analysis, i.e., it’s a forgone conclusion:  
26 “as for the Muddy River Springs area, I do not just go by the statistical results. I have to use facts and  
27 like what I know. Does anybody think that production from the carbonate aquifer in the MRSA does not  
28 affect EH-3 water levels. So this value is a little bit higher than the .05, but I still believe and I know

1 that production in the Muddy River Springs area does affect water levels in EH-4 because they're in the  
2 same basin." [9-27-19 Tr. 984:21-985:5 (Drici Testimony)].

3 SNWA provided no evidence that a regression analysis of water level data determines the  
4 interconnectedness of an aquifer system. SNWA provided no peer reviewed or other scientific basis or  
5 reference that uses a regression analysis comparing water levels to infer connectivity or causation. The  
6 response SNWA witness Burns provided to support this type of statistical application to water level data  
7 was convoluted and confusing as illustrated in the following Questions and Answers: "Q. Right. But the  
8 concept that you can do a regression analysis and compare water levels, and therefore, conclude that  
9 there's some kind of connectivity between them, where – who – what scientific basis is there for that  
10 principle? A. Well, first, I think there's a professional judgment. We're trained, as observers of data, to  
11 understand what these responses are, what these – what factors would contribute to these responses. And  
12 it's not difficult, you don't maybe need to even be a hydrologist to see that these time series plots  
13 behaved in a same way and in a linear fashion, as Ms. Drici described, and that's what we tested with  
14 the analysis. Q. Okay. So it's your professional judgment? A. I think it's more than that. I think it's a  
15 standard approach. Q. But can you give me a site? A. Well, not off the top of my head, but it's something  
16 professional hydrologists are trained to." [9-27-19 Tr. 981:21-982:16 (Burns Testimony)].

17 Others relied on the flawed and inappropriate regression analysis: Nevada Cogeneration  
18 Associates 1 and 2 (NCA) relied upon the SNWA regression analysis as stated in their testimony "We  
19 took SNWA's regression analysis. I reproduced it to make sure I could get the exact same results." [10-  
20 03-19 Tr. 1624:19-20 (Dixon Testimony)]. To further their support for inclusion of KSV in the LWRFS,  
21 NCA's expert witness Coache performed "...a direct visual comparison of hydrograph of CSVM-4 and  
22 KMW-1 wasn't[was] done. The visual comparison was done because at the time I could not locate the  
23 data to actually do the actual analysis." [10-03-19 Tr 1637:9-12 (Coache Testimony)]. Direct visual  
24 comparison of data is not a scientific method taught, practiced, or endorsed by the scientific community.

25 The linear regression exercise failed to account for the discrepancy in the water level elevations  
26 of well MX-4. The water levels in MX-4 are noted to be 1,820 or less during the MX-5 test, and then  
27 for the correlation analyses and linear regression analyses, they're all above 1,820, identified as a two  
28 (2) foot offset. [9-30-19 Tr. 1307:20-1308:9 (Umstot Testimony); LC-V Umstot Demonstrative Exhibit

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1 Slide 24]. This means that "...if we're looking and trying to estimate a half foot of drawdown to CSVM-  
2 4 and there's errors in these data of one to two feet, the data themselves are not sufficient to be used to  
3 estimate the drawdown and the estimated impact at KWM-1 or CSVM-4." [9-30-19 Tr. 1308:9-13  
4 (Umstot Testimony)].

5 Obviously, the water level elevation is off in well MX-4. The water level is much higher than  
6 the water level elevations in the wells surrounding MX-4, this higher water level in this well would  
7 indicate a source of recharge. [9-30-19 Tr. 1308:16-22 (Umstot Testimony)]. Therefore "...it may not  
8 be appropriate to use the MX-4 well for any kind of a correlation analysis or a linear regression  
9 prediction of drawdown." [9-30-19 Tr. 1309: 3-5 (Umstot Testimony)].

10 There are wells that show a distinct head difference as demonstrated by the hydrographs of wells  
11 CE-VF-2 and CSI-4. Using correlated water level data, the groundwater elevation in well CE-VF-2 was  
12 about 1,856, whereas the groundwater elevation of CSI-4 is about 1,822. "So there's a change in head  
13 here of over 30 feet over for this area a relatively short distance. And others have testified that this is  
14 more of a bathtub with fairly flat gradient. You wouldn't expect to see this much offset from these two  
15 locations that are only two miles apart." [9-30-19 Tr. 1310: 16-23 (Umstot Testimony); LC-V Umstot  
16 Demonstrative Exhibit Slide 27].

17 On cross examination by the City of North Las Vegas, Mr. Umstot testified: Q. "So my question  
18 is does an outcome from the linear regression analysis that all responses at EH-4 are from Garnet Valley  
19 make hydraulic sense? A. If you look at slide 22, which was accepted in to evidence from my  
20 presentation, I showed SNWA analysis. My opinion is not that Garnet Valley is the sole cause of  
21 fluctuations at EH-4. That does not make hydrologic sense. I think my point is that this whole analysis  
22 of linear regression as given by SNWA is not useful for any conclusions." [9-30-19 Tr. 1348:20 – 1349:5  
23 (Umstot Testimony)].

24 5. **POSITIONS OF OTHER PARTICIPANTS ON INCLUDING KANE SPRINGS VALLEY**  
25 **IN THE LOWER WHITE RIVER FLOW SYSTEM ADMINISTRATIVE UNIT**

26 With regard to the proposed geographic boundary, a few participants proposed that KSV be  
27 included as part of the LWRFS. There was much testimony and evidence that KSV should not be  
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1 included as part of the LWRFS or that the geographic boundaries remain the same as originally proposed  
2 by the NSE.

3 Colby Pellegrino, a witness for SNWA, testified that the boundaries of the LWRFS should not  
4 change: “So we make the recommendation that the boundaries should not change...” [9-27-19 Tr.  
5 876:11-12 (Pellegrino Testimony)]. This was also stated by SNWA in its July 2019 report submittal:  
6 “The boundary of the LWRFS should be as defined by the NSE in Order 1303. The LWRFS is underlain  
7 by an interconnected distribution of carbonate rocks that constitute a laterally extensive and continuous  
8 aquifer extending beneath the basins and across the ranges. The data presented in Section 5.0  
9 demonstrate that the aquifer responds similarly to changes in both groundwater production and recharge  
10 throughout the six basins composing the LWRFS. Observed trends are uniform across the system, with  
11 only slight variations in the magnitude of the responses. Drawdown responses to pumping stresses are  
12 small throughout the region; however, they are unequivocal and occur in very short time frames given  
13 the distances between the pumping centers and points of observation. This demonstrates the aquifer has  
14 a very high degree of hydraulic connection and should be treated as a single administrative unit.”  
15 [SNWA EX 007, July 2019 Submittal Report, p. 82].

16 NCA’s witness Robert Coache concurred with SNWA’s position and testified: “Therefore, NCA  
17 supports SNWA's position that the current boundary of the Lower White River Flow System should stay  
18 the same pending the water management decisions in the next phase.” [10-3-19 Tr. 1645:7-10 (Coache  
19 Testimony)].<sup>2</sup>

20 The Muddy Valley Irrigation District agreed with the NSE regarding the proposed boundary of  
21 the LWRFS administrative unit: “Q. And the Muddy Valley Irrigation Company did not disagree with  
22 the State Engineer’s determination as set forth in Order 1303, did it? A. We did not.” [10-3-19 Tr.  
23 1698:2-5 (Robison Testimony)]. Likewise, testimony by the City of North Las Vegas was that the  
24 current boundary of the LWRFS should remain: “Again it’s our opinion...that the boundaries as  
25 proposed for the Lower White River Flow System are sufficient, are adequate.” [10-01-19 Tr. 1463:1-4  
26 (Smith Testimony); CNLV Smith Demonstrative Exhibit Slide 32]. The United States Fish & Wildlife  
27  
28

<sup>2</sup> Lincoln/Vidler oppose including KSV in any phase of this proceeding including any future management phase.

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1 Service (FWS) witness also backed away from recommending KSV be included in the LWRFS. [9-24-  
2 19 Tr. 464:1-19 (Braumiller Testimony)].

3 Others relied on the flawed regression analysis and faulty water level measurements by SNWA  
4 to support inclusion of KSV in the LWRFS administrative unit. For example, Moapa Valley Water  
5 District (MVWD) believes that KSV should be included in the proposed LWRFS administrative unit.  
6 Testimony by MVWD witness Jay Lazarus: “So what we’re looking at really is the summation of my  
7 testimony regarding geographic boundary of the LWRFS, and the water district proposes, and we believe  
8 we have sound science to back it up, that Kane Springs Valley basin should be included as part of a  
9 seven-basin super basin should be included as part of the administrative basin regulated by the  
10 Department of Water Resources State Engineer.” [9-30-19 Tr. 1197:6-13 (Lazarus Testimony)].  
11 However, Mr. Lazarus simply focused on the northern boundary and contrary to his testimony above  
12 brought no new “sound science,” data, or analysis to the NSE in response to IO #1303: “Q. You just  
13 stated that your focus was on Kane Springs Valley with regards to the boundaries? A. Not the southern  
14 portions. Yes. Q. Just the northern portions? A. Correct. Q. Now, in your report – let’s go back – you –  
15 you also stated that you didn’t do any independent data gathering with regards to Kane Springs? A. This  
16 is correct. Q. So you pick and choose from other people’s information and supplied that here today? A.  
17 Well given the limited budget we have, that’s what we are allowed to work with, was what was out  
18 there. Q. And given the slides that you’ve presented today and gone over, those were not submitted in  
19 the report, correct? Those hydrographs that you referenced and the other data have not been supplied in  
20 the report? A. That’s correct, but hydro—the hydrographs are out there in the public record, and we’ve  
21 taken, like I said, information from other reports. Yes, sir.” [9-30-19 Tr. 1222:22-1223:18 (Lazarus  
22 Testimony)].

23 Similarly, the Center for Biologic Diversity’s (CBD) witness testified that he simply did a  
24 qualitative analysis to determine the geographic boundary of the proposed LWRFS administrative unit:  
25 “Observation of the water levels in comparison to the carbonate pumping that occurred throughout  
26 Lower White River Flow System. Now, I am clearly qualitatively moving that removal of groundwater  
27 from the carbonate to the mouth of Kane Springs Valley and assuming – and at least making a leap of  
28 logic that indeed that would have a similar effect.” [10-2-19 Tr. 1563:14-19 (Meyers Testimony)].

1 Clearly what this shows is that the entities proposing that KSV be included in the LWRFS administrative  
2 unit provided no new data, analysis, or independently reproducible and verifiable information to support  
3 their position.

4 Other entities seemingly decided that KSV should be included, not based on what they  
5 recommended in their report, or based on any sound science that they independently conducted, but out  
6 of a revisionist view. NV Energy witness Rick Felling testified: "We put in our report that the State  
7 Engineer could manage Kane Springs Valley without including it in the Lower White River Flow  
8 System. There has been an abundance of very compelling evidence. And we now say that we should  
9 include Kane Springs Valley in the joint management area." [10-4-19 Tr. 1789:14-19 (Felling  
10 Testimony)]. No evidence was provided or cited to by Mr. Felling to support his change in position.  
11 Further, Mr. Felling did not change his other opinions in his rebuttal report "Those two basins have  
12 water levels that are significantly higher than the LWRFS carbonate aquifer and did not immediately  
13 respond during the Order 1169 aquifer test. If one were to add all basins whose groundwater flows into  
14 the LWRFS basins, then we would also need to add the entire White River Flow System as well as the  
15 Meadow Valley Flow System." [NVE Ex. 1 NV Energy Rebuttal Report at page 1]. Thus, according to  
16 NV Energy's own expert, if KSV is included in the LWRFS, then the entire White River Flow System  
17 as well as the Meadow Valley Flow System need to be added to this proceeding. Obviously, the NV  
18 Energy last minute change in position at the conclusion of the hearing was not well thought out.

19 **6. BIOLOGICAL OPINION FOR KANE SPRINGS VALLEY**

20 The FWS issued a biological opinion (BO) on October 29, 2008 for the KSV Groundwater  
21 Development Project in Lincoln County, Nevada [LC-V 002, August 16, 2019 Rebuttal Report  
22 Submittal at pages 16 and 17]. The finding on page 37 of the BO sums up the conclusion from the FWS  
23 on impacts to the MRSA, and on the Moapa Dace, of the proposed KSV Groundwater Development  
24 Project:

25 *"After reviewing the current status of and environmental baseline for the Moapa dace, the*  
26 *effects of the project, and the cumulative effects, it is the Service's biological opinion that*  
27 *the action, as proposed and analyzed, is not likely to jeopardize the continued existence of*  
28 *the endangered Moapa dace. The project could contribute to groundwater level declines*  
*and spring flow reductions; however, implementation of the project's conservation actions*  
*will minimize these impacts."*

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1 Based on this BO, any reference that the FWS makes to the addition of KSV to the proposed  
2 administrative unit should be ignored as the FWS has already made a determination in this case. [LV-C  
3 002 August 16, 2019 Rebuttal Report at Attachment A-2, p. 37]. The BO was signed by Robert D.  
4 Williams, Field Supervisor, who testified on behalf of SNWA. [9-30-19 Tr. 1138:10-23 (Williams  
5 Testimony)]. Mr. Williams was asked if "...the Kane Springs Valley Groundwater Development Project  
6 is not likely to jeopardize the continued existed of the endangered Moapa Dace." And Mr. Williams  
7 response was "Yes." [9-30-19 Tr. 1139:7-12 (Williams Testimony)]. Mr. Williams also testified the  
8 "...implementation of the [KSV Groundwater Development Project] project's conservation action will  
9 minimize any potential impacts." [9-30-19 Tr. 1139:13-16 (Williams Testimony)].

10 In addition to the BO, Lincoln/Vidler have a settlement agreement with the FWS for the  
11 withdrawal of their protests during the NSE's hearing on Lincoln/Vidler's groundwater applications in  
12 KSV. [LV-C 0016 Amended Stipulation]. Mr. Williams testified "...that the parties of the Kane Springs  
13 agreement and stipulation, the biological opinion, are clearly covered under the ESA." [9-30-19 Tr.  
14 1140:9-11 (Williams Testimony)].

15 **7. CONCLUSION**

16 Kane Springs Valley should not be included in the proposed LWRFS administrative unit. The  
17 new geophysical data in northern CSV shows the existence of the Northern LWRFS Boundary Fault,  
18 that taken in context with the other existing data explains the difference in heads in wells in northern  
19 CSV and KSV compared to the rest of the LWRFS, as does the geochemistry. Just the mere statement  
20 that there was a response in water levels from wells CSV-4 and KMW-1 to the Order 1169 Aquifer  
21 Test doesn't make it a fact. There is not a scientific evidence-based reason to include KSV in the  
22 proposed LWRFS administrative unit. On the contrary there are science-based data and analysis that  
23 support the continued exclusion of KSV from the proposed LWRFS administrative unit. The NSE must  
24 rely on the scientific data analysis that Lincoln/Vidler provided in testimony and exhibits and consider  
25 all of the scientific data provided and what that means.

26 Lincoln/Vidler request that Kane Springs Valley remain excluded from the proposed LWRFS  
27 administrative unit.

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DATED this 3<sup>rd</sup> day of December, 2019.

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I hereby certify that I am an employee of ALLISON MacKENZIE, LTD., Attorneys at Law, and on this date, I caused the foregoing document to be served on the following via Hand Delivery and/or Electronic Transmission as follows:

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DATED this 3<sup>rd</sup> day of December, 2019.

  
NANCY FONTENOT

1 IN THE OFFICE OF THE STATE ENGINEER  
2 OF THE STATE OF NEVADA  
3

4 IN THE MATTER OF THE ) **INTERIM ORDER 1303**  
5 ADMINISTRATION AND )  
6 MANAGEMENT OF THE LOWER )  
7 WHITE RIVER FLOW SYSTEM )  
8 WITHIN COYOTE SPRING )  
9 VALLEY HYDROGRAPHIC BASIN )  
10 (210), A PORTION OF BLACK )  
11 MOUNTAINS AREA )  
12 HYDROGRAPHIC BASIN (215), )  
13 GARNET VALLEY )  
14 HYDROGRAPHIC BASIN (216), )  
15 HIDDEN VALLEY )  
16 HYDROGRAPHIC BASIN (217), )  
17 CALIFORNIA WASH )  
18 HYDROGRAPHIC BASIN (218), )  
19 AND MUDDY RIVER SPRINGS )  
20 AREA (AKA UPPER MOAPA )  
21 VALLEY) HYDROGRAPHIC BASIN )  
22 (219). LINCOLN AND CLARK )  
23 COUNTIES, NEVADA. )

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**MUDDY VALLEY IRRIGATION COMPANY**  
**POST HEARING CLOSING STATEMENT**

26 Pursuant to the direction of this Nevada Division of Water Resources' Hearing  
27 Officer at the close of the hearings on October 4, 2019, the Muddy Valley Irrigation  
28 Company ("MVIC") files its Post Hearing Closing Statement.

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1 direct examination and cross examination. Fourteen participants presented  
2 testimony by a witness or witnesses over the ten days of hearings regarding the  
3 matters presented in Interim Order 1303 including MVIC. Accordingly, MVIC's  
Closing Statement relies on and references the evidence heard and entered into the  
record of the Interim Order 1303 proceedings.

4 To briefly restate for the record, MVIC is a Nevada corporation which has  
5 been in existence since 1895 and it owns the majority of Muddy River decreed  
6 surface water rights adjudicated in Muddy Valley Irrigation Company v. Moapa and  
7 Salt Lake Produce Company et al. ("Muddy River Decree"). MVIC's water rights  
8 were appropriated and placed to beneficial use prior to 1905 and they are senior in  
9 priority to all Nevada groundwater rights within the Lower White River Flow System  
10 ("LWRFS"). The Muddy River Decree Court determined the Muddy River and all of  
11 its sources of supply to be fully appropriated and ruled that MVIC is entitled to  
12 divert and use all Muddy River waters, not otherwise adjudicated to the other  
13 parties whose relative rights to the use of Muddy River water were also confirmed  
14 in the Decree. MVIC entered into evidence its Rebuttal Report on August 15, 2019  
15 and presented the witness testimony of MVIC President Todd Robison at the  
16 hearings which presented these facts in more comprehensive detail.

17 At the hearings substantial evidence was offered that confirmed that  
18 groundwater pumping within the LWRFS, whether in the carbonate or alluvial  
19 aquifers causes reduced Muddy River and Muddy River spring flows. The Decree  
20 Court determined that the relative rights of MVIC and the other parties to the  
21 Muddy River Decree exhausts all of the available flow of the Muddy River, its head  
22 waters, sources of supply, springs and tributaries. Because substantial evidence  
23 demonstrated that groundwater pumping within the LWRFS captures and decreases  
24 spring and river flows, said evidence demonstrated and confirmed that LWRFS  
25 groundwater pumping conflicts with MVIC's senior decreed surface water rights.

## II

MVIC's Surface Waters Rights are Senior in Priority  
to all LWRFS Groundwater Rights and the Muddy River Decree  
Court Confirmed the Muddy River and all its Sources  
to be Fully Appropriated

Interim Order 1303 cites foundational Nevada prior appropriation water law  
precepts to the questions considered relative to groundwater pumping within the  
LWRFS and MVIC's senior surface water rights. Specifically, Interim Order 1303 at  
page 7 noted that:

"...the Muddy River, a fully appropriated surface water source, has its  
headwaters in the Muddy River Springs Area and has the most senior  
rights in the LWRFS. Spring discharge in the Muddy River Springs  
Area is produced from the regional carbonate aquifer. Prior to

1 groundwater development, the Muddy River flows at the Moapa gage  
2 were approximately 34,000 acre-feet annually."...and...

3 "...the State Engineer has determined that pumping of groundwater  
4 within the LWRFS has a direct interrelationship with the flow of the  
5 decreed and fully appropriated Muddy River, which has the most-  
6 senior rights."

7 At page 10 Interim Order 1303 additionally stated:

8 "...NRS 533.024(1)(e) was added in 2017 to declare the policy of  
9 the State to "manage conjunctively the appropriation, use and  
10 administration of all waters of this state regardless of the source of the  
11 water".

12 MVIC asserts that the above statements in Interim Order 1303 necessarily  
13 must be read in the broader factual and legal context presented to and decided by  
14 by the Muddy River Decree Court. The Court considered the relative water rights of  
15 MVIC and the defendant party appropriators in and to the waters flowing from the  
16 large group of springs which is the source of supply and head water of the Muddy  
17 River stream system. Today this source of supply is known as the Warm Springs or  
18 Muddy River Springs Area ("MRSA"). The Court held in 1920 that all of the water  
19 sources of the Muddy River and flows thereof were fully appropriated and consumed  
20 and the water rights allocated were and are entitled to protection from capture and  
21 depletions by other parties.

22 Importantly as the threshold matter in these Interim Order 1303 proceedings  
23 the current State Engineer should reaffirm the legal parameters set by the  
24 Nevada Decree Court on March 20, 1920. There the Nevada District Court, pursuant  
25 to Nevada law, authorized and accepted State Engineer J. G. Scrugham's Final  
Order of Determination dated January 21, 1920 and his Further and Supplemental  
Order of Determination dated March 11, 1920 in adjudicating the rights to the  
Muddy River. The Court held that the pre 1905 water rights adjudicated to MVIC  
and the other users are fully consumptive of all sources of supply of water to the  
Muddy River springs and Muddy River flows. Thus any evidence of reduced flows to  
either and any sources of supply by groundwater pumping creates a conflict with  
MVIC's rights.

As above stated MVIC was incorporated for purposes which include the  
acquisition of water rights and for the construction operation and maintenance of  
their associated irrigation works of diversion and distribution for MVIC's  
shareholders and others for the beneficial use of Muddy River water within the  
Moapa Valley.

1 The Muddy River Decree determined that with the exception of the rights of  
2 the other named defendants, that MVIC is the holder of all rights in the Muddy  
3 River and all of said water rights are vested rights acquired by valid appropriation  
4 and beneficial use prior to March 1, 1905. That they are also considered as equal in  
rank without one having priority over any other, that the Muddy River is to be  
operationally divided into two parts (as far as practicable) the upper and the lower,  
and that the Muddy River is fully adjudicated; specifically holding:

5 "Muddy Valley Irrigation Company is declared and decreed to have  
6 acquired by valid appropriation and beneficial use and to be entitled  
7 to divert and use... all of the waters of said Muddy River, its head  
8 waters, sources of supply and tributaries said water sources, supply  
save and accept the several amounts and rights hereinbefore specified  
and described as awarded and decreed...". page 20, par 7.

9 Not only did the Court hold that MVIC owns all the water rights not decreed  
10 to others, but that the Company is to divert all those waters for the use of the  
11 shareholders. The Court provided for the State Engineer to supervise the Muddy  
River with the administration and control of the lower Muddy River provided by  
MVIC:

12 "The Muddy Valley Irrigation Company, although under the  
13 supervision and control of the state engineer and commissioner  
14 shall subject to said supervision and general control, distribute  
and control the distribution of the waters diverted and conveyed  
by its works to its stockholders and other persons obtaining  
waters by means thereof." page 21, par 9,

15 and further:

16 "That the aggregate volume of the several amounts and quantities  
17 of water awarded and allocated to the parties...**is the total available  
18 flow of the said Muddy River and consumes and exhausts all of  
19 the available flow in the said Muddy River, the head water,  
sources of supply and tributaries.**", (emphasis added) page 22-  
23, par 12.

20 Additionally in the above referenced Further and Supplemental Order of  
21 Determination (incorporated by the Court as Exhibit B to the Decree), State  
22 Engineer Scrugham further identified the source of waters appropriated and  
23 protected by the Muddy River Decree from subsequent use or depletion where in a  
24 section with reference to the Baldwin Springs flow but not otherwise limited he  
25 held:





1 that groundwater production within the MRSA and to a lesser extent the rest of the  
2 LWRFS (except as noted in the above sentence) is depleting Muddy River stream  
flows.

3 Some concise examples of evidence in this regard follow.

4 Coyote Springs Investment witness Dr. Stephen Reich on cross examination  
5 by SNWA when questioned on whether alluvial pumping in the MRSA affected  
6 Muddy River flows answered "yes". When questioned on whether carbonate  
7 pumping affected Muddy River flows Dr. Reich answered "yes". When questioned on  
whether pumping in the Coyote Springs Valley at the MX5 well affected Muddy  
River spring flows Dr. Reich answered "yes".

8 U.S. Fish and Wildlife Service witness Dr. Tim Meyer on cross examination by  
9 SNWA when asked agreed that pumping in the LWRFS affects flows of the Muddy  
River and Muddy River spring flows.

10 U.S. Fish and Wildlife witness Ms. Sue Braumiller on cross examination by  
11 the Center for Biological Diversity when asked if carbonate pumping reduces Muddy  
12 River spring flows and causes depletions in the Muddy River spring flows answered  
"yes".

13 U.S. National Park Service witness Dr. Richard Waddell in his testimony  
14 (while referring to his power point at page 28) concerning the question on what the  
15 long-term quantity of pumping within the LWRFS, or an acceptable rate of capture  
16 of Muddy River sources of supply should be, offered the dispositive answer which  
one would expect by the Decree Court if presented with this question and likewise  
by the State Engineer when protecting the senior decreed water rights from  
depletion. His answer to this question and here I paraphrase, went along the lines  
of:

17 "... someone needs to set a limit and that might be to protect senior  
18 water rights...to me that sounds reasonable."

19 Southern Nevada Water Authority witness Ms. Colby Pellegrino's testimony  
20 supported the technical analysis found in SNWA's July 3, 2019 Report which  
21 concluded that no quantity of alluvial or carbonate long term pumping within the  
LWRFS could occur without conflicting with Muddy River senior decreed water  
rights.

22 City of North Las Vegas witness Mr. Dwight Smith testified that he believes  
23 there is an amount of pumping, in the Apex area, within the Garnet Valley that can  
24 occur without effecting the flows at the higher springs to the Muddy River.  
25 Interestingly in reaching this conclusion his review appears to have been based, at  
least in some respect, by a subtle shifting of the question of pumping to a "safe  
yield" analysis, instead of the relevant legal question of whether LWRFS pumping  
conflicts with senior rights. He also testified however that capture of Muddy River

1 flows overwhelmingly occurs from alluvial and carbonate pumping locations in close  
2 proximity to the Muddy River and the Muddy River Spring Area.

3 The Center for Biological Diversity witness Dr. Tom Myers testified that no  
4 carbonate pumping within the LWRFS should be allowed because there is a direct  
5 correlation between carbonate pumping and decreased spring flows in the MRSA.

6 NVEnergy witness Mr. Richard Felling testified that pumping from the  
7 carbonate aquifer anywhere in the LWRFS will capture Muddy River flows.

8 IV  
9 Because the Muddy River Decree Court  
10 Ruled in 1920 that the Muddy River and all of its  
11 Sources of Supply are Fully Appropriated and Protected  
12 Against Impairment and Depletion, the State Engineer's  
13 LWRFS Groundwater Development Analysis is  
14 Limited as a Matter of Law

15 The State Engineer is obliged to uphold and enforce Nevada water law.  
16 Nevada is a strict prior appropriation water law state for both surface and  
17 groundwater appropriations and conflicts.

18 NRS 533.024(1)(e) declares it to be the policy of the State of Nevada to  
19 "manage conjunctively the appropriation, use and administration of all waters of  
20 this State regardless of the source of the water". NRS 533.024(1)(c) directs the  
21 State Engineer "to consider the best available science in rendering decisions  
22 concerning the availability of surface and underground sources of water in Nevada."

23 Substantial evidence was placed on the record in these proceedings which  
24 confirmed, using the best available science, that groundwater pumping in the  
25 LWRFS captures and depletes the water supply of the Muddy River. Said  
groundwater pumping is occurring under Nevada underground water rights which  
are all junior in priority to MVIC's senior decreed surface water rights.

The Muddy River Decree protects against any impairment of the water rights  
adjudicated therein, specifically forbidding capture and depletion of said water  
rights' sources of supply.

In the absence of an agreed upon conjunctive management plan, acceptable  
to the owners of Muddy River Decree senior surface water rights including MVIC,  
Nevada law provides limited options to the State Engineer (other than curtailment)  
where a clear conflict and impairment of senior rights has been determined. MVIC  
made this observation earlier in its Rebuttal Report.

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V  
Conclusion

Substantial and uncontradicted evidence presented in these proceedings and the hearings therefor clearly confirmed two things; first that groundwater pumping in the LWRFS is depleting Muddy River flows and second that all of said Muddy River flows are absolutely protected against said depletions by the water allocations and determinations made in the Muddy River Decree.

Respectfully submitted this 2<sup>nd</sup> day of December, 2019

Muddy Valley Irrigation Company

  
\_\_\_\_\_  
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775-427-5821  
kingmont@charter.net

**CERTIFICATE OF SERVICE**

I certify that I, Steven D. King, on this date, caused a true copy of **MUDDY VALLEY IRRIGATION COMPANY POST HEARING CLOSING STATEMENT**, to be served on all parties to this action by emailing an attached copy of the document to the email addresses below:

8milelister@gmail.com;  
ablack@mcdonaldcarano.com  
admin.mbop@moapabandofpaiutes.org  
alaskajulie12@gmail.com;  
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Dated this 3rd day of December, 2019.

  
STEVEN D. KING



IN REPLY REFER TO:

## United States Department of the Interior

OFFICE OF THE SOLICITOR  
Pacific Southwest Region  
San Francisco Field Office  
333 Bush Street, Suite 775  
San Francisco, CA 94104

December 2, 2019

Tim Wilson, P.E., Acting State Engineer  
Nevada Division of Water Resources  
901 S. Stewart Street, Suite 2002  
Carson City, Nevada 89701-5250

**Subject: Closing Statements in Response to Interim Order 1303**

Dear Mr. Wilson:

On behalf of the National Park Service (NPS), and at the invitation extended by Ms. Micheline Fairbank on the last day of the Interim Order 1303 administrative hearing, I am submitting the NPS' closing statements in response to Interim Order 1303. The closing statements provided are intended as a summation of the main "take home" issues and findings important to the NPS. We hope this summary is useful as your staff prepares to evaluate the considerable information that has been presented and formulate a final order related to the conjunctive management of surface water and groundwater resources in the Lower White River Flow System (LWRFS) administrative unit.

The NPS appreciates the opportunity to provide these closing statements to your office and to work with you and the other interested stakeholders to determine how best to manage these public resources. If you or your staff have any questions or need further information, please contact me (415-296-3381) at your convenience.

Sincerely,

Karen Glasgow  
Field Solicitor  
San Francisco Field Office  
Office of the Solicitor  
Department of the Interior

**CLOSING STATEMENTS  
INTERIM ORDER 1303 HEARING TESTIMONY**

**Prepared by the National Park Service in cooperation with Tetra Tech, Inc.**

The National Park Service (NPS) appreciates the opportunity to participate in the Interim Order 1303 hearing process and to provide the Nevada State Engineer (NSE) and staff with some closing statements for final consideration. The closing statements provided below are intended to leave the NSE with a summation of the main “take home” issues and findings important to the NPS, as the NSE prepares to evaluate the considerable information that has been presented and formulate a final order related to the conjunctive management of surface water and groundwater resources in the Lower White River Flow System (LWRFS) administrative unit.

**Inclusion of the Black Mountains Area within the LWRFS Geographic Boundary.**

The NPS is the only stakeholder holder who has requested that all of the Black Mountains Area basin be included in the geographic boundary of the LWRFS administrative unit being considered by the NSE. Based on the information contained in the NPS reports that were submitted to the NSE, as well as testimony presented by Dr. Richard Waddell at the hearing, the NPS believes that there is sufficient scientific evidence to conclude that a considerable portion of the flow issuing from Rogers Spring, Blue Point Spring and several other springs in the same vicinity is derived from carbonate-rock aquifer groundwater moving to the east-southeast beneath Garnet Valley, California Wash and the Black Mountains Area. This evidence includes:

- *Favorable geologic conditions exist allowing for carbonate groundwater flow beneath the Muddy Mountains.* Although the Muddy Mountain thrust fault superposes permeable Paleozoic carbonate rocks in the upper plate over less permeable Mesozoic rocks in the lower plate, the overprinting of the thrust fault by Cenozoic faults in certain areas provides linkage between rocks in the upper and lower plates, thereby allowing for some groundwater flow across the thrust fault in both the upper and lower plates. One area where this linkage likely has been created by Cenozoic faulting is the upper plate area extending from the west side of the Muddy Mountains to the Rogers Spring and Blue Point Spring area on the east side of the Muddy Mountains, which is overprinted by the Arrowhead Fault and other smaller faults.
- *Spring chemistry and isotopic composition can be explained by water mixing and rock-water reactions along the pathways.* The groundwater discharging from Rogers Spring and Blue Point Spring has a stable isotopic signature that suggests a substantial contribution from the carbonate aquifer. Geochemical modeling indicates that the stable isotopic composition of these springs requires the mixing of the lighter isotopic carbonate aquifer groundwater with heavier isotopic local recharge water. The higher content of dissolved solids and major ions at Rogers Spring and Blue Point Spring likely is attributable to dissolution of evaporite minerals as groundwater flows through the Mesozoic rocks, Tertiary volcanic rocks, and/or Tertiary basin-fill sediments present in the Muddy Mountains.

- Favorable hydraulic head conditions allow for carbonate groundwater flow beneath the Muddy Mountains. Recent potentiometric surface mapping of the upper carbonate-rock aquifer in southern Nevada indicates an east-southeast flow direction through Garnet Valley, California Wash and the Black Mountains Area toward the NPS' springs. This recent groundwater level data also indicates the presence of a significant head differential (100 to 190 feet) that is sufficient to sustain groundwater flow beneath the Muddy Mountains area.

We would like to address an observation that was made by Mr. Jon Benedict of the NSE's staff during cross examination of Dr. Waddell that groundwater temperatures in several of the carbonate aquifer wells in Garnet Valley are cooler than the water temperatures measured at Rogers Spring and Blue Point Spring (approximately 30° to 31° C), suggesting that the Garnet Valley-California Wash pathway may not be the source of water to these springs. At that time, Dr. Waddell did not have readily available temperature data to be able to make an informed reply. Subsequent examination of temperature data, which is contained in Table 1 of Appendix A of the NPS' July 3, 2019 data report, indicates that there are at least two (2) existing wells (RW-1 and G.P. Apex) in Garnet Valley, and three (3) other periphery wells in western California Wash (ECP-1 & ECP-2) and western Black Mountains Area (EBM-4), respectively, with measured groundwater temperatures similar to these two springs. Therefore, this pathway cannot be discounted as a primary source of water to Rogers Spring and Blue Point Spring, based solely on small temperature differences in a few wells.

Another factor that should be considered in explaining water temperature differences between these springs and some of the groundwater wells in Garnet Valley and California Wash relates to the potential warming of the groundwater from a nearby Tertiary volcanic center located on the north shore of Lake Mead, south of the Rogers Spring area. Similar to the volcanic caldera complexes in Kane Springs Valley that are believed to provide a remnant heat source to warm the groundwater temperature (57° C) observed in well KMW-1, these Tertiary volcanic rocks may be providing a remnant heat source to groundwater flowing toward Rogers Spring and Blue Point Spring, thus warming water temperatures before discharging at the surface. This instance of remnant heating is believed to be similar to the case of Tertiary volcanic centers located further south in the Black Canyon area below Hoover Dam, which are likely responsible for several hot springs in the canyon, where water temperatures ranging from 36° to 56° C have been measured.

Some of the other participating stakeholders (SNWA and NV Energy) provided supporting statements in their reports and/or testimony that some amount of carbonate groundwater in the LWRFS bypasses the Muddy River Springs Area (MRSA) and flows toward Lake Mead. Although these parties did not endorse the incorporation of the rest of the Black Mountains Area into the LWRFS, NV Energy's expert (Mr. Richard Felling) raised important questions that were never answered about how the partial exclusion of a hydrographic area (such as the Black Mountains Area) from the LWRFS would be managed by the NSE. Specifically, would the unincorporated (weakly connected) portion of a hydrographic basin become a new (or reconstructed) basin with a revised perennial yield?

In conclusion, there is a hydraulic connection between Rogers Spring and Blue Point Spring, and the carbonate aquifer beneath California Wash and Garnet Valley, and thus with the carbonate aquifer in up-gradient areas. The NPS recognizes these spring areas are weakly connected to up-gradient portions of the LWRFS due to the lower permeability of the intervening geology in the Muddy Mountains area. Even though this hydraulic connection is weaker than other areas of the LWRFS, the NPS believes it



is necessary to incorporate the rest of the Black Mountains Area basin into the boundary of the LWRFS for purposes of protecting the NPS' state appropriative and Federal reserved water rights at these springs. It is worth reiterating that the NPS has a state appropriative water right at Rogers Spring with a priority date of February 16, 1937, which is senior to all other groundwater rights in the currently defined LWRFS, with the exception of the rights held by Bedroc Limited, LLC in Coyote Spring Valley. By excluding the rest of the Black Mountains Area from the LWRFS, the NPS is concerned that if our springs are adversely affected by up-gradient junior groundwater users in the LWRFS basins, the NPS' ability to claim injury will be substantially reduced if the NSE does not recognize this hydraulic connectedness.

In order to increase the potential success of future conjunctive water resources management, the NPS recommends that the NSE include all existing hydrographic areas within the final LWRFS administrative unit where a hydraulic interconnection (strong to weak) between surface water and groundwater can be reasonably demonstrated within any portion of the hydrographic areas being considered. This approach will allow appropriate management decisions to be made for designated sub-regions with differences in hydraulic connectedness that are contained within the final LWRFS boundary, thereby eliminating the need to create new hydrographic areas from the remnants of areas that were not fully incorporated into the final LWRFS administrative unit. As more information becomes available on the different degrees of hydraulic connectedness (or lack thereof) within a given hydrographic area, these designated sub-region boundaries can be modified, and appropriate management conditions and approaches can be applied to these different sub-regions accordingly.

#### **Inclusion of Kane Springs Valley within the LWRFS Geographic Boundary.**

It is noteworthy that in the data reports and rebuttal reports submitted to the NSE, Kane Springs Valley was recommended most often for inclusion into the LWRFS, with recommendations provided by the NPS, U.S Fish & Wildlife Service (USFWS), Moapa Valley Water District (MVWD), the Center for Biological Diversity (CBD), the Southern Nevada Water Authority (SNWA) and Nevada Cogeneration Associates (NCA). In all cases, the prime reason stated for including this basin within the LWRFS was the hydrologic connection between this basin and Coyote Spring Valley, which was established by the distinct and unambiguous pumping response that is seen in the hydrographs for wells CSVM-4 and KMW-1 during the Order 1169 pumping test period.

Although Lincoln County/Vidler collected useful geophysical data to define subsurface geologic structures such as the high resistivity carbonate block near the mouth of Kane Springs Valley, their contention that this block acts as a significant impediment to groundwater flow in this region should not be accepted at face value alone without additional corroborating evidence. The geophysical method that was used detects changes in the electrical conductivity of rocks, but it does not provide a measure of the hydrologic properties of the rocks. Therefore, it should not be assumed that high resistivity values necessarily equate to intra-fault blocks having low permeability without adequate aquifer testing and evaluation of hydraulic gradients across the fault blocks to substantiate the resistivity data. The NPS believes the attenuated Order 1169 pumping test response expressed in the hydrographs for wells CSVM-4 and KMW-1 proves that this carbonate block and associated faults do not significantly impede groundwater flow in this area. Although the NPS and others testified that the aquifer transmissivity appears to be lower in this area than throughout much of the LWRFS, the hydrologic evidence

conclusively establishes that this area is hydrologically connected to the LWRFS. Additionally, the other lines of evidence proffered by Lincoln County/Vidler, such as differences in water levels, water chemistry and water temperatures in the area, when viewed in proper context, tend to support the hydrologic connection of Kane Springs Valley with the LWRFS.

Finally, of particular significance was the testimony of several former employees of the Nevada State Engineer's office, which strongly support the incorporation of Kane Springs Valley into the LWRFS. Former State Engineer, Hugh Ricci and former Deputy State Engineer, Robert Coache, who were directly involved in establishing Order 1169 and permitting Lincoln County/Vidler's existing water rights in Kane Spring Valley, both testified that in hindsight, if they had the current hydrogeological data available to them when deciding which basins to include under Order 1169, they would have included Kane Springs Valley under the order. Similarly, former Deputy Administrator and Chief of the Hydrology Division, Richard Felling, after initially taking the position in NV Energy's rebuttal report that Kane Springs Valley should not be included in the LWRFS joint management area, subsequently testified that he found that the scientific and technical evidence presented in the reports and at the hearing was so compelling that he was convinced of the need to include Kane Springs Valley into the joint management area.

#### **Groundwater Level Trends in the LWRFS.**

Within the carbonate aquifer in the LWRFS basins, there has been a trend of declining water levels observed for at least two decades. Many hydrologists have attributed this decline to drought conditions. However, this interpretation does not take into account that water levels have been rising in many other areas in southern Nevada. The NPS and USFWS presented numerous examples of groundwater hydrographs in their rebuttal reports that clearly show that water levels have been rising for several decades in southern Nevada in areas where groundwater production is absent or minor. The fact that there are numerous examples of rising groundwater levels in neighboring basins to the west, south, east and north of the current LWRFS basins suggests that the LWRFS basins also would have been affected by rising groundwater levels during the same period of time reflected in the water level records in these valleys. With the exception of one objection to the NPS' presentation of this information during the hearing, it's noteworthy that no other stakeholder testimony was presented to refute that rising groundwater levels have been occurring throughout much of southern Nevada for several decades.

In the LWRFS basins, where groundwater pumping has been occurring throughout much of this same period, groundwater levels have been on a decline. This decline only can be explained by the pumping occurring in the LWRFS basins and not by current drought conditions that may or may not be occurring. The groundwater pumping in the LWRFS has been of sufficient magnitude to overwhelm the rising water level response that likely would have been widely observable in the LWRFS basins in the absence of any pumping. Even though a significant reduction in alluvial pumping in the MRSA since 2015 has resulted in noticeable recovery of groundwater levels and spring discharge in the MRSA, continued pumping at current levels still appears to be limiting (or extending the period to) full recovery from the pumping effects observed from the Order 1169 pumping test.

If the amount of recent pumping has been sufficient to overwhelm the rising water level trend and create the observed water level declines, then there are more serious management implications ahead when the current period of wetter conditions reverts to a period of drier conditions. If the recent amount of pumping is allowed to continue, then this declining trend will be exacerbated not only for

groundwater levels, but also for spring and river discharges in the MRSA and elsewhere in the LWRFS during an extended period of drier conditions. Conjunctive management in the LWRFS should factor in long-term monitoring of groundwater levels in several surrounding basins that are distant from pumping in the LWRFS basins to gauge the real-time climatic response being transmitted through the aquifers in southern Nevada. Such information could then be used to adjust the amounts of permissible groundwater pumping in order to prevent injurious declines in groundwater levels, and spring and river discharges.

#### **The Relationship of Pumping Location on the Capture of Spring and River Flows.**

The NPS was the only stakeholder to provide a robust qualitative evaluation of the possible effects on spring and river flows from the redistribution of groundwater pumping within and between the carbonate and alluvial aquifers in the LWRFS. This evaluation was achieved using the current version of the Tetra Tech groundwater flow model and the same total annual pumping rate that occurred during the Order 1169 pumping test period for each of the simulations conducted. The simulation results indicated that pumping at approximately 14,535 afy under several different pumping configurations caused similar declines in discharge in the MRSA area over time, thus indicating to the NPS that the annual sustainable quantity of groundwater available is less than 14,500 afy. Similar modeling simulations conducted at lower pumping rates, coupled with long-term water level and discharge monitoring, may help to ascertain what this annual sustainable quantity may be.

The simulations indicated that there would be short-term benefit on the flows of the Muddy River Springs and the Muddy River from moving greater amounts of alluvial and/or carbonate withdrawals from the northern basins into the southern basins. The similarity in the results from all three simulations over time appears to refute some stakeholder contentions that redistributing pumping further away from the MRSA would permit more groundwater to be withdrawn without adversely affecting senior rights. The simulations also revealed that moving greater amounts of pumping closer to the NPS' springs would raise the likelihood of adverse impacts to these springs over time.

Although it has been suggested that decreasing pumping from the Muddy River alluvium would reduce the capture of the surface flow and result in having more surface water available to satisfy downstream decreed water rights, the simulations indicate that this increase is not enough to fully offset the reduction in surface flow that is predicted in later years. Moving greater amounts of pumping further away from the MRSA and from the alluvial aquifer to the carbonate aquifer delays impacts by a few decades, but does not eliminate subsequent injurious effects. Ultimately, the degree of hydraulic connectedness will be a primary factor in determining whether relocating pumping will be effective in minimizing injurious effects to senior surface water rights.

**IN THE OFFICE OF THE STATE ENGINEER  
OF THE STATE OF NEVADA**

IN THE MATTER OF THE ADMINISTRATION AND MANAGEMENT OF THE LOWER WHITE RIVER FLOW SYSTEM WITHIN COYOTE SPRING VALLEY HYDROGRAPHIC BASIN (210), A PORTION OF BLACK MOUNTAINS AREA HYDROGRAPHIC BASIN (215), GARNET VALLEY HYDROGRAPHIC BASIN (216), HIDDEN VALLEY HYDROGRAPHIC BASIN (217), CALIFORNIA WASH HYDROGRAPHIC BASIN (218), AND MUDDY RIVER SPRINGS AREA (AKA UPPER MOAPA VALLEY) HYDROGRAPHIC BASIN (219).

**Post-hearing brief of Nevada Cogeneration Associates Nos. 1 and 2 pertaining to Amended Notice of Hearing Interim Order #1303 following the hearing conducted September 23, 2019, through October 4, 2019, before the Nevada State Engineer**

Nevada Cogeneration Associates Nos. 1 and 2 (collectively “NCA,” and separately “NCA 1” and “NCA 2”), provides the following post-hearing brief for consideration by the Nevada State Engineer following the completion of the Phase 1 hearings in the above referenced matter involving the Lower White River Flow System (“LWRFS”), which hearings were conducted over a two-week period from September 23, 2019, through October 4, 2019. This brief is presented on behalf of NCA by counsel for NCA, Alex J. Flangas of the firm of Kaempfer Crowell, with the assistance of Mr. Jason M. Dixon, P.E. (Dixon Hydrologic, PLLC), Mr. Robert A. Coache, P.E., and Mr. Hugh Ricci, P.E. both of whom are working in conjunction with Mr. Dixon through Dixon Hydrologic PLLC.

**Background:** Interim Order #1303 acknowledges in the first paragraph on page 1 that the “purpose of this Interim Order *is to designate a multi-basin area **known to share a close hydrologic connection** as a joint administrative unit*, which shall be known as the Lower White River Flow System.” The third full paragraph on page 1 of Interim Order #1303 then expressly ended up defining the scope of the Phase 1 hearings and their purpose:

... during the interim period that this Order is in effect, holders of existing rights and other interested parties are encouraged to submit reports to the Nevada Division of Water Resources (NDWR) analyzing the data available *regarding sustainable groundwater development in the LWRFS, the geographic extent of the LWRFS, and considerations relating to groundwater pumping within the LWRFS and its effects on the fully decreed Muddy River*. This collected and analyzed data is an essential step to optimize the beneficial use of the available water supply in the LWRFS.

(Emphasis added.) The concluding paragraphs of Interim Order #1303, at pages 13 and 14, further clarified the points to be included in the “reports,” stating:

Reports filed with the Office of the State Engineer should address the following matters:

- a. The geographic boundary of the hydrologically connected groundwater and surface water systems comprising the Lower White River Flow System;
- b. The information obtained from the Order 1169 aquifer test and Muddy River headwater spring flow as it relates to aquifer recovery since the completion of the aquifer test;
- c. The long-term annual quantity of groundwater that may be pumped from the Lower White River Flow System, including the relationships between the location of pumping on discharge to the Muddy River Springs, and the capture of Muddy River flow;
- d. The effects of movement of water rights between alluvial wells and carbonate wells on deliveries of senior decreed rights to the Muddy River; and
- e. Any other matter believed to be relevant to the State Engineer's analysis.

The first four of those points – (a) through (d) -- became the focus *and the limitation* of the Phase 1 hearings, as outlined in the State's Amended Notice of Hearing issued August 26, 2019, and as reiterated several times by Deputy Administrator Micheline Fairbank during the hearing.

During the hearing, NCA focused its presentation on essentially two of the four elements that were at issue: items (a) the geographic boundary of the LWRFS; and item (c) the long-term annual quantity of groundwater (*sustainable groundwater development*) that may be pumped from the LWRFS. Some discussion was had on the other points, but this brief will focus primarily on those two elements, as they are the main post-hearing points to which NCA will direct the State Engineer with some focus on testimony and evidence that was presented to clarify those points – especially as they affect NCA's interests in this proceeding.

**1. The Evidence and Analysis presented to the State Engineer strongly suggests that the Geographic Boundary of the LWRFS may need to be adjusted in two areas:**

- a. **to *exclude* the NCA production wells in the Black Mountains Area, and**
- b. **to *include* the Kane Springs Valley Basin in the LWRFS.**

A. Evidence supports excluding NCA's production wells from the LWRFS.

- (i) SNWA's experts agree that "the Black Mountain area production wells probably should not be within the Lower White River Flow System boundary."

Significantly, a primary source of initial analysis for the conclusion that the NCA production wells are likely *outside* the boundary of the LWRFS came not directly from NCA's experts, but rather from other experts who independently reached the conclusion that NCA's production wells did not appear to be connected to the LWRFS system. The significance of this independent determination should not be minimized.

Southern Nevada Water Authority (“SNWA”) presented an August 13, 2019, rebuttal report entitled, “Response to Stakeholder Reports Submitted to the Nevada State Engineer with Regards to Interim Order 1303.”<sup>1</sup> The authors of that report emphasize that carbonate wells *inside* the LWRFS demonstrate impacts on wells near the Muddy River Springs Area (“MRSA”), whereas other wells appear unconnected suggesting the boundary in that area is likely “off.”

The SNWA authors initially comment at page 2 of their Rebuttal Report that the data they have observed, “do not support interpretations of hydraulically-isolated flow paths, capture zones, or structural blocks *within the LWRFS.*” (*Emphasis added here.*) Rather, say the authors, assertions that blocks of carbonate rock “within” the LWRFS can be hydrologically isolated is erroneous, as is demonstrated by the significant evidence of responses shown through their multiple linear regression (“MLR”) analysis of well response data. For most locations, that data demonstrates a close connection between the pumping from the various basins and a particular well located near the MSRA that was used for the analysis – that being EH-4.

As was explained by both SNWA and Jay Dixon during NCA’s testimony, that MLR analysis partitioned the EH-4 hydrograph into several hydrographs of responses to groundwater production from each of the five LWRFS basins. It demonstrated close connections at several locations; indeed, for the period 2006 through 2019, the hydrographs for CSVM-2 and CSVM-1 (Coyote Springs Valley), UMVM-1 (Muddy River Springs Area), and GV-1 (Garnet Valley) all virtually mirror the hydrograph for EH-4 (Muddy River Springs Area).<sup>2</sup> Notably, however, that same MLR analysis produced a significantly *different* result when it was applied to the production wells in the Black Mountains Area (“BMA”).

SNWA’s Rebuttal Report discusses the MLR at pages 15-20 and specifically recognizes at p.17 that a strong correlation applies between EH-4 in the MSRA and a monitoring well located in the Black Mountains Area, BM-DL-2, that showed an extremely high correlation value ( $R^2$  of 0.95), but no such correlation was found to exist in connection with the NCA wells. The authors concluded, “[t]his indicates that while well BM-DL-2 is undoubtedly within the carbonate aquifer of the LWRFS, ***the current production wells (Figure 2-8) are probably not.***” (*Emphasis added.*) At the hearing, when Ms. Warda Drici, the lead hydrologist who co-authored the SNWA Rebuttal Report, was asked, “[n]ow, that means ‘are probably not’ within the

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<sup>1</sup> Burns, A., Drici, W., and Marshall, ZI, 2019, Response to Stakeholder Reports Submitted to the Nevada State Engineer with Regards to Interim Order 1303: Southern Nevada Water Authority, Las Vegas, Nevada. (Hereinafter, “SNWA Rebuttal Report”)

<sup>2</sup> See Fig. 2.4, SNWA Reb. Report at p. 8.

carbonate aquifer of the LWRFS; isn't that correct? Isn't that what that means?," Ms. Drici answered in the affirmative, [y]es, it is."<sup>3</sup> Importantly, Mr. Andrew G. Burns, who co-authored the SNWA Rebuttal Report with Ms. Drici, confirmed that he concurred in the analysis, as did Jim Rogers at SNWA.<sup>4</sup>

In her direct testimony during the hearing, at pages 905 and 906, Ms. Drici was even more specific about the "boundary" of the LWRFS and the production wells in the Black Mountains Area. Referencing slide No. 17 in SNWA's presentation which contained Figure A-3, Ms. Drici discussed the BMA in particular and explained the MLR (multiple liner regression) analysis, stating as follows:

So when we conduct this analysis and we extract the responses to the individual basin groundwater production from the carbonate aquifer, and if you look at the first graph there, the slide [No. 17, Fig. A-3], that would be the Black Mountain area. And it appears, from this analysis, that the groundwater production from Black Mountain is not really affecting water levels at EH-4.

*So it's an indication that, perhaps, the boundary down there might be a little bit off because the boundary was defined based on the observation well, the VMDL-2 [sic]<sup>5</sup>, I believe.*

*And VMDL-2 did respond to the MX-5 pumping during the Order 1169 aquifer test, and these wells, the production wells are just a little bit south of there. So this is an indication that, perhaps, the boundary might be a little bit off. (Emphasis added.)<sup>6</sup>*

Notably, Fig. A-3 from SNWA's presentation (depicting the BMA production pumping wells) shows a completely horizontal line for the water levels in EH-4 throughout the entire time that SNWA tracked data from 1996 through 2018 – which is significantly different than what was shown in MLR results for California Wash, Coyote Springs Valley, and Garnet Valley (Figures A-4, A-5, and A-6 – slides 17 and 18 of SNWA presentation).

Finally, Ms. Drici confirmed that a part of her conclusion in this regard was based upon the 'P' values calculated for the responses observed from the various wells and pumping in the different basins, including in the BMA. In response to cross examination by Ms. Karen Peterson,

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<sup>3</sup> Transcript of Hearings, Vol. V, p.m. session, Sept. 27, 2019, p.1019, lines 13-21. Ms. Drici then clarified her report statement somewhat, stating that the word "probably" simply meant that she could not say, "with hundred percent certainty that it is true. I mean to demonstrate things like this, you would need to look at it from different angles. So, this analysis indicates that maybe they are not in there...." *Id.* At p. 1019, lines 21-24, and p. 1020, lines 1-4.

<sup>4</sup> Trans., Vol. V, p.m. session, Sept. 27, 2019, p. 1020, lines 13-14, p. 2021 lines 1-3 (Mr. Burns referenced Mr. Rogers, specifically, as having concurred in the analysis along with he and Ms. Drici.).

<sup>5</sup> The Ct. Reporter heard "VMDL-2," but this should be "BM-DL-2."

<sup>6</sup> Trans., Vol. V, a.m. session, Sept. 27, 2019, p. 905, lines 11-24, p. 906, line 1.

the attorney for Lincoln/Vidler, Ms. Drici discussed the differing P values for the BMA, and again confirmed that, “we already showed the results that we think that Black Mountain area production wells *probably should not be within the Lower White River Flow System boundary*.”<sup>7</sup>

In summary, the experts for SNWA uniformly suggested in both SNWA’s Rebuttal Report and in their direct testimony at the hearing that the *boundary* in the Black Mountains Area was questionable by including the NCA production wells, because those wells *probably should not be within the LWRFS*.<sup>8</sup>

- (ii) NCA’s Experts’ review and analysis of the data and conclusions of SNWA also supports removal of the NCA wells from the BMA, as well as a relocation of the Boundary in the BMA.

The data relied upon and the conclusions reached by SNWA’s experts were analyzed by NCA’s own experts, and they too concluded that NCA’s wells reacted noticeably differently than the other monitoring well only 3,600 feet away, BM-DL-2. At the hearing Jay Dixon, the lead hydrologist on NCA’s team, discussing slides Nos. 7 and 8 of the NCA presentation, testified that the NCA production wells were intentionally sited by Marty Mifflin in the early 1990s (acting as a consultant to the owners of NCA) because “[h]e was aware of a series of strike slip faults and you can see coming off the east side of the Dry Lake Range.”<sup>9</sup> As Mr. Dixon explained:

Again, still staying on this recommendation regarding this boundary and focusing on the geologic section GG that I pointed out in the previous slide. The NCA wells, as you can see, are put right in the middle of those strike-slip faults. That’s where Marty purposely sited them.

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<sup>7</sup> Trans. Vol. V, a.m. session, Sept. 27, 2019, p. 984, lines 17-20.

<sup>8</sup> Curiously, despite the repeated testimony of Ms. Drici and Mr. Burns testimony that he and Jim Rogers of SNWA had reviewed and supported the conclusions reached in SNWA’s Reb. Report regarding the production wells not appearing to affect the Muddy Springs Area or being part of the LWRFS, when asked by the State Engineer whether SNWA still supported the State Engineer’s recommendations on the LWRFS “boundary” even with regard to the Black Mountains Area Mr. Burns stated he would still support the recommendation that the boundary “was appropriate.” (See Trans. Vol. V, p.m. session, Sept. 27, 2019, p. 1051, lines 1-6.) Notably, however, Mr. Burns quickly referenced Ms. Colby Pellegrino’s position, stating, “[b]ut, what I’m also saying or what we’re also saying is that it’s, as Colby mentioned this morning, if there is prospects of moving production from one part of an adjacent basin to the boundary of LWRFS, and particularly this boundary *which I think a little uncertain*, we think applications to change those points of diversion in that regard should be scrutinized.” (*Id.* at lines 6-14).

The undersigned would suggest that Mr. Burn’s reticence to directly respond to the State Engineer has more to do with the fact that SNWA did not identify a specific line or point where the boundary should be moved in the Black Mountains Area, and thus did not want to wade in without more information. The conclusion those experts drew, however, is unmistakable: the **LWRFS boundary** should *not* include the NCA production wells, and since it currently does, it should probably be changed to exclude them because the boundary in that area is “a bit off.”

<sup>9</sup> Trans. Vol. IX, Oct. 3, 2019, at p.1618, lines 4-23.



And referring back to the larger question should the entire basin be included? As you continue to the east, you see a complete different map[ped] geology on this side. There is no apparent consistency in the geology on the other side of that Muddy Mountain thrust fault, at least relative to this pumping.<sup>10</sup>

Mr. Dixon further acknowledged that well EBM-3 “has a monitoring record that goes back to 1993 and its continuous,”<sup>11</sup> and Mr. Dixon explained that after hearing what SNWA had concluded and reviewing their P values and MLR analysis, he and his colleagues “did a little investigation, obviously, we spent a lot of time reviewing Marty Mifflin’s work. He did a very good job of documenting what he saw when he was out there in the early nineties.”<sup>12</sup> Mr. Dixon then described certain “high angle fractures,” fractured limestone, and – importantly – confirmation that the wells were located *in the fault*.<sup>13</sup> Finally, he noted that “SNWA didn’t look at it beyond what they have,”<sup>14</sup> but Mr. Dixon and his colleagues did, and they provided even more information for consideration by the State Engineer.

Finally, Mr. Dixon discussed the same P-values that Ms. Drici had briefly touched upon, and Mr. Dixon explained the significance of the difference that was demonstrated by the BMA production well, EBP-2 (as reported by EBM-3, its adjacent monitoring well), as compared to the monitoring well only 3,600 feet away, BM-DL-2. Both wells are approximately 30 miles from EH-4, yet BM-DL-2 correlates nearly 1 to 1 with EH-4, while the NCA well is statistically so far off on the correlation that it caused SNWA to question whether there was any connection whatsoever. Indeed, SNWA’s Figure A-3 showed no influence from BMA pumping of production wells, which Mr. Dixon explained would be consistent with the vastly different P-values. However, Mr. Dixon did note that there was “noise” associated with the well data for EBM-3 (the NCA well), and noted that it would be helpful to have additional work done to analyze the data more thoroughly.<sup>15</sup>

Following the conclusion of the hearing, Mr. Dixon did precisely that – he analyzed the existing monitoring record back to 1993, and performed a more thorough review of information already in the State’s record. Notably, nothing herein is added to the record that was made available to the Nevada State Engineer during the hearing, but instead is rather a more thorough review of the materials from the NCA Permit files that are part of the record, using the data

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<sup>10</sup> Trans. Vol. IX, Oct. 3, 2019, at p. 1619, lines 3-13.

<sup>11</sup> *Id.* at p. 1619, line 24, p. 1620, line 1.

<sup>12</sup> *Id.* at p. 1620, lines 23-24, p. 1621, lines 1-2.

<sup>13</sup> *Id.* at p. 1621, lines 3-24, p. 1622, lines 1-2.

<sup>14</sup> *Id.* at p. 1622, lines 20-21.

<sup>15</sup> *Id.* at p. 1622, lines 21-22, p. 1625, lines 2-6.

provided therein and assessing exactly what was discussed at the hearing involving the Black Mountains Area and the differing effects noted from the production wells in that area as compared to nearly all the other wells reported upon and analyzed by SNWA and others. Mr. Dixon provided the following analysis, which is included as part of this closing brief:

## **BACKGROUND**

The purpose of this Memorandum is to provide a summary of an additional review and analysis of regional carbonate groundwater level response and pumping in the Black Mountain Area (BMA) basin from the Nevada Cogeneration Associates (NCA) wells. The justification for this follow-up analysis was to further examine the possibility that pumping in the BMA from the NCA wells may have limited or no effect on observed spring flow and carbonate groundwater responses in the Muddy River Springs Area (MRSA) and therefore, could be managed outside of the proposed Lower White River Flow System (LWRFS) administrative unit. The data used for this work relied on existing information and reports at NDWR, with some of that data being filtered and used in support of the same (type of) analyses reported by NCA and others for the Order 1303 Hearing (hereinafter, the “Hearing”).

## **ORDER 1303 – BMA PUMPING AND EFFECTS CONCLUSIONS**

The Southern Nevada Water Authority (SNWA) provided detailed information on historical pumping, surface water flows and water levels within the proposed LWRFS in their initial report, SNWA (2019a)<sup>16</sup>, including interpretations on the extent of correlation between groundwater levels in the LWRFS basins and MRSA responses (spring flow and carbonate groundwater levels). However, the report did not discuss the apparent lack of contributions from pumping in the BMA. The follow-up SNWA (rebuttal) report (SNWA, 2019b)<sup>17</sup> presented results of a multiple linear regression (MLR) analysis that partitioned the EH-4 hydrograph into several hydrographs of responses to groundwater production from each of the five (5) LWRFS basins. As shown in **Figure 1** attached to this Closing Brief, SNWA (2019b) demonstrated “*that groundwater production from the Black Mountains Area causes the least effect ....*” See SNWA (2019b) at p. 16. The analysis performed by SNWA as described in SNWA (2019b) concluded that production wells in the BMA are “probably not” within the proposed LWRFS. See SNWA (2019b) at p. 17. The same conclusions were reiterated by SNWA experts during the Order 1303 Hearing in Sept. – Oct. 2019.

## **FOLLOW-UP REVIEW OF NCA PUMPING AND GROUNDWATER LEVELS**

During the Order 1303 Hearing, evidence was presented by SNWA and NCA experts that reiterated that carbonate groundwater levels in the BMA behaved differently than elsewhere in the LWRFS and pumping in the BMA appears to have little to no effect on spring flow and carbonate groundwater levels in the MRSA. However, these conclusions were repeatedly conditioned with uncertainty due to apparent differences in the responses to pumping based on carbonate groundwater observations at EBM-3 when compared to BM-DL-2 and EH-4. Some of this uncertainty was likely due to interference at EBM-3, a non-pumping observation well, from nearby pumping well EBP-2, which is located only 200 ft away (see **Map 1**, attached to this Closing Brief). As shown in **Map 1**, BM-DL-2 is located 2,660 ft northwest of the nearest NCA pumping wells (and approximately 3,600 feet from EMB-3). The data used by SNWA, NCA and other experts during the Hearing originated from records at NDWR made available via an online database. This data is reported to NDWR by various stakeholders in the LWRFS with ongoing monitoring and reporting obligations, which includes the years 1992 to 2017.

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<sup>16</sup> Burns, A., Drici, W., Collins, C., and Watrus, J., 2019, Assessment of Lower White River Flow System Water Resource Conditions and Aquifer Response, Presentation to the Office of the Nevada State Engineer: Southern Nevada Water Authority, Las Vegas, Nevada.

<sup>17</sup> Burns, A., Drici, W., and Marshall, ZI, 2019, Response to Stakeholder Reports Submitted to the Nevada State Engineer with Regards to Interim Order 1303: Southern Nevada Water Authority, Las Vegas, Nevada.

In order to further investigate the relationship between BMA pumping and carbonate groundwater observations, a series of steps were taken as summarized below:

1. Extensive review of NCA pumping files at NDWR, which included hard-copy reports submitted by NCA to NDWR on a quarterly basis beginning in 1992 through 2017. Beginning in 2017 the reports were submitted in digital format (Excel spreadsheets). Each hard-copy report was manually digitized and converted and transferred into a digital format (Excel spreadsheet). These reports included monthly pumping and water level observations.
2. Groundwater level observations have been reported by NCA for three (3) wells (see **Map 1** for locations). Wells EGV-3 and EBM-4 were reported as pumping wells from December 1991 through June 2015. Beginning in September 2015, Wells EGV-3 and EBM-4 were replaced (as pumping wells) and converted to monitoring wells. Water level observations for these wells is sporadic and highly variable, depending when the levels were measured relative to pumping as shown in **Figure 2** (attached to this Closing Brief). The NCA reports filed at NDWR generally indicate whether the groundwater levels are taken when the production wells are on or off, but the amount of time between pump shut-in and water level measurements was never indicated.
3. Groundwater level observations have been reported by NCA for EBM-3 since 1993. The data from this well has the longest continuous record in the BMA as reported on the NDWR database. The database also includes eight (8) water level observation reported by the USGS, but the earliest record (August 1991) appears to have been taken directly from the Well Log (#46122). Even though well EBM-3 was used only for monitoring purposes, it is located only 200 ft away from NCA pumping well EBP-2. EBM-3 was no longer accessible for groundwater monitoring purposes after December 2017. As discussed by NCA during the Hearing, water levels measured at EBM-3 appear to vary by approximately 5 ft over short periods of time. This variability has been interpreted as dynamic influence from nearby pumping, particularly at EBP-2. The NCA reports filed at NDWR do not indicate (directly) the pumping status of nearby wells, and most importantly the status of EBP-2, when the EBM-3 water levels are measured.
4. EBM-3 groundwater level data was filtered such that only NCA water level observations made during months when EBP-2 registered no pumping were plotted over time. This data was also combined with USGS observations in the NDWR database for months when EBP-2 was not pumping. For this analysis, it was assumed that using only water level data reported during months with no pumping (from EBP-2) helped ensure that groundwater levels were more representative of actual background, or relative static aquifer conditions, at the well. As shown in **Figure 3** (attached to this Closing Brief), some variability in EBM-3 data still exists, but an interpretive (average) plot was added to provide a better, or more continuous, visual representation of observed trends within the time-series data points.
5. During the Hearing, NCA experts presented the results of a simple linear regression analysis for BM-DL-2 vs. EH-4 and EBM-3 vs. EH-4 (NCA hearing presentation Slide 16<sup>18</sup>). Results of the BM-DL-2 vs. EH-4 analysis indicated a high correlation with an R<sup>2</sup> value of 0.95, which matched the results presented by SNWA (2019a, b). The results of the EBM-3 vs. EH-4 correlation analysis indicated low correlation with a R<sup>2</sup> value of 0.52. However, as was noted during the Hearing, the data included several water level measurements that were the same value within the nearest 1-ft and measurements taken when nearby EBP-2 was being pumped or had recently pumped which are considered unrepresentative of actual (background) groundwater conditions at the EBM-3 well. **Figure 4** (attached to this Closing Brief) includes a revised regression plot for EBM-3 vs. EH-4 using only data reported by NCA and USGS during months when EBP-2 was not pumped.

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<sup>18</sup> Dixon, J., Coache, R. and Ricci, H., October 3, 2019. Administrative Hearing in the Matter of Administration and Management of the Lower White River Flow System – Demonstrative Presentation in Support of Direct Testimony. Carson City, Nevada.

6. Additionally, the reports filed prior to and testimony provided during the Hearing did not examine water level data at BM-DL-1. As shown in **Map 1**, BM-DL-1 is located 2,176 ft east of BM-DL-2 and approximately 1,530 ft north of the northern-most NCA production well (EBM-5). As shown in **Figure 5** (attached to this Closing Brief), the hydrographs from BM-DL-1 and BM-DL-2 are shown in the same hydrograph plot to provide a simple visual comparison between groundwater levels in the two wells.

## RESULTS OF FOLLOW-UP REVIEW

Using only data reported by NDWR, an additional review was performed to further investigate the relationship, if any, between NCA pumping in the BMA and water level responses in the regional carbonate aquifer *within the proposed LWRFS boundary*. No new analyses were performed as part of this follow-up review. Existing data was filtered as described herein and presented in **Figures 1** through **4**. A summary of the results of this follow-up review and limited analysis is listed below:

1. The SNWA (2019a, b) reports incorrectly reported the start of pumping (from NCA) in the BMA as being 1996. As shown in **Figure 3**, NCA pumping within the BMA actually began in July 1992.
2. Carbonate pumping in the BMA was 0 ac-ft in 1991, 479 ac-ft in 1992 and averaged 1,537 ac-ft from 1993 through 1997, ***yet the carbonate groundwater levels in the MRSA as observed at EH-4 were stable during this time reflecting only normal seasonal trends.*** In fact, groundwater levels at EH-4 actually **increased** by 0.9 ft between 1992 and 1993 within the first full year of NCA groundwater production while static groundwater levels at EBM-3 in the BMA dropped by 14 ft from NCA pumping. See **Figure 3**.
3. Overall seasonal carbonate groundwater hydrograph trends are nearly identical for BM-DL-2 and EH-4 even though the wells are 29.5 miles apart and in separate hydrographic basins. However, same seasonal trends are **not** observed in EBM-3 as compared to BM-DL-2 and EH-4 even though EBM-3 is located only approximately 3600 ft away from BM-DL-2. This suggests that while a strong hydrologic connection appears to exist between EH-4 and BM-DL-2, the same does not appear to be true for EH-4 and EBM-3, or between BM-DL-2 and EBM-3.
4. As shown in **Figure 5**, visual comparison between the hydrographs for BM-DL-1 and BM-DL-2 reflect a significant departure in groundwater level trends between 2007 and 2011, which seems to indicate different hydrogeologic conditions between those two wells.
5. Even though it appears that some regional response in carbonate levels can be seen in EBM-3 observations (**Figure 3**), as shown in **Figure 4**, groundwater levels at EBM-3 do **not** correlate well with corresponding levels at EH-4 with regression analysis results indicating an (updated) R<sup>2</sup> value of less than 0.5, and by inference EBM-3 does not correlate well with nearby BM-DL-2 either.
6. During the Hearing, NCA experts provided testimony in review of the Mifflin and Associates 1992 well completion reports for NCA, which indicated the presence of significant structural features encountered during well drilling. As shown in **Map 2**, Rowley (2017)<sup>19</sup>, Mifflin's descriptions are supported by the mapping of a (buried) strike-slip fault extending south of the Dry Lake Range through the NCA well field. Because of the lack of response in the LWRFS to pumping from the NCA wells in the BMA, the poor correlation in groundwater level (response) between observations

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<sup>19</sup> Rowley, P.D., Dixon, G.L., Mankinen, E.A., Pari, K.T., McPhee, D.K., McKee, E.H., Burns, A.G., Watrus, J.M., Ekren, E.B., Patrick, W.G., and Brandt, J.M., 2017, Geology and Geophysics of White Pine and Lincoln Counties, Nevada, and adjacent parts of Nevada and Utah: The geologic framework of regional groundwater flow systems, Nevada Bureau of Mines and Geology Report 56, Prepared cooperatively by Geologic Mapping, Inc., New Harmony, Utah, U.S. Geological Survey, Menlo Park, California, Southern Nevada Water Authority, Las Vegas, Nevada and Private consultant, White Sulphur Springs, Montana.

made at EBM-3, BM-DL-1 and EH-4 it is apparent that ***an adjustment to a portion of the proposed LWRFS boundary in Basin 215 (BMA) is warranted.*** As shown in **Map 2**, the proposed boundary modification would generally place the south and western-most boundary within the Basin 215 portion of the LWRFS to be coincident with the strike-slip fault mapped by Rowley (2017) with a slight adjustment west such that the fault and boundary lie west of the NCA well field and BM-DL-1. Essentially this modified portion of the area currently within Basin 215 should become part of the administrative boundary for Basin 216 (Garnet Valley), leaving the NCA wells (EBP-2, EBM-5 and EBM-6) and BM-DL-1 inside of Basin 215, but outside of the LWRFS administrative unit.

## CONCLUSIONS

Based on the results of this limited follow-up analysis using only existing data available at NDWR, it appears that pumping from carbonate wells in the BMA does not have an appreciable influence on carbonate groundwater levels observed in EH-4. This lack of correlation corroborates SNWA's statements and conclusions regarding contributions from NCA pumping in the BMA to observed impacts in carbonate groundwater levels and changes in spring flow in the MRSA.

Due to the lack of response to pumping from the BMA and poor correlation between carbonate groundwater levels near the NCA well field and within the LWRFS (EH-4) an adjustment to the portion of the LWRFS boundary within Basin 215 is warranted. The boundary adjustment, as shown in **Map 2**, is further supported by mapped geologic structural features from Rowley (2017).

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Conclusion as to the boundary in the Black Mountains Area: Notably, **Map 2** included by Mr. Dixon shows a meaningful, geologic structure that should be used to form the actual Southern (LWRFS) boundary proposed for what is currently part of the Black Mountains Area. It is based on an actual strike-slip fault that was mapped, photographed, and into which NCA's production wells were intentionally sited. It is not surprising, really, that they perform outside the LWRFS. All of this data was discussed during the hearing; Mr. Dixon explained during the hearing the reasons why this made sense and explained precisely why NCA's production wells did *not* affect EH-4 the way that other wells in other basins *within the LWRFS* did.<sup>20</sup>

B. Evidence and Analysis supports the inclusion of Kane Springs Valley Basin as part of the LWRFS.

An additional geographic 'boundary' adjustment is also warranted by the evidence and analysis that was presented to the State Engineer both by the initial Reports, the Rebuttal Reports, and the testimony presented during the hearing. Several sources demonstrated that a direct, hydrologic connection exists in the carbonate aquifer between Kane Springs Valley Basin and the MSRA such that it would be appropriate to include Kane Springs Valley in the LWRFS.

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<sup>20</sup> Mr. Dixon's supplemental discussion for the Post-Hearing Brief does, in fact, identify a better and more scientifically supported boundary than the arbitrary straight-line previously applied to form the Southern boundary of the LWRFS. As such, it is a "recommendation" made to a public agency by an engineer, and thus this Post-Hearing Brief of NCA will bear Mr. Dixon's professional engineer's stamp and signature, along with the undersigned, as representatives of NCA, in order to comply with NAC 625.612.

As such, the geographic boundary of the LWRFS should be adjusted to include Kane Springs Valley Basin.

In NCA's Rebuttal Report at section 4, beginning on page 8, NCA's experts addressed several comments made by Lincoln County/Vidler in their initial report titled, "Lower White River Flow System Interim Order #1303 Report Focused on the Northern Boundary of the Proposed Administrative Unit," dated July 3, 2019 (the "Lincoln/Vidler Report"), beginning with the reliance by Lincoln/Vidler on the purported statement that the State Engineer had supposedly found that there would be no significant impact for hundreds of years. In fact, as pointed out by NCA's experts, no such determination was made by the State Engineer with regard to Kane Springs Basin or Lincoln/Vidler's rights.

An actual review of Ruling 5712 -- issued February 2, 2007, at a time when the State Engineer had only limited data relevant to the impacts caused by carbonate groundwater pumpage within the LWRFS and no direct statutory right to "conjunctively manage" water sources -- nonetheless *still* highlights the following findings made by the State Engineer *at that time*:

- "The State Engineer further finds that the Applicants' pumping test supports the conclusion that there is considerable potential for ground-water flow in the carbonate rocks in the vicinity of well KPW-1" (Pg. 7)
- "The State Engineer finds the evidence indicates a strong hydrologic connection between Kane Springs Valley and Coyote Spring Valley, specifically, that ground water flows from Kane Springs Valley into Coyote Spring Valley." (Pg. 21)
- "Given the unique hydrologic connection between the Kane Springs Valley Hydrographic Basin and the Coyote Spring Valley Hydrographic Basin, the development of ground water within Kane Springs Valley will ultimately affect water levels and flows in the White River regional carbonate-rock aquifer system." (Pg. 15)

Notably, as was pointed out in slide 31 of the NCA presentation, several parties -- not just NCA -- found that CSVM-4 and KMV-1 (in Kane Springs Valley Basin) showed effects resulting from the Order 1169 aquifer test; SNWA, Moapa Valley Water District, US Fish and Wildlife Service, National Park Service, the Center for Biological Diversity, and NCA all made similar findings. Additionally, the values for several wells including CSVM-4 were then plotted against EH-4 for various periods and there was a high correlation between all the carbonate wells within the LWRFS plotted against EH-4, indicating a high level of hydraulic connectivity across the basins

within the LWRFS; CSVM-4 vs. EH-4, for example, resulted in a value of 0.82 – a high correlation indeed, taken from the SNWA Initial Report.<sup>21</sup>

But SNWA did *not* calculate a correlation between EH-4 and KMW-1. NCA’s experts, however, did perform a visual comparison of the hydrographs for KMW-1 and CSVM-4 (as the correlation had been made between CSVM-4 and EH-4), and the hydrographs were *virtually identical*. Slide 33 of NCA’s presentation demonstrated the similarity, and the testimony of Robert Coache on this topic cemented the analysis by estimating the R<sup>2</sup> value to be greater than 0.9, which Mr. Coache explained, “indicates a high correlation between KMW-1 and carbonate wells in the Lower White River Flow System with a high level of hydrologic connectivity across all of the basins within the Lower White River Flow System.”<sup>22</sup>

Importantly, when SNWA discussed the analysis provided by Mr. Greg Bushner (a Lincoln/Vidler panel expert) and his supposed “science-based reasons” to exclude Kane Springs Valley and northern Coyote Spring Valley from the LWRFS, SNWA concluded that Bushner’s reliance was primarily on new geophysical surveys and “an implausible interpretation of the hydrogeologic framework in which a new, unmapped fault is postulated in northeastern Coyote Spring Valley.”<sup>23</sup> The SNWA analysis points out the errors in the postulated position, including the convenient perpendicular manner in which the new fault would run in comparison to the range-front faults of the Delamar Mountains and Meadow Valley Mountains – and even to the Kane Springs Fault Zone, which is the dominant feature in the area. Also coincidentally, the new, unmapped fault just happens to be coincident with the boundary of the two basins.<sup>24</sup>

SNWA also questions the Bushner analysis based on water quality, geochemical, and stable-isotope data wherein Bushner relied on CH2M Hill (2006), noting that the water that makes up the carbonate comes from many different sources – which is what makes the carbonate aquifer such an issue to begin with. The conclusion, therefore, that Kane Springs Valley water cannot be *identified* does not mean it is not mixed with the other carbonate sources; indeed, it is precisely the opposite. The connection shown by the hydrographs and the gradient from KSV into Coyote Spring Valley demonstrate the connection – and the water eventually makes its way to the MSRA.

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<sup>21</sup> Slide 32, NCA presentation, taken from SNWA Initial Report, Assessment of Lower White River Flow System Water Resource Conditions and Aquifer Response, June 27, 2019, p. 5-12.

<sup>22</sup> Trans. Vol. IX, Oct. 3, 2019, at p.1637, lines 16-20.

<sup>23</sup> SNWA Reb. Report, at Sec. 2.1, p.2.

<sup>24</sup> SNWA Reb. Report, Sec. 2.1 at p. 2.

Also, additional engineering reports known well to Lincoln/Vidler found that significant amounts of water were flowing from Kane Springs Valley Basin, through the carbonate, into Coyote Spring Valley. During cross examination of Lincoln/Vidler's panel, Mr. Bushner confirmed his knowledge of the 2006 CH2M Hill report that found "local groundwater discharge into Coyote Spring Valley" "16,000 acre-feet a year based on analysis by Walker."<sup>25</sup> Mr. Bushner confirmed that if there was such a flow, it was coming "[m]ost likely through the carbonate."<sup>26</sup> Notably, Lincoln County commissioned that report, but – while they did not present it at the Hearings – Lincoln/Vidler did nothing at the Hearing to discredit its findings.

And, perhaps most tellingly, certain stakeholders' counsel took the opportunity to question two of NCA's panel members who were instrumental in the establishment of the Order 1169 pump tests that brought this matter to a head and foreshadowed these proceedings -- former State Engineer Hugh Ricci, and former Deputy State Engineer Robert Coache – asking each what they would have concluded regarding whether to include Kane Springs Valley Basin in the proposed administrative unit that is the Lower White River Flow System *had they known then what they know now* after all these studies have been performed and all these reports have been presented. Given the State Engineer's prior statements in Ruling 5712 expressing concerns nearly twelve years ago about the pumping of Kane Springs Valley Basin water and the potential "effect" on the "White River regional carbonate aquifer system," it is not surprising that the responses were as follows:

Q: (by Greg Morrison) There's a substantial amount of institutional knowledge up there at the table right now. I'll start with Mr. Ricci. If you were the State Engineer October 2019 faced [with] all the evidence we've been looking at for the last couple of weeks, would you include Kane Springs in the management area?

A: (by Hugh Ricci) Hugh Ricci. I would have another option. I could retire. But I will have to go back to 2002, actually 2001, when the hearing was held on Coyote Springs Valley as far as the Southern Nevada Water Authority applications in Coyote Springs Investments. And when that order was written, it did not include Kane Springs at that time. And the reason I think was that there was nothing going on in Kane Springs. Had I had the knowledge that I would today as of a result and had to issue Order 1169 again, Kane Springs would have been included.

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<sup>25</sup> Trans. Vol. VII, Oct. 1, 2019, at p. 1390, lines 9-17.

<sup>26</sup> *Id.* at p. 1391, lines 3-7.



Q: (Mr. Morrison) Okay. Thanks. Mr. Coache, what about you, if I posed the same question. If you were sitting where Mr. Wilson is today, would you want to include Kane Springs in this management area?

A: (by Robert Coache): MR. COACHE: Yes, I would.<sup>27</sup>

In response to follow up questions by Ms. Peterson, the attorney for Lincoln/Vidler, who questioned why “presentation” slide No. 40 of NCA suggested the boundary should remain the same, Mr. Coache explained that perhaps this first phase of the proceedings wasn’t the proper venue for making that determination (to modify the boundary for Kane Springs), but he did not waiver as to whether Kane Springs Valley should be included.<sup>28</sup> Mr. Ricci, too, did not alter his testimony regarding whether – if he knew then what he knows today – he would have included Kane Springs Valley Basin in the Lower White River Flow System for management purposes.<sup>29</sup> Like Mr. Coache, Mr. Ricci was not certain at the time of the testimony whether a ‘boundary’ adjustment was in order during this phase, or during another phase of these proceedings.

Conclusion as to Kane Springs: At this point, it is the position of NCA that, having considered the fundamental purpose of Interim Order #1303 and its direct recommendation that the parties work to inform the State Engineer where they believe the *extent* of the “geographic boundary” of the Lower White River System is, then NCA now takes the position – despite its statement on Slide 40 of its presentation – that the “boundary” should be adjusted to include Kane Springs Valley Basin as part of the management area that is the Lower White River Flow System. There is simply too much data to ignore the hydrologic connection, and too much reason previously given by the State Engineer years ago that foreshadowed that result. The inclusion of Kane Springs Valley Basin makes good scientific sense, and its exclusion is not based on sound principles but rather on past comments made at a time when the parties knew less of the workings of the system than they do today.

**2. The long-term annual quantity of groundwater that may be pumped from the LWRFS is less than 9,318 afa once the Black Mountains Area boundary is adjusted to exclude the NCA production wells.**

NCA has repeatedly endorsed the State Engineer’s figure of 9,318 afa as a supportable figure for the pumping that should continue to be allowed within the LWRFS. It is NCA’s understanding that the figure was arrived at in large part through a determination of the actual

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<sup>27</sup> Trans. Vol. IX, Oct. 3, 2019, at p. 1659, line 24, p. 1660, lines 1-20.

<sup>28</sup> *Id.* at p.1662, lines 7-12.

<sup>29</sup> *Id.* at p. 1661, lines 11-24, p.1662, line 1.

pumping that was occurring in the system, coupled with the finding that the system appears to have somewhat stabilized and is essentially in a recovery mode. If NCA was to be included in the LWRFS, then NCA would still support that figure of 9,318 afa as a figure for sustainable groundwater development in the system.

NCA's contention, however, was predicated on the understanding that the pumping calculation included the groundwater production from the BMA made by NCA for its facilities in the BMA. NCA averages approximately 1,600 afa annually for its pumping to operate its facilities, and has done so for many years. Indeed, NCA is one of few water right stakeholders in this process who has fully perfected its rights by completing its beneficial use and, as a result, has fully certificated water rights. But NCA has demonstrated a strong position that the NCA production wells *are not within the LWRFS as currently proposed*. This position is based in part on science developed by an independent stakeholder – SNWA – who agrees that the ‘boundary’ in the southern part of the BMA is probably “a bit off,” and the NCA’s production wells are probably “not within the LWRFS.”

As a result, should the State Engineer agree with NCA and make the determination to adjust the boundary in the BMA to exclude the NCA production wells from the LWRFS, then the pumping figure attributable to NCA’s production well pumping should be removed from the 9,318 afa number in arriving at the proper amount for actual LWRFS pumping. It would be intellectually inaccurate to ignore this result if the 9,318 figure was arrived at based on the *inclusion* of NCA’s pumping, and then eliminate those wells from the “boundary” but not eliminate the pumping from those wells in the annual amount of sustainable groundwater that can be developed from the LWRFS.<sup>30</sup>

### **3. Lower Meadow Valley Wash water rights should Not be included in the LWRFS**

As was explained by Jay Dixon in NCA’s Rebuttal Report at Sec. 3, pp.3-7, bolstered by NCA’s presentation slides at Nos. 19-24 and his accompanying testimony<sup>31</sup>, the geology of the Lower Meadow Valley Wash (“LMVal.W”) and the actual water use there does not support its inclusion for several reasons: (a) there is no carbonate pumping occurring in that area (the wells there are shallow, alluvial-depth wells), and thus the “connection” must be inferred but has not been proven, nor has the effect of actual pumping been determined; (b) the depth to the carbonate is great in the LMVal.W, making it difficult to establish a carbonate source of water

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<sup>30</sup> Of course, if the State Engineer does not adjust the BMA boundary and leaves NCA’s production wells inside the LWRFS, there is no reason to reduce this figure from the 9,318.

<sup>31</sup> Trans. Vol. IX, Oct. 3, 2019, at pp.1627-1629.

there<sup>32</sup>; (c) there were no effects from LWRFS pumping observed in groundwater levels; (d) the current pumping in the basin is minimal; and (e) if the water rights are simply *included* in the LWRFS the potential exists for inactive water rights to be given artificial *new life* by virtue of potentially being classified as “carbonate, underground rights” when they have essentially never been pumped or managed in that fashion previously, to the detriment of other LWRFS stakeholders – especially those who have actually put water rights to use.

### FINAL CONCLUSION

For all the foregoing reasons, NCA recommends: (1) the modification of the LWRFS boundary in the BMA in accordance with the recommendation of Mr. Jay Dixon, P.E. as shown on **Map 2**, which would exclude NCA’s production and monitoring wells from the LWRFS; (2) the modification of the LWRFS boundary to include Kane Springs Valley Basin within the LWRFS; (3) the total, annual groundwater development in the LWRFS be considered with regard to a figure that is something less than the 9,318 afa determined to be the appropriate amount should NCA’s production wells be excluded from the LWRFS, as would be proper given the circumstances and the evidence; and (4) the Lower Meadow Valley Wash *not* be included in the LWRFS.


Date: December 3, 2019.

KAEMPFER CROWELL

BY: 

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12-3-2019

<sup>32</sup> NCA’s Reb. Report at p. 7 stated that, as explained in Burbey (1997) and shown in geologic sections included in Rowley, et al. (2017), development of a carbonate aquifer source in the LMVal.W (anywhere near the southern boundary would require a well completed to a depth of approximately 4,000 ft., which is highly unlikely.

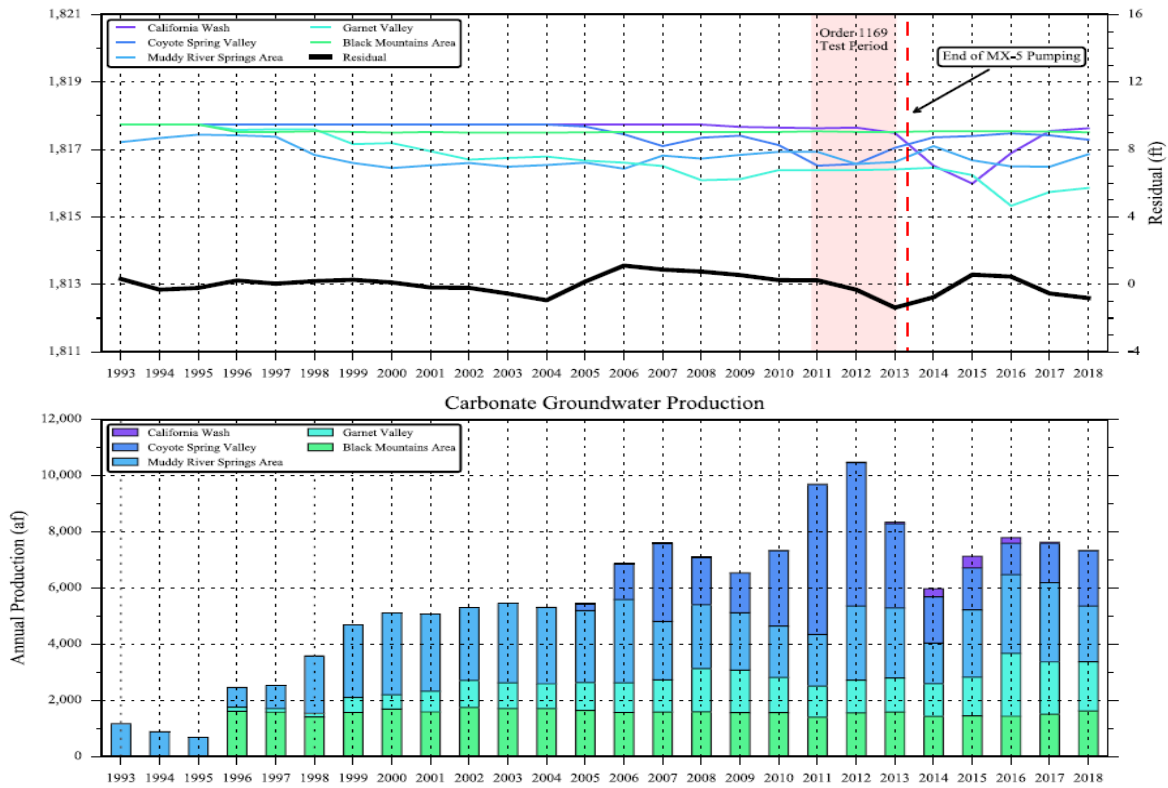


Figure 1. Taken from SNWA 2019b (Figure 3-1). MLR results reflecting decomposed Well EH-4 water levels due to carbonate groundwater production by basin. Results indicate limited to no response at EH-4 due to pumping in the BMA due to NCA (carbonate) wells.

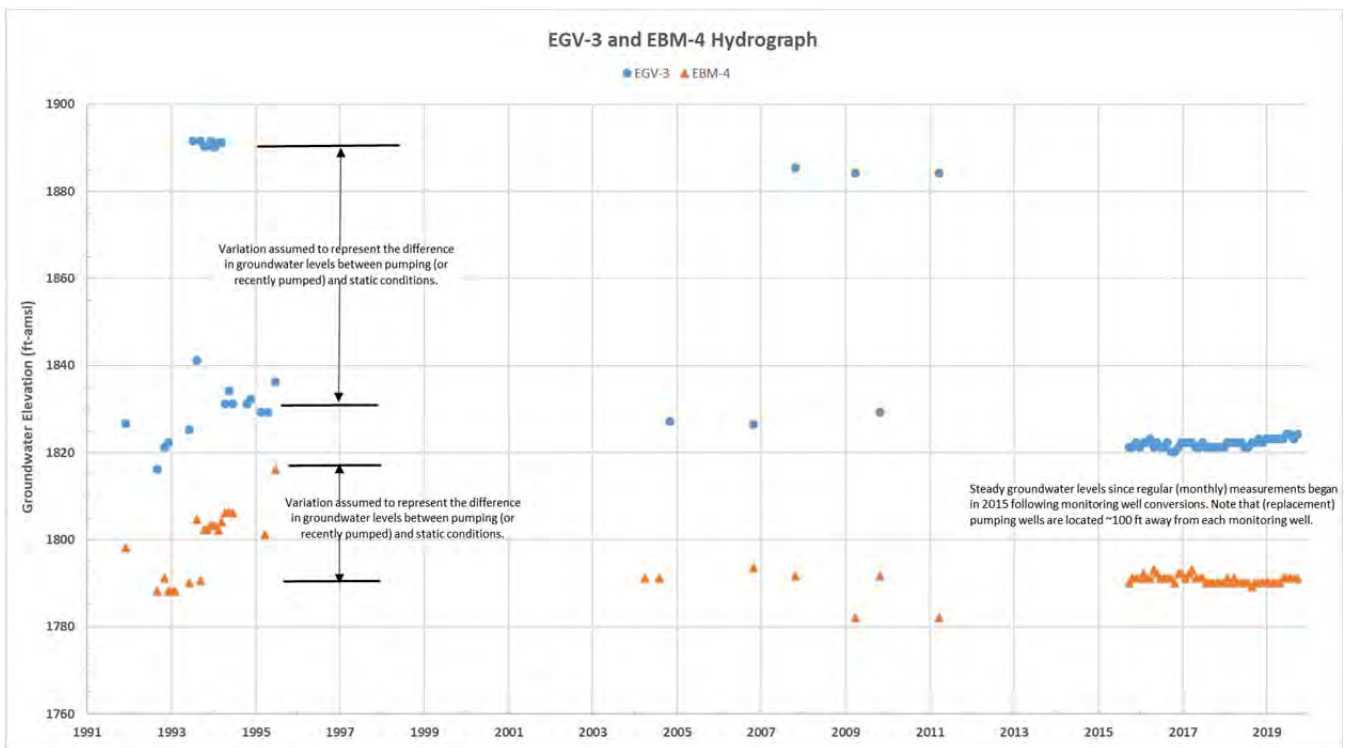
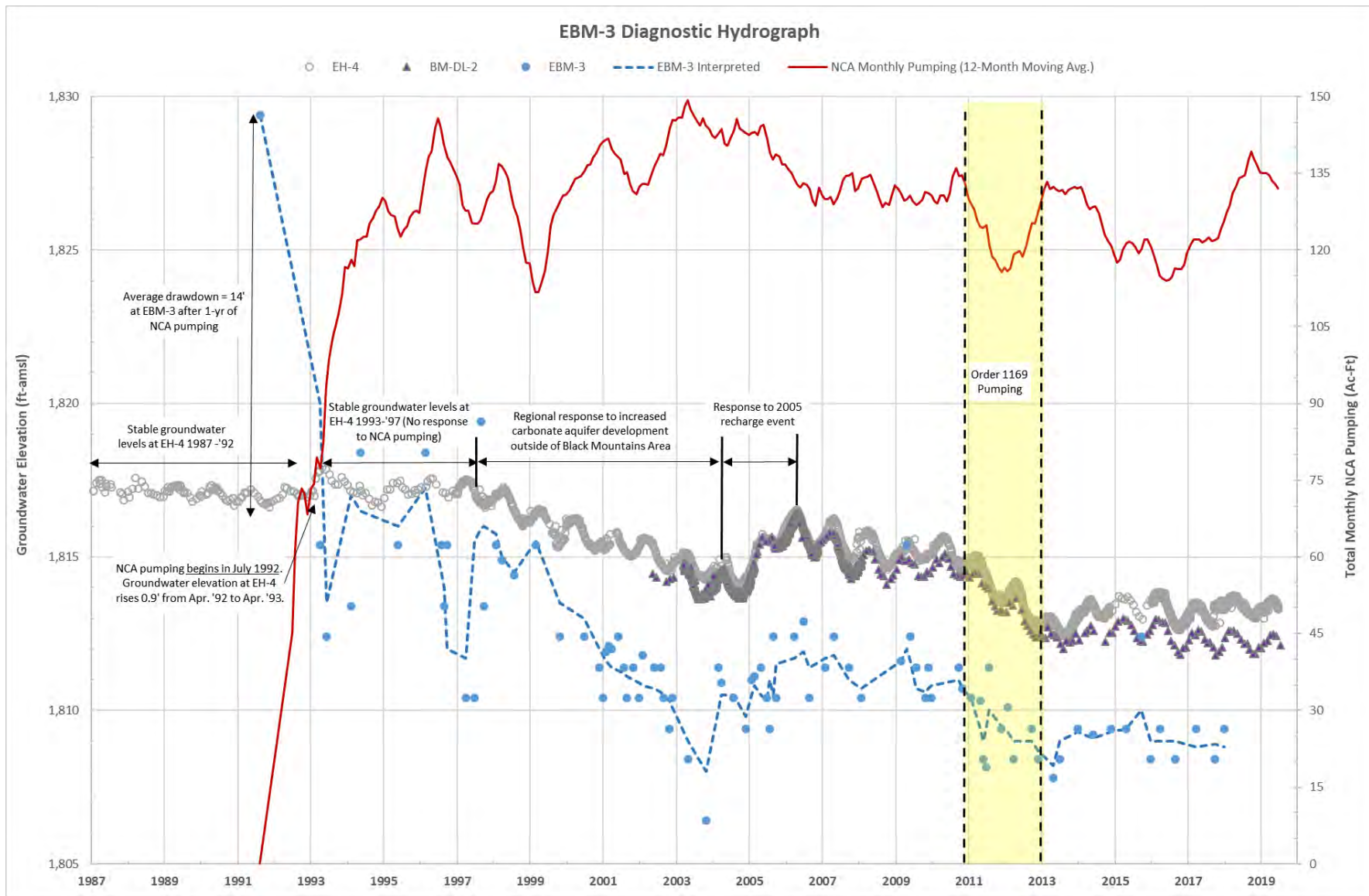
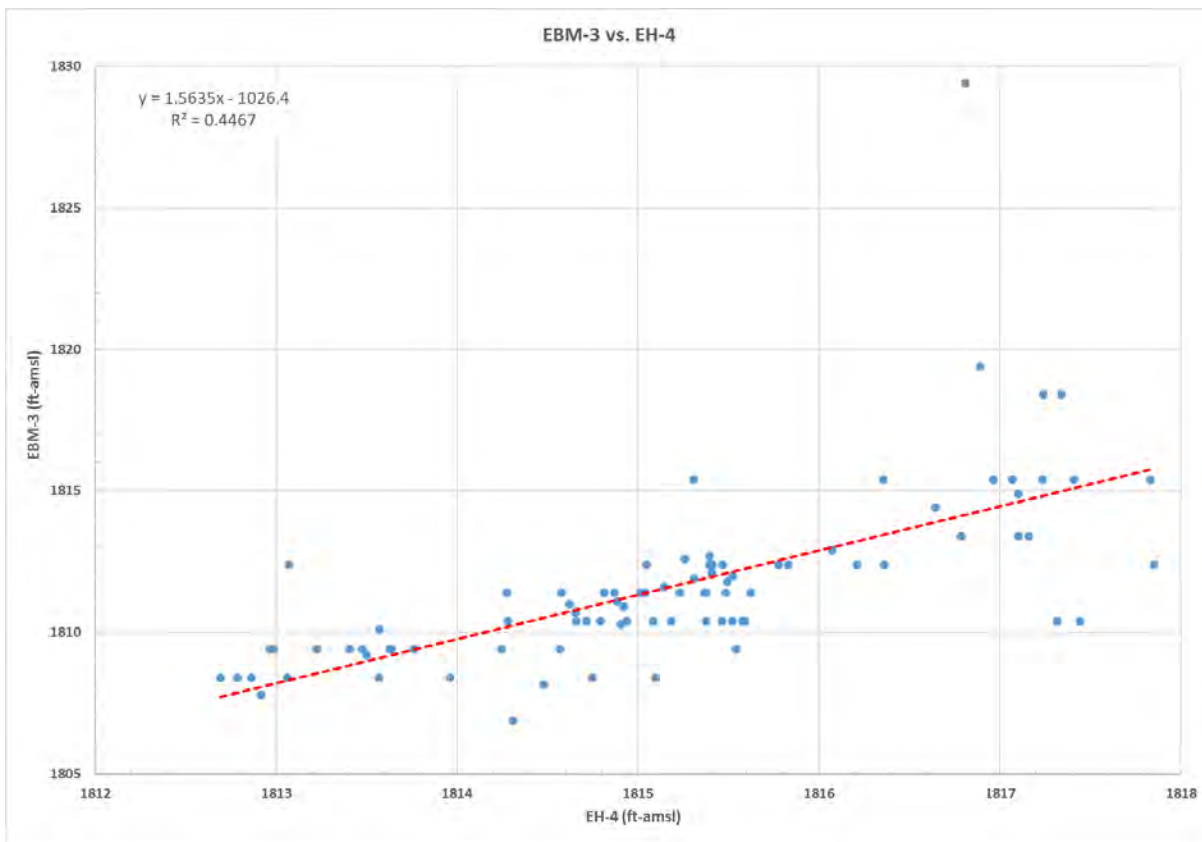


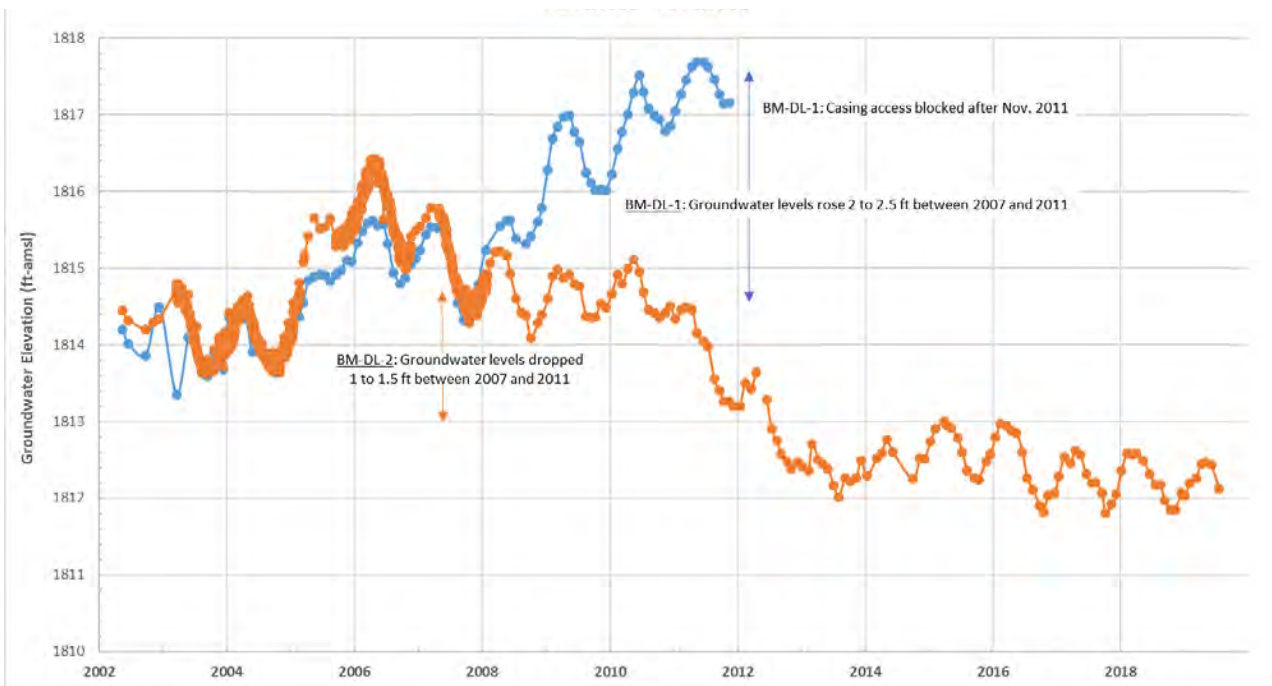
Figure 2. Hydrograph data based on hard-copy and digital reports filed by NCA at NDWR



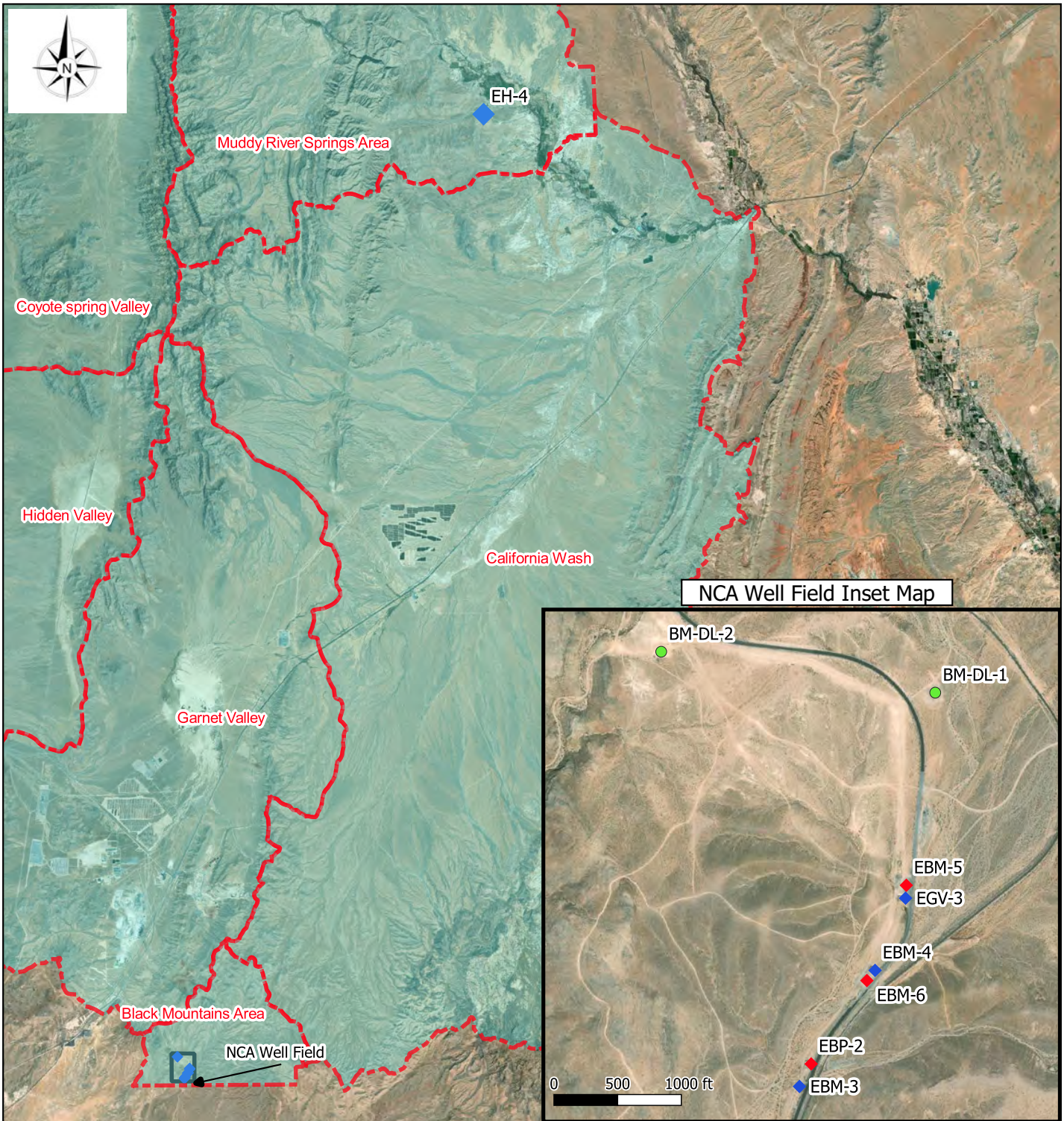
**Figure 3.** Diagnostic composite hydrograph data based on non-pumping filtered water level data from hard-copy and digital reports filed by NCA and USGS at NDWR for EBM-3, water level data for BM-DL-2 and EH-4 as reported on NDWR database and monthly NCA pumping as reported by NCA to NDWR (hard-copy and digital reports).




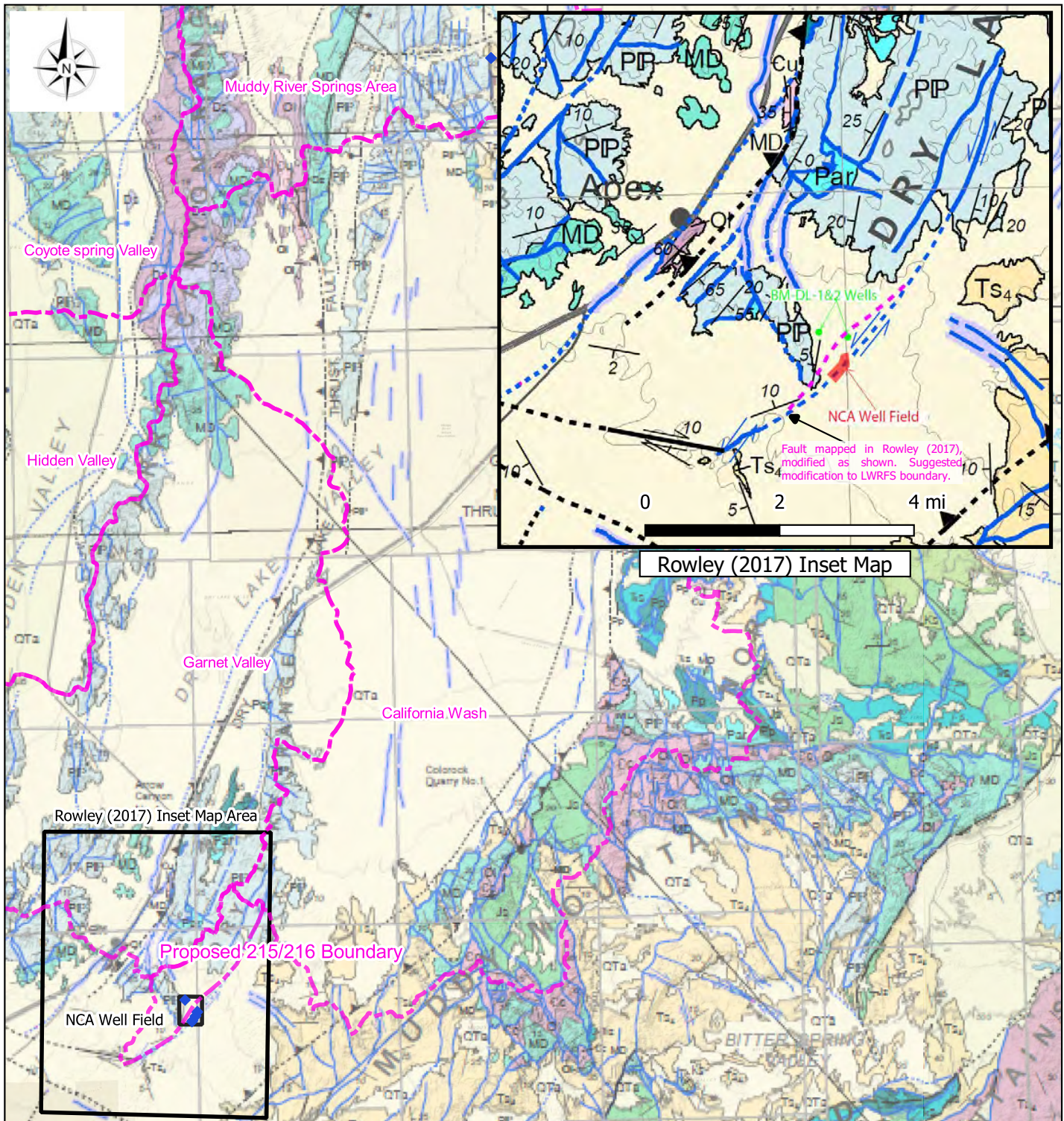
**Figure 4.** Results of the simple linear regression analysis between EBM-3 and EH-4 based on filtered (non-pumping influenced) data from EBM-3.



**Figure 5.** Groundwater elevation (hydrographs) for BM-DL-1 and BM-DL-2.



<p><b>Legend</b></p> <p><b>Regional Boundaries</b></p> <ul style="list-style-type: none"> <li> LWRFS Basins (As Proposed in Order 1303)</li> <li> NDWR Basins 2015</li> </ul> <p><b>Water Levels</b></p> <ul style="list-style-type: none"> <li> Post 1303 Hearing Analysis Wells</li> </ul> <p>NCA Well Field (Vicinity Wells)</p> <ul style="list-style-type: none"> <li> Monitoring</li> <li> Pumping</li> <li> Non-NCA Wells</li> </ul> <p><b>DRG Layers</b></p> <p>Google Eath Aerial</p>	<p><b>Graphic Scale</b></p> <p>0                      5                      10 mi</p>	 <p><b>Nevada Cogeneration Associates</b></p> <p>Order 1303 Follow-Up Review</p> <p><b>Map 1</b></p> <table border="1"> <tr> <td>Date: 12/1/2019</td> <td>Jay Dixon, P.E.</td> </tr> </table>	Date: 12/1/2019	Jay Dixon, P.E.
Date: 12/1/2019	Jay Dixon, P.E.			



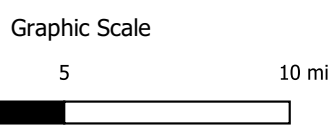
Rowley (2017) Inset Map

**Legend**

- Regional Boundaries**
- LWRFS Basins (As Proposed in Order 1303)
  - Proposed Modification- Basins 215/216
  - NDWR Basins 2015

- Water Levels**
- ◆ Post 1303 Hearing Analysis Wells
  - NCA Well Field (Vicinity Wells)
    - ◆ Monitoring
    - ◆ Pumping
    - Non-NCA Wells

**DRG Layers**  
Rowley (2017) Digitized Map



<b>Nevada Cogeneration Associates</b>	
Order 1303 Follow-Up Review	
<b>Map 2</b>	
Date: 12/1/2019	Jay Dixon, P.E.



## CERTIFICATE OF SERVICE

I hereby certify that I am an employee of KEMPFER CROWELL, and on this date, I caused the foregoing document to be served via electronic transmission as follows:

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Additionally, a the original and a copy of this document was delivered for filing to the Division of Water Resources this same day.

DATED December 3, 2019.

  
Employee of Kaempfer Crowell

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**IN THE OFFICE OF THE STATE ENGINEER  
OF THE STATE OF NEVADA**

DESIGNATING THE ADMINISTRATION OF )  
ALL WATER RIGHTS WITHIN COYOTE )  
SPRING VALLEY HYDROGRAPHIC BASIN )  
(210), A PORTION OF BLACK MOUNTAINS )  
AREA BASIN (215), GARNET VALLEY BASIN )  
(216), HIDDEN VALLEY BASIN (217), )  
CALIFORNIA WASH BASIN (218), AND )  
MUDDY RIVER SPRINGS AREA (AKA UPPER )  
MOAPA VALLEY) BASIN (219) AS A JOINT )  
ADMINISTRATIVE UNIT, HOLDING IN )  
ABEYANCE APPLICATIONS TO CHANGE )  
EXISTING GROUNDWATER RIGHTS, AND )  
ESTABLISHING A TEMPORARY )  
MORATORIUM ON THE REVIEW OF FINAL )  
SUBDIVISION MAPS. /

INTERIM ORDER No. 1303

**NEVADA ENERGY’S CLOSING STATEMENTS**

**I. INTRODUCTION**

On January 11, 2019, the Nevada State Engineer (“State Engineer’s) issued Interim Order No. 1303 setting forth a procedural schedule for briefs, reply briefs and a hearing to address five questions relating to the Lower White River Flow System (“LWRFS”):

- a. The geographic boundary of the hydrologically connected groundwater and surface water systems comprising the Lower White River Flow System;
- b. The information obtained from Order 1169 aquifer test and subsequent to the aquifer test and Muddy River headwater spring flow as it relates to aquifer recover since the completion of the aquifer test;
- c. The long-term annual quantity of groundwater that may be pumped from the Lower White River Flow System, including the relationships between the location of the pumping on discharge to the Muddy River Springs, and the capture of Muddy River flow;
- d. The effects of movement of water rights between alluvial wells and carbonate wells on deliveries of senior decreed rights to the Muddy River;
- e. Any other matter believed to be relevant to the State Engineer’s analysis.

In response to Interim Order No. 1303, Nevada Energy submitted a rebuttal report on August 16, 2016 and participated in the September 23 through October 4, 2019 hearing along with Coyote Springs Investments, LLC (“CSI”); United States Fish and Wildlife Service (“USFWS”);

1 United States National Park Service (“NPS”); Moapa Band of Paiutes (“MBOP”); Southern  
2 Nevada Water Authority and Las Vegas Valley Water District (collectively “LVVWD/SNWA”);  
3 Moapa Valley Water District (“MVWD”); Lincoln County Water District and Vidler Water  
4 Company (collectively “Vidler”); City of North Las Vegas (“CNLV”); Center For Biological  
5 Diversity and Great Basin Water Network (“CBD”; Dry Lake Water LLC, Georgia Pacific  
6 Corporation, Georgia Pacific Gypsum, LLC, and Republic Environmental Technologies  
7 (collectively “GP”); Nevada Cogeneration Associates (“NCA”); Muddy Valley Irrigation  
8 Company (“MVIC”); and Bedrock Limited and Western Elite Environmental Inc. (collectively  
9 “Bedroc”).

10 During the course of the two week long hearing to summarize the parties’ thousands of  
11 pages of briefs, reports and studies on the LWRFS, NV Energy’s position with respect to the  
12 geographic boundaries of the LWRFS changed. As such, at the conclusion of the hearing, NV  
13 Energy requested permission to file a closing statement to address its new position. CSI and  
14 SNWA also requested permission to file closing briefs and draft orders. The State Engineer  
15 granted CSI, SNWA and NV Energy’s request to allow the parties to file written closing  
16 statements. As such, NV Energy hereby files its Interim Order No. 1303 Closing Statement to  
17 address its change in position with respect to the inclusion of Kane Springs Valley into the  
18 geographic boundary of the LWRFS and provide a brief closing statement on the other issues  
19 addressed in in Interim Order No. 1303.

## 20 II. CLOSING ARGUMENT

### 21 **A. The geographic boundary of the hydrologically connected groundwater and** 22 **surface water systems comprising the Lower White River Flow System should** 23 **include Kane Springs Valley.**

24 Through careful review of the reports, evidence and presentations of all the parties, NV  
25 Energy has changed its position and now agrees with MVWD, NPS, USFWS, CBD, and  
26 LVVWD/SNWA’s<sup>1</sup> earlier position that Kane Springs Valley be included in the LWRFS  
27 boundary. Evidence and testimony overwhelmingly support the conclusion that virtually all of  
28 Kane Springs Valley’s groundwater discharge flows downgradient into Coyote Spring Valley.

<sup>1</sup> October 23, 2018 Letter from Colby Pellegrino, SNWA to Jason King P.E.

1 While evidence shows there is faulting that may impede that flow of groundwater from Kane  
2 Springs Valley to Coyote Spring Valley, there is no evidence that this zone is impermeable.  
3 Rather evidence shows that during the Order 1169 pumping test the water levels in the wells in  
4 Kane Springs Valley were lowered, with a similar drawdown slope as other Coyote Spring  
5 Valley wells.<sup>2</sup>

6 Because the aquifer in Kane Springs Valley is clearly connected to the carbonate aquifer  
7 in Coyote Spring Valley, and because pumping in Coyote Spring Valley captures groundwater  
8 from Kane Springs Valley, it is clear that the reverse is also true. Pumping in Kane Springs  
9 Valley will reduce the current contribution of subsurface flow into Coyote Spring Valley, lower  
10 water levels and ultimately deplete the supply of water to the Muddy River Springs Area  
11 (“MRSA”). As there is no doubt that some, if not all, pumping in Kane Springs Valley will  
12 ultimately impact the MRSA, the Muddy River and ultimately the Moapa dace, it is imperative  
13 that Kane Springs Valley be included in the LWRFS Joint Management Area (“JMA”).

14 **B. The information obtained from order 1169 aquifer test and subsequent to the**  
15 **aquifer test and the Muddy River Headwater Spring Flow as it relates to aquifer**  
16 **recovery since the completion of the aquifer test indicates that the water level is**  
17 **reaching a steady state.**

18 Since the Order 1169 aquifer test, evidence shows that maximum recovery was reached  
19 in 2016. Groundwater pumping during this period was primarily from the carbonate aquifer and  
20 averaged about 9,000 acre-feet per year. Since 2016, water levels in MRSA are approaching, or  
21 possibly have reached steady state. Flow at the Warm Springs West gage is staying above the  
22 3.2 cfs trigger established under the 2006 Memorandum of Agreement (“MOA”). The current  
23 pumping regime of 7,000 to 8,000 acre feet annually should be maintained for additional time to  
24 ensure that steady state in the MRSA is reached and a minimum of 3.2 cfs is maintained at the  
25 Warm Springs West gage pursuant to the MOA.

26  
27  
28 <sup>2</sup> NPS Ex. 3 rebuttal page 10-11; USFS Ex. No 5, pg. 22 report

1           **C. The long-term annual quantity of groundwater that may be pumped from the**  
2           **Lower White River Flow System, including the relationships between the**  
3           **location of pumping on discharge to the Muddy River Springs, and the capture**  
4           **of Muddy River flow supports current pumping levels.**

5           Under the current pumping regime, steady-state conditions may already exist in the  
6           MRSA. Water levels and flows of the Muddy River and high elevation springs appear to have  
7           stabilized. Water levels in surrounding basins continue to decline at a very modest rate.

8           The post-Order 1169 analyses demonstrate that steady state conditions are being reached  
9           in the Muddy River Springs Area with 7,000 to 8,000 afy of carbonate pumping. The depletion  
10          of the Muddy River with this amount of pumping appears to be on the order of 2,300 to 3,750  
11          afy, and is not increasing. Using these figures, impacts to the Muddy River appear to be on the  
12          order of 25% to 50% of the amount of groundwater pumped under the current pumping regime.

13          NV Energy agrees with respondents MBOP, CNLV and others that groundwater  
14          pumping at locations further south, toward the southern boundary of the LWRFS, are likely to  
15          have less effect on the Muddy River and springs than pumping in Coyote Spring Valley or the  
16          Muddy River Springs Area.

17           **D. The effects of movement of water rights between alluvial wells and carbonate**  
18           **wells on deliveries of senior decreed rights to the Muddy River.**

19          The movement of a water right from an alluvial well in the MRSA to a carbonate well in  
20          Garnet Valley, for example, would be evaluated by the State Engineer under NRS 533.370(2).  
21          Any change application within the LWRFS involves water already appropriated. Therefore, the  
22          first clause concerning unappropriated water at the source of supply is moot. Whether the  
23          proposed use in a change application conflicts with existing rights has always been evaluated by  
24          the State Engineer as a comparison between the effects on existing rights from pumping at the  
25          original Point of Diversion (“POD”) as compared to effects from pumping on existing rights at  
26          the proposed POD. The preponderance of evidence submitted (e.g., NPS report and rebuttal  
27          reports) definitively show that carbonate pumping captures less Muddy River flow (senior and  
28          existing water rights) than alluvial pumping at all points in time. That is, the proposed POD

1 whether it be in Garnet Valley or California Wash, would impact existing rights less than  
2 pumping from the an existing POD in the MRSA. Whether any impacts to existing water rights  
3 will occur is not necessarily a consideration for a change application. If impacts to existing water  
4 rights occur due to any and all pumping, then the State engineer should consider other  
5 management actions. If no impacts to any existing water rights were allowed, there would be  
6 just one water right in each of Nevada's basins. Therefore, the conflict analysis for such a change  
7 application would be satisfied and the application approved. There is no conflict with existing  
8 groundwater rights because NRS 534.110(4 and 5) allows for reasonable drawdown. Existing  
9 water rights in the carbonate aquifer are in wells generally over 1,000 feet deep. A lowering of  
10 the water table by a few feet due to new pumping is not unreasonable. Finally, any change  
11 application will not prove detrimental to the public interest any more than pumping from the  
12 existing POD. Because change applications are evaluated relative to the existing POD, this  
13 clause is also satisfied.

14 Nevada water law's primary tenets are prior appropriation and beneficial use. NV  
15 Energy's groundwater rights in the MRSA are senior to most groundwater rights in the LWRFS.<sup>3</sup>  
16 A review of a Hydrographic Abstract of the basins will show that most of NV Energy's water  
17 rights are also certificated.<sup>4</sup> When the State Engineer considers public interest, preserving a  
18 consistent interpretation of those primary tenets of Nevada's water law should be paramount.

19 **E. Any other matter believed to be relevant to the State Engineer's analysis.**

20 With all complex water systems, more data is needed in the LWRFS. In order to ensure  
21 that the 3.2 cfs trigger at Warm Springs West gage is not met, one or two more years pumping  
22 at current rates and locations needs to be collected to verify equilibrium conditions in MRSA  
23 have been reached.

24 While the State Engineer does not have jurisdiction over the current MOA that set forth  
25 the 3.2cfs triggers in the MRSA, NV Energy believes that the MOA, or an appropriate agreement  
26 needs to be expanded to include all users in the LWRFS. As Warm Springs West flows are just  
27

28 <sup>3</sup>NSE Exhibit 224.

<sup>4</sup> *Id.*

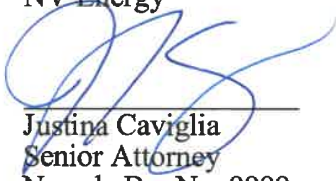
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over 3.2 cfs, there is little room for additional stresses in the system and it is in the State's interest, as well as all of the water users in the LWRFS, to protect the Moapa dace.

**III. CONCLUSION**

The thousands of pages of exhibits and the two week long hearing has provided copious amounts of information for the State Engineer to work with, however, this is still more information that needs to be collected in certain areas of the LWRFS. However, there is substantial evidence that the LWRFS should include Kane Springs. Water levels in the MRSA are reaching steady state at the current pumping regime, however more information is needed to ensure that the 3.2 trigger is not reached. NV Energy looks forward to the future phase(s) of this proceeding.

Respectfully submitted this 4<sup>th</sup> day of December, 2019.

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STATE ENGINEERS OFFICE

IN THE MATTER OF THE  
ADMINISTRATION AND MANAGEMENT  
OF THE LOWER WHITE RIVER FLOW  
SYSTEM WITHIN COYOTE SPRING  
VALLEY HYDROGRAPHIC BASIN (210),  
A PORTION OF BLACK MOUNTAINS  
AREA HYDROGRAPHIC BASIN (215),  
GARNET VALLEY HYDROGRAPHIC  
BASIN (216), HIDDEN VALLEY  
HYDROGRAPHIC BASIN (217),  
CALIFORNIA WASH HYDROGRAPHIC  
BASIN (218), AND MUDDY RIVER  
SPRINGS AREA (AKA UPPER MOAPA  
VALLEY) HYDROGRAPHIC BASIN (219),  
LINCOLN AND CLARK COUNTIES,  
NEVADA.

**CLOSING BRIEF OF SOUTHERN  
NEVADA WATER AUTHORITY AND  
LAS VEGAS VALLEY WATER  
DISTRICT**

COME NOW SOUTHERN NEVADA WATER AUTHORITY ("SNWA") and LAS  
VEGAS VALLEY WATER DISTRICT ("LVVWD") by and through counsel, PAUL G.  
TAGGART, ESQ. and TIMOTHY D. O'CONNOR, ESQ., of the law firm of TAGGART &  
TAGGART, LTD., and STEVEN C. ANDERSON, ESQ., of SNWA, and hereby submits its  
closing brief in this matter.

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## INTRODUCTION

### **I. SNWA and LVVWD Are the Primary Stakeholders in the LWRFS.**

SNWA and LVVWD have substantial interests in the Lower White River Flow System (“LWRFS”). SNWA is a not-for-profit political subdivision of the State of Nevada consisting of seven member agencies (local municipalities and political subdivisions in Clark County) and is a wholesale water provider serving approximately 75 percent of Nevada’s population. SNWA’s water resource portfolio includes approximately 20,000 afa of senior Muddy River decreed water rights, 9,000 afa of groundwater in Coyote Spring Valley, and 2,200 afa of groundwater in Garnet and Hidden valleys. SNWA conducted the Order 1169 pumping test and is one of the primary participants in the 2006 Memorandum of Agreement (“MOA”) concerning the Moapa dace. Clark County designated SNWA’s largest member purveyor, LVVWD, to be the operating entity for the Coyote Springs Water Resources General Improvement District.

If Coyote Springs Investment, LLC (“CSI”) is allowed to develop homes in the LWRFS, LVVWD and Clark County are responsible for providing long-term water service. SNWA and LVVWD, therefore, urge the State Engineer to exercise caution. Compelling evidence proves that only 4,000 to 6,000 afa can be sustainably pumped. Based on the evidence presented, the State Engineer should not approve new subdivisions, or additional long-term pumping, because the public health and safety of a new community cannot depend upon LWRFS groundwater.

### **II. Order 1303 and Previous Factual Findings of State Engineer.**

The State Engineer issued Interim Order 1303 to obtain stakeholder input on four specific factual questions. After factual findings are made on those questions, the State Engineer will use that factual predicate to evaluate groundwater management options for the Lower White River Flow System. This Closing Argument addresses those factual questions.

The State Engineer is not starting from scratch. The record of available information and data is rich, and the 2019 administrative proceeding simply built on the record related to

applications filed over 30 years ago. In 2002, the State Engineer considered applications to appropriate water in Coyote Spring Valley, but issued Order 1169 because the lack of aquifer data prevented informed management. The State Engineer thus required a pumping test in Coyote Spring Valley to stress the aquifer. The pumping test yielded a substantial amount of information, and drastically altered the outlook for groundwater management and availability in the LWRFS.

As chronicled in Order 1303, the State Engineer made sound factual findings based on the Order 1169 pumping test. He found that groundwater rights within the LWRFS should be jointly managed because of a “unique” and “direct hydraulic connection” among basins that encompass over 1,100 square miles. He also determined water was not available for additional applications and denied all the pending applications in the LWRFS through Rulings 6254-6260. The State Engineer also found that:

1. pumping has a direct interrelationship with the flow of the decreed and fully appropriated Muddy River, which are the most senior rights;
2. the Muddy River had a pre-development flow of approximately 34,000 acre-feet annually;
3. pumping from the test caused “sharp declines in groundwater levels and flows in the Pederson and Pederson East springs,” and throughout the LWRFS; and
4. pumping in the LWRFS must be less than occurred during the test, otherwise pumping will conflict with senior Muddy River rights or adversely impact the Moapa dace.<sup>1</sup>

Order 1303 was issued to solicit factual input from experts on discrete issues to build on these foundational findings from Rulings 6254-6260 – not to “start over.”

Most stakeholders that presented evidence understood the work that was completed over the previous 20 years. They agreed that the State Engineer already rejected the water budget approach in favor of using aquifer tests and recovery data that was required by Order 1169. They acknowledged the exceptionally flat gradient and high degree of transmissivity throughout the LWRFS. Importantly, they reached consensus that the prior State Engineer findings were correct, and the lack of aquifer recovery since Rulings 6254-6290 means that existing pumping levels pose

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<sup>1</sup> NSE Ex. 1 at 7-11.

an imminent threat to the endangered Moapa dace and senior water rights in the Muddy River. These parties also agree no new long-term pumping can occur, and a reduction in existing pumping is probably required. Most stakeholders further agree: (1) the precise LWRFS boundary is debatable, but ultimately, a hydrologic connection exists with Kane Springs Valley; (2) the carbonate aquifer is highly transmissive and pumping from virtually all reaches of the LWRFS impact the Muddy River and its springs; (3) pumping, not climate, is the primary factor for the declines; (4) maximum recovery has been reached and declines are once again occurring; and (5) a water user cannot pump “underflow” without capturing the source of supply for the Muddy River.

A few parties are outliers who ignored the prior findings of the State Engineer. For instance, CSI needs more water to build a large community in Coyote Spring Valley and sought to turn back the clock to a time before the Order 1169 pumping test. Without more groundwater pumping, CSI does not have enough water to provide a long-term supply to a new community. Thus, CSI’s experts relied on water budgets, and not aquifer stress and recovery data even though the State Engineer, and virtually all other experts, acknowledged water budgets of little value at this time. And despite widely accepted expert conclusions regarding hydrologic connectivity in the LWRFS, CSI also proffered dubious CSAMT information to *hypothesize* new geologic barriers to flow, and a new compartment for conflict-free pumping, despite the consensus of experts that CSAMT cannot be used to for that purpose.

### **EVIDENCE RELATED TO FOUR FACTUAL INQUIRIES IN ORDER 1303**

#### **I. The Geographic Boundary Defined in Order 1303 for the LWRFS Should Not Be Amended At This Time.**

Order 1303 requested input on the “geographic boundary of the hydrologically connected groundwater and surface water systems comprising” the LWRFS. During the hearing, a consensus of expert opinion emerged on this question. Nearly all parties acknowledged the high degree of hydraulic connectivity within the LWRFS.<sup>2</sup> That unique connectivity is supported by additional

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<sup>2</sup> Hr’g on Order 1303 Tr. vol. 2, 266:3-11, Sept. 24, 2019 (Braumiller); Hr’g on Order 1303 Tr. vol. 3, 509:7-8, Sept. 25, 2019 (Waddell); Hr’g on Order 1303 Tr. vol. 5, 953:6-8, Sept. 27, 2019 (Burns); Hr’g on Order 1303 Tr. vol. 6,

information obtained in the years following the pumping test. Quantitative data assessments indicate that ground-water levels underlying these basins correlate to EH-4, an index well in the MRSA.<sup>3</sup> This is due to the “lithologic continuity”<sup>4</sup> or “uninterrupted, continuous, exceptionally flat gradient . . . from KMW-1 down to EH-4.”<sup>5</sup> Certainly, all the areas within the currently constituted LWRFS are hydrologically connected, and none should be excluded.

**A. New CSAMT Data Does Not Justify Excluding Northern or Western Coyote Spring Valley from the LWRFS.**

CSI and Lincoln/Vidler introduced CSAMT data, erroneously claiming it was the only “new” evidence, to claim pumping can occur within certain parts of the existing LWRFS without conflicting with senior water rights, or impacting the Moapa dace. CSI and Lincoln/Vidler used CSAMT data to identify new faults, took great liberties with the precise placement of the faults, and incorrectly concluded the *new* faults represented impermeable geologic barriers to groundwater flow. CSI, for example, argued that faulting west of MX-5 (the “Highway Fault”) created an east/west barrier to flow, which essentially created a western flow path where approximately 5,000 afa of groundwater can allegedly be pumped without impacting the rest of the LWRFS.<sup>6</sup> Similarly, Lincoln/Vidler contended that CSAMT data showed faulting in northern Coyote Spring Valley that creates an impermeable barrier.<sup>7</sup> These claims are without merit.

CSAMT data was obviously not the only new evidence introduced during the Order 1303 hearing, because new data and analysis were presented by other parties including more recent groundwater level data, correlations in groundwater change, and climate trend data. More importantly, CSAMT data was improperly conflated to identify hydrologic properties that are

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1178:1-18, Sept. 30, 2019 (Lazarus); Hr’g on Order 1303 Tr. vol. 8, 1526:23-27:5, Oct. 2, 2019 (Myers); Hr’g on Order 1303 Tr. vol. 9, 1645:7-10, Oct. 3, 2019 (Coache); Hr’g on Order 1303 Tr. vol. 10, 1763-65, Oct. 4, 2019 (Felling); Hr’g on Order 1303 Tr. vol. 1, 95:14-16, Sept. 23, 2019 (Reich).

<sup>3</sup> Hr’g on Order 1303 Tr. vol. 3, 509:11-12, Sept. 25, 2019 (Waddell); Hr’g on Order 1303 Tr. vol. 6, 1178:1-18, Sept. 30, 2019 (Lazarus); Hr’g on Order 1303 Tr. vol. 5, 903:2-5, Sept. 27, 2019 (Burns).

<sup>4</sup> Hr’g on Order 1303 Tr. vol. 3, 509:12, Sept. 25, 2019 (Waddell).

<sup>5</sup> Hr’g on Order 1303 Tr. vol. 6, 1178:10-11, Sept. 30, 2019 (Lazarus).

<sup>6</sup> Hr’g on Order 1303 Tr. vol. 1, 98:16-99:2, Sept. 23, 2019 (Reich) (*see* CSI Ex. 1 at 48, concluding “groundwater pumping in CSI-1, -3 and -4 will not likely cause impact to groundwater resources in the Muddy River Springs Area.”).

<sup>7</sup> LCV Ex. 2 at 16.

inconsistent with actual empirical groundwater level data that was collected during and after the Order 1169 pumping test. While CSAMT may do a “good job of” identifying faults, “[i]t does not measure hydraulic properties.”<sup>8</sup> CSAMT can be useful for making hypotheses, but such hypotheses must be proven through hydrology.<sup>9</sup> CSI and Lincoln/Vidler ignored known hydraulic properties, and all other experts roundly rejected CSI’s and Lincoln/Vidler’s CSAMT conclusions.

SNWA-LVVWD explained in their rebuttal report and testimony that “the available data do not support the conclusion by Reich and Moran (2019) that monitor wells CSVM-2 and CSVM-4 did not respond to pumping that occurred in the MRSA or eastern portion of Coyote Spring Valley.”<sup>10</sup> To support this claim, SNWA-LVVWD’s experts explained, “[m]onitor well CSVM-2 . . . is within the same structural block as production wells CSI-1, CSI-3 and CSI-4, . . . responds to natural and anthropogenic stresses in the same manner as all the other LWRFS wells completed in the carbonate aquifer.”<sup>11</sup> Other experts agreed with this assessment. Also, water-level records that were needed to support CSI’s claims were “conspicuously absent from their report.”<sup>12</sup> Thus, notwithstanding any CSAMT “hypotheses,” the hydrologic testing shows any new CSAMT faults are permeable and do not act as barriers.<sup>13</sup>

Similarly, Dr. Waddell, on behalf of NPS, explained that CSI and Lincoln/Vidler applied CSAMT in reverse order, as they used CSAMT to identify faults, then assumed the faulting and structures were impermeable.<sup>14</sup> “CSAMT does not provide you information on [permeability]” and “[y]ou just can’t make the assumption because [the structure] has a high resistivity that it has low permeability.”<sup>15</sup> In short, claiming these structures are barriers to flow is “an invalid interpretation.”<sup>16</sup> To test the hypothesis formed from CSAMT data, one “can do aquifer tests,”

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<sup>8</sup> Hr’g on Order 1303 Tr. vol. 3, 533:6-10, Sept. 25, 2019 (Waddell).

<sup>9</sup> *Id.* at 628:5-9 (Waddell).

<sup>10</sup> SNWA Ex. 9 at 6.

<sup>11</sup> SNWA Ex. 9 at 7-8 (*see* Figure 2-4).

<sup>12</sup> SNWA Ex. 9 at 7. Such records do exist and demonstrate there is a clear hydraulic connection between these wells and the rest of the LWRFS from west to east and north to south. SNWA Ex. 9 at 7-9.

<sup>13</sup> Hr’g on Order 1303 Tr. vol. 3, 543:11-12, 628:5-9, Sept. 25, 2019 (Waddell) (making similar conclusions to those SNWA reached in notes 23-25, *supra*).

<sup>14</sup> *Id.* at 533-34 (Waddell).

<sup>15</sup> *Id.* at 534:4-7 (Waddell).

<sup>16</sup> *Id.* (Waddell).

such as Order 1169 in the LWRFS.<sup>17</sup> Aquifer tests are necessary because “when pumping is done and observations are made of discharge . . . your water levels are much more valid.”<sup>18</sup> This data, along with factors such as low “hydraulic gradients across the block,” shows CSI made an “invalid interpretation.”<sup>19</sup> Thus, Dr. Waddell concluded that the supposed barrier was, in fact, *permeable*.<sup>20</sup>

Many experts took exception to CSI’s and Lincoln/Vidler’s CSAMT conclusions. Mr. Lazarus bluntly stated he “disagree[s] with this assertion” of a purported barrier in Coyote Spring Valley and agreed with Dr. Waddell that such conclusions are not “valid conclusion[s] based upon the evidence.”<sup>21</sup> To support his opinion, Mr. Lazarus addressed the hydraulic gradients from KMW-1 to EH4, from CSVN-4 to CSVN-1 (a proxy for MX-5) and from CSVN-1 to EH-4, with EH-4 acting as a sentinel or index well for the MRSA. Calculating the gradient from various LWRFS wells to EH-4, Mr. Lazarus remarked that “the gradient is remarkably flat.”<sup>22</sup> Mr. Lazarus explained, “[w]hatever heterogeneities might be there aren’t affecting the groundwater gradient in those areas” or “interrupting groundwater flow.”<sup>23</sup> Finally, in addressing whether “there are any compartments in Coyote Spring Valley that can be pumped without impacting the Muddy River Springs,” Mr. Lazarus simply stated, “based on the data available to date, no.”<sup>24</sup>

NV Energy’s expert, Mr. Felling, also criticized CSI’s and Lincoln/Vidler’s CSAMT assertions. Regarding CSI’s purported western flow path, Mr. Felling testified that the elevation at CSVN-2 is several feet higher than in the center of the valley. Mr. Felling further explained that the State Engineer already rejected the western flow path because “evidence showed that there was a water level at the south end of Coyote Spring Valley that was higher and it looked like there was a groundwater divide.”<sup>25</sup> He testified that any faulting would only be an impediment, not a barrier to flow, as flow from Kane Springs Valley “makes it into Coyote Spring Valley where it

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<sup>17</sup> *Id.* at 534:8-9 (Waddell).

<sup>18</sup> *Id.* at 629:12-16 (Waddell).

<sup>19</sup> *Id.* at 534:2-7 (Waddell).

<sup>20</sup> *Id.* (Waddell).

<sup>21</sup> Hr’g on Order 1303 Tr. vol. 6, 1176:18-27:3, Sept. 30, 2019 (Lazarus).

<sup>22</sup> *Id.* at 1177:1-18 (Lazarus).

<sup>23</sup> *Id.* at 1165:23-66:1 (Lazarus), 1169:9-24 (Lazarus).

<sup>24</sup> *Id.* at 1220:7-10 (Lazarus).

<sup>25</sup> Hr’g on Order 1303 Tr. vol. 10, 1800:15-23, Oct. 4, 2019 (Felling).



joins the regional flow and heads southward towards the Muddy River Spring.”<sup>26</sup> Similarly, Dr. Myers testified flow from the north “reach[es] southern Coyote Spring Valley and well MX-5 and of course then the Muddy River Springs Area,” the “point being” that despite any geologic structures, flow from Coyote Spring Valley moves to the Muddy River Springs Area.<sup>27</sup>

Order 1303 plainly identifies the initial hydrologic work that was done in the LWRFS, including the significant pumping stress that provided real data on how various parts of the aquifer responded. That evidence, and the new groundwater level data and analysis, proves the CSAMT-based hypotheses of impermeable faults are plainly incorrect. Therefore, neither western nor northern Coyote Spring Valley should be excluded from the LWRFS.<sup>28</sup>

**B. Certain Adjacent Basins Should Be Managed With Recognition That Pumping In Those Basins Can Impact The LWRFS, But Adjacent Basins Should Not Be Added To LWRFS Until Establishment of Groundwater Management Rules.**

Throughout the hearing, various experts identified additional basins for possible inclusion in the LWRFS. The most notable candidates for inclusion were Kane Springs, Lower Meadow Valley Wash and the Las Vegas Valley. The case for inclusion of these basins varies from “compelling” for Kane Springs, to virtually unsupported for Las Vegas Valley. Regardless, as Mr. Felling testified, “the State Engineer could manage [the LWRFS] without including [additional basins] in the [LWRFS] management area” and thus, “at this point in time I don’t think that it’s necessary.”<sup>29</sup> Similarly, Ms. Pellegrino testified, “regardless of the boundary, we know that the State will have to continue managing the adjacent basins to” protect the LWRFS from pumping in those basins.<sup>30</sup> Ultimately, the boundary must be protected from activities that could cause drawdown to propagate to the LWRFS, such as allowing a “pile-up” of “points of diversion along the boundary.”<sup>31</sup> For instance, applications in Kane Springs seek to move pumping to the border

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<sup>26</sup> *Id.* at 1761:4-14 (Felling).

<sup>27</sup> Hr’g on Order 1303 Tr. vol. 8, 1518:9-24, Oct. 2, 2019 (Myers).

<sup>28</sup> Various parties claimed “underflow” could be captured, but no party could identify where underflow could be captured without capturing Muddy River flows or spring sources.

<sup>29</sup> Hr’g on Order 1303 Tr. vol. 10, 1763-65, Oct. 4, 2019 (Felling).

<sup>30</sup> Hr’g on Order 1303 Tr. vol. 5, 876:2-10, Sept. 27, 2019 (Pellegrino).

<sup>31</sup> *Id.* (Pellegrino).

of Coyote Spring Valley. While Kane Springs does not necessarily have to be included within the LWRFS, management of Kane Springs must account for the impacts Kane Springs applications will have on the LWRFS and, in particular, on its senior decreed rights and the Moapa Dace.

Accordingly, even though certain adjacent basins may merit inclusion in the LWRFS at some later time, inclusion now is not necessary. This point is made clearer by the fact the rules for groundwater management in the LWRFS, and when new basins are added to the LWRFS, have not been defined. Groundwater management rules in the LWRFS should not allow more flexibility in moving points of diversion freely from basin to basin. But until such rules are clear, the State Engineer should not create a potential opening for water rights to be moved to existing LWRFS basins from adjacent basins. For example, under the proposed LWRFS boundary, pumping in certain areas of the more tenuously-connected Black Mountains Area will likely not have significant impact on Muddy River springs or river flow. But, if such pumping moved closer to the MRSA, within the LWRFS, there would likely be quicker and more significant impacts.

As the State Engineer's Office has made clear, Interim Order 1303 created a process for addressing only factual issues, and groundwater management issues will be addressed in a subsequent phase of this proceeding. At this time, SNWA agrees that "the boundary defined by the State Engineer is appropriate."<sup>32</sup> But, depending on subsequent management decisions, the State Engineer should consider inclusion of other basins in the next phase of the proceedings.

**C. The Las Vegas Valley Should Not Be Added To The LWRFS.**

The Moapa Band of Paiute Indians ("Tribe") is the primary proponent of including the Las Vegas Valley within the LWRFS. But the Tribe's assertion, generally supported by CSI, is based on little more than conjecture. Burns and Drici explained that "any outflow to Las Vegas Valley," would be from the carbonate aquifer to the basin-fill, which is 3 to 4 kilometers thick," raising the question of "where this groundwater discharges in the Las Vegas Valley,"<sup>33</sup> and would require

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<sup>32</sup> Hr'g on Order 1303 Tr. vol. 5, 953:7-10, Sept. 27, 2019 (Burns).

<sup>33</sup> SNWA Ex. 9 at 12.

“flow upgradient through the Las Vegas Valley Shear Zone”.<sup>34</sup> Dr. Waddell also rejected the Tribe’s argument. “Water has a hard time getting across the Las Vegas Valley shear zone” and that groundwater “has a hard time getting across some of the rock that intervene between the carbonate aquifer and the Colorado River, limiting flow and discharge out of the system.”<sup>35</sup> Similarly, Dr. Myers, for CBD, stated that “for this to actually occur, water would have to go uphill.”<sup>36</sup> And, Mr. Felling, on behalf of NV Energy, testified that he would not recommend “that [the State Engineer] extend the system to Las Vegas Valley” based on the shear zone.<sup>37</sup>

**II. Order 1169 Pumping Test And Subsequent Recovery Of Impacts to Groundwater Levels And Spring Flows**

The second inquiry in Interim Order 1303 related to aquifer recovery since the end of the Order 1169 pumping test. A consensus of experts agreed to the following.

**A. Pumping Test (and Existing Pumping) Impacted Virtually All Areas of the LWRFS.**

The LWRFS basins have been the subject of testing and assessment for nearly two decades. In Interim Order 1303, several foundational findings were made and those findings were confirmed during the recent administrative hearing. For example, “the resulting water-level decline” from the pumping test “encompassed 1,100 square miles and extended from northern Coyote Spring Valley through the Muddy River Springs Area, Hidden Valley, Garnet Valley, California Wash and the northwestern part of the Black Mountains Area.”<sup>38</sup> Data revealed that the pumping test, with concurrent pumping in other LWRFS basins, “caused sharp declines in groundwater levels and flows in the Pederson and Pederson east springs.”<sup>39</sup> Indeed, the Pederson Springs hydrograph

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<sup>34</sup> SNWA Ex. 9 at 12, Figure 2-8.

<sup>35</sup> Hr’g on Order 1303 Tr. vol. 3, 517:15-19, Sept. 25, 2019 (Waddell).

<sup>36</sup> Hr’g on Order 1303 Tr. vol. 8, 1536:21-22, Oct. 2, 2019 (Myers).

<sup>37</sup> Hr’g on Order 1303 Tr. vol. 10, 1764:21-24, Oct. 4, 2019 (Felling).

<sup>38</sup> NSE Ex. 1 at 4.

<sup>39</sup> *Id.* at 5.

in Order 1303 shows the severe decline that occurred during the pumping test.<sup>40</sup> These findings and conclusions were not seriously debated by the experts.

Virtually all experts agree that MX-5 pumping caused corresponding drawdowns throughout the LWRFS carbonate aquifer and the decline of Muddy River spring flows.<sup>41</sup> For example, Mr. Burns testified that pumping at MX-5 caused corresponding drawdowns at MX-4 and CSVM-2 and, in turn, at the index well EH-4 in the MRSA.<sup>42</sup> The high correlation between hydraulic head at EH-4 with discharge at Pederson Spring<sup>43</sup> indicates MX-5 pumping is directly correlated to decreased spring flow for Moapa dace and senior water rights. Even pumping in CSI's western alleged "compartment of no conflict" is hydrologically connected to the Muddy River. Dr. Waddell explained how CSVM-2, which is in that "compartment," has a "gradient for flow back to the north [MX-5]."<sup>44</sup> "[W]ater levels are lower in the central part of the CSV than they are to the south" or in the northern portions.<sup>45</sup> Thus, water in southern Coyote Spring Valley *does not flow to Hidden Valley*, but moves north to MX-5, and then into the MRSA and discharges in the springs.<sup>46</sup>

**B. Aquifer Levels And Spring Discharge Remain Below Pre-Test Levels.**

When the Order 1169 pumping test ended at MX-5, groundwater pumping throughout the LWRFS continued. After the cessation of MX-5 pumping, carbonate aquifer levels began to increase. The recovery, however, did not reach pre-test levels. Throughout these proceedings, many experts offered evidence and testimony that recovery reached its maximum level in

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<sup>40</sup> *Id.* at 5.

<sup>41</sup> *See, e.g.*, Hr'g on Order 1303 Tr. vol. 5, 899:17-900:16, Sept. 27, 2019 (Burns); Hr'g on Order 1303 Tr. vol. 3, 521:5-24, Sept. 25, 2019 (Waddell), Hr'g on Order 1303 Tr. vol. 2, 251:4-52:12 Sept. 24, 2019 (Braumiller), Hr'g on Order 1303 Tr. vol. 6, 1187:11-88:21, Sept. 30, 2019 (Lazarus), Hr'g on Order 1303 Tr. vol. 8, 1526:23-27:5, Oct. 2, 2019 (Myers).

<sup>42</sup> SNWA Ex. 81; Hr'g on Order 1303 Tr. vol. 5, 945:14-46:16, Sept. 27, 2019 (Burns).

<sup>43</sup> *Id.* at 899:17-20 (Burns).

<sup>44</sup> Hr'g on Order 1303 Tr. vol. 3, 543:11-12, Sept. 25, 2019 (Waddell).

<sup>45</sup> *Id.* (Waddell).

<sup>46</sup> *Id.* (Waddell). The only exception to the hydrologically connected LWRFS is CSVM-5 – a high elevation monitoring well in the Sheep Range that required a Special Use Permit for construction. No party argued this source could support a production well, and for good reason. Beyond its location in the Desert Wildlife Refuge and federal management as wilderness area, CSVM-5 has a depth to water of 1,080 ft bgs, making production futile. *See* SNWA Ex. 7 at 3:11-13.

approximately 2016.<sup>47</sup> This was not unexpected, as Order 1303 states that “groundwater levels have not recovered to pre-test levels.”<sup>48</sup> The stunted recovery, of course, has been limited by continued carbonate pumping.<sup>49</sup> And, while the recovery may have peaked and then “leveled off,” the problem persists, as “we’re starting to downward trend again.”<sup>50</sup> Therefore, aquifer and spring flows remain at levels below pre-test levels with virtually no chance to return to pre-test levels.

**C. Drawdown is Still Occurring Due to Ongoing Pumping.**

Groundwater levels and spring flows are continuing to decline in the LWRFS due to ongoing pumping. Mr. Burns testified that since peak recovery, measurements and observations indicate declining trends in monitor wells throughout the LWRFS, such as EH-4.<sup>51</sup> If the potentiometric surface measured by EH-4 water levels continues to decrease, the spring complex discharge will also decrease.<sup>52</sup> Ms. Drici further explained that this indicates we have definitely not reached a “steady state” “because we’re still capturing groundwater from storage.”<sup>53</sup>

Several other experts agreed with SNWA-LVVWD’s conclusion that after achieving maximum post-pumping recovery around 2016, declines continue due to ongoing pumping. For instance, Dr. Waddell testified that hydrographs still show a continuing decline that may continue for many decades.<sup>54</sup> Specifically, he testified that the evidence shows a *declining trend in water levels* in Coyote Spring Valley, Garnet Valley and California Wash, at EH-4, and by implication, at high-elevation springs supplying the Muddy River.<sup>55</sup> Dr. Waddell also agreed that the declines at EH-4 represent corresponding declines throughout the highly-interconnected LWRFS.<sup>56</sup> Dr. Myers indicated that water levels are not “steady but [are] going down.”<sup>57</sup> Dr. Myers reinforced

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<sup>47</sup> See, e.g., Hr’g on Order 1303 Tr. vol. 5, 941:2-7, Sept. 27, 2019 (SNWA); Hr’g on Order 1303 Tr. vol. 8, 1545:22-46:1, Oct. 2, 2019 (Myers); Hr’g on Order 1303 Tr. vol. 9, 1658:6-15, Oct. 3, 2019 (Coache).

<sup>48</sup> NSE Ex. 1 at 8.

<sup>49</sup> Hr’g on Order 1303 Tr. vol. 8, 1545:1-46:1, Oct. 2, 2019 (Myers).

<sup>50</sup> Hr’g on Order 1303 Tr. vol. 3, 519:24-20:4, Sept. 25, 2019 (Waddell).

<sup>51</sup> *Id.* (Waddell).

<sup>52</sup> Hr’g on Order 1303 Tr. vol. 5, 880:6-9, Sept. 27, 2019 (Burns).

<sup>53</sup> Hr’g on Order 1303 Tr. vol. 5, 932:21-22, Sept. 27, 2019 (Drici).

<sup>54</sup> Hr’g on Order 1303 Tr. vol. 3, 642:21-45:23, Sept. 25, 2019 (Waddell).

<sup>55</sup> *Id.* at 644:1-10 (Waddell).

<sup>56</sup> *Id.* at 645:19-46:2 (Waddell).

<sup>57</sup> Hr’g on Order 1303 Tr. vol. 8, 1545:16-46:1, Oct. 2, 2019 (Myers).

his position when he described trends at EH-4 in the post-recovery years as continuing to decline. And, given that Arrow Canyon pumping declined at this time, “there should be a slight uptick in the flows and slight uptick in the water levels[.]”<sup>58</sup>

Even the few experts who initially opined to the existence of a new “steady state” or equilibrium recanted because more observations are needed to know for sure.<sup>59</sup> For instance, Mr. Felling testified, “[c]urrently, we’re still losing water from storage in the [LWRFS],”<sup>60</sup> and, “*I think that water levels are declining everywhere because of groundwater pumping.*”<sup>61</sup>

**D. Climate Is Not A Significant Factor in LWRFS Groundwater Declines.**

Certain parties, primarily CSI and the Tribe, argued that sharp declines in aquifer levels were due to climate, not groundwater pumping. These assertions were refuted by expert testimony, and cannot be squared with findings the State Engineer already made.

SNWA-LVVWD submitted written evidence and testimony that established when “local and dominant natural or anthropogenic stress is imposed on the carbonate aquifer, its impact on water levels and spring flow can be detected on the hydrographs within short time periods, and everywhere within the interconnected carbonate aquifer.”<sup>62</sup> Mr. Burns identified the extraordinary precipitation event of 2005 (natural), and the Order 1169 pumping test and subsequent pumping (anthropogenic), as obvious examples. To test this observation, multiple linear regression (“MLR”) analysis was completed to extract the effects of groundwater pumping from other stresses, including climate.<sup>63</sup> The MLR analysis confirmed that groundwater production from the carbonate aquifer, not climate, is the main cause of the observed long-term declines in carbonate aquifer levels and Muddy River spring flows.<sup>64</sup>

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<sup>58</sup> *Id.* at 1552:20-53:22 (Myers).

<sup>59</sup> *See, e.g.*, NVE Ex. 1 at 2; Hr’g on Order 1303 Tr. vol. 10, 1790:6-10, Oct. 4, 2019 (Felling).

<sup>60</sup> Hr’g on Order 1303 Tr. vol. 10, 1783:7-8, Oct. 4, 2019 (Felling).

<sup>61</sup> *Id.* at 1812:1-2 (Felling) (emphasis added).

<sup>62</sup> SNWA Ex. 9 at 16.

<sup>63</sup> *Id.*

<sup>64</sup> *Id.*

A few experts expressed opinions regarding limitations or misapplication of SNWA's MLR method, but other experts supported the MLR analysis.<sup>65</sup> Mr. Felling recognized the importance of MLR as a critical piece of new evidence and analysis because it "goes to the question . . . none of the other parties tried to answer" and is "important for showing the effects of pumping in all of these different areas."<sup>66</sup> Regardless of critiques of method, the fact remains the pumping test demonstrated the high hydraulic connectivity and flat gradient of the carbonate aquifer.

SNWA-LVVWD's conclusion based on the MLR analysis is consistent with the opinions of the vast majority of experts. Ms. Braumiller and Dr. Mayer, on behalf of FWS, concluded pumping, not climate, is the primary cause of aquifer drawdown and spring flow declines. Dr. Mayer explained emphatically there is "no credible evidence that drought has impacted water levels in the LWRFS."<sup>67</sup> Consistent with this, Dr. Waddell presented compelling evidence that groundwater levels in similarly situated climatic basins are *increasing* where there is no human stress from groundwater pumping, yet the LWRFS aquifer levels continue to decline.<sup>68</sup> Dr. Myers concurred. He testified, "I see no evidence of a 20-year drought in this data" from the Western Regional Climate Center."<sup>69</sup> Dr. Myers directly addressed numerous shortcomings from the conclusion of the Tribe's experts, including the lack of a "direct analysis of climate data" in their report and numerous unwarranted assumptions, such as a purported 40,000 afa of flow to Las Vegas Valley.<sup>70</sup> Similarly, Mr. Felling explained climate is not a significant driver and in wet years, you may see an increase in aquifer levels, but "in dry years you don't see that much of a decline or any I think measurable decline."<sup>71</sup>

Mr. Lazarus echoed these conclusions on behalf of MVWD. He testified, "[i]f there are any seasonal fluctuations during the pumping test, the pressure response from the MX-5 pumping test throughout the highly confined aquifer system . . . had overridden any type of climate

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<sup>65</sup> Hr'g on Order 1303 Tr. vol. 9, 1644:11-14, 1645:7-10, Oct. 3, 2019 (Coache).

<sup>66</sup> Hr'g on Order 1303 Tr. vol. 10, 1785:18-20, 1787:1-2, Oct. 10, 2019 (Felling).

<sup>67</sup> Hr'g on Order 1303 Tr. vol. 2, 322:15-19, Sept. 24, 2019 (Mayer).

<sup>68</sup> Hr'g on Order 1303 Tr. vol. 3, 574:4-82:23, Sept. 25, 2019 (Waddell).

<sup>69</sup> Hr'g on Order 1303 Tr. vol. 8, 1508:20-24, Oct. 2, 2019 (Myers).

<sup>70</sup> *Id.* at 1534:17-36:10 (Myers).

<sup>71</sup> Hr'g on Order 1303 Tr. vol. 10, 1772:1-8, Oct. 4, 2019 (Felling).

response.”<sup>72</sup> Mr. Lazarus testified that the stable groundwater levels during drought periods “contradict[] the idea that the declining water levels during the test were normalizing after 2004-2005.”<sup>73</sup> Further,

during the 1169 pumping test . . . we had rapid drawdown in CSVM-4 despite normal or near normal Palmer Drought Severity Index climate indicators here, [s]o while we’re seeing the PDSI rise, we’re seeing . . . the most rapid drawdown in the CSVM-4 hydrograph, and that’s during the pumping test.<sup>74</sup>

In addition, “we’re seeing the Palmer Drought Severity Index drop while water levels in CSVM-4 are increasing.”<sup>75</sup> Climate simply cannot explain the drastic drawdown during the pump test and corresponding moderation in trend that has happened since the pump test.

Overwhelming evidence supports the State Engineer’s prior finding of fact that pumping “caused sharp declines in groundwater levels and flows in the Pederson and Pederson East Springs.”<sup>76</sup> Further, since the State Engineer can only control pumping, not the weather, groundwater pumping should remain the primary consideration for LWRFS management.

**III. No Pumping Can Occur In LWRFS Without Conflicting with Senior Decreed Rights, And Only 4,000-6,000 AFA Of Pumping Can Occur Without Harming Moapa Dace.**

The third factual inquiry the State Engineer sought input on was “[t]he long-term annual quantity of groundwater that may be pumped” in LWRFS without capturing Muddy River spring flow, or river flow.<sup>77</sup>

**A. LWFRS Groundwater Pumping Captures of Muddy River Flows and Should Be Limited Absent Mitigation.**

In Order 1303, the State Engineer properly indicated it is necessary to “evaluat[e] the amount of groundwater that may ultimately be developed within the LWRFS *without conflicting*

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<sup>72</sup> H’rg on Order 1303 Tr. vol. 6, 1190:8-12, Sept. 30, 2019 (Lazarus).

<sup>73</sup> *Id.* at 1190:24-91:2 (Lazarus).

<sup>74</sup> *Id.* at 1191:3-9 (Lazarus).

<sup>75</sup> *Id.* at 1191:11-15 (Lazarus).

<sup>76</sup> NSE Ex. 1 at 5 (emphasis added).

<sup>77</sup> *Id.* at 11 (emphasis added).



*with senior decreed rights on the Muddy River[.]*<sup>78</sup> All expert witnesses agreed that any and all pumping within the LWRFS captures some amount Muddy River flow. SNWA owns and leases substantial water rights on the Muddy River and the capture of flow has deprived SNWA of use of its senior decreed water rights, resulting in an impermissible conflict with existing rights. Since LWRFS pumping conflicts with senior rights, pumping can only occur with effective mitigation.

The Muddy River Decree is broad, and its plain language is clear. The water rights that are recognized in the decree appropriate the “whole of said River system . . . as a fully adjudicated stream”<sup>79</sup> The Decree “*absorbs and exhausts all of the flow of the said stream, its sources of supply, headwaters and tributaries during the entire year[.]*”<sup>80</sup> The Muddy River Decree appropriated *all sources of its supply* to senior vested water rights, and those sources of supply include the LWRFS carbonate aquifer and the springs. The 1920 Decree *is not capped at 34,000 afa.*

SNWA submitted substantial evidence that the capture of flow has already conflicted with its senior decreed rights, and any future pumping will continue to conflict with senior vested rights. Capture occurs through carbonate and alluvial pumping. SNWA identified the “Muddy River Flow Deficit” is caused by that groundwater pumping. Prior to groundwater development in the LWRFS, Muddy River flows were approximately 34,000 afa.<sup>81</sup> Since groundwater development began, Muddy River flows have declined to under 29,000.<sup>82</sup> The “Muddy River Flow Deficit” calculated the difference between predevelopment flows and annual post-development flows.<sup>83</sup>

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<sup>78</sup> NSE Ex. 1 at 11 (emphasis added).

<sup>79</sup> NSE Ex. 333 at 6:13-7:7; *see also* NRS 533.0245 (The State Engineer shall not carry out his or her duties pursuant to this chapter in a manner that conflicts with any applicable provision of a decree or order issued by a state or federal court”).

<sup>80</sup> *Id.* at 15 ¶ 8 (emphasis added). The Muddy River Decree court created an upper and lower division to the river. NSE Ex. 333 at 6:13-21; *see* SNWA Ex. 7 at 7-2, figure 7-1. While upper division water rights might be impacted from decreased flows, there is no evidence of conflict as these rights can be fully utilized and placed to beneficial use. Hr’g on Order 1303 Tr. vol. 5, 939:21-24 (Burns). However, decreased flows in the river are conflicting with the beneficial use of water in the lower division. Within the lower division, MVIC “acquired . . . all the waters of said Muddy River, its head waters, sources of supply and tributaries,” and “the stockholders of said Company are the equitable owners of rights to use said waters in this decree[.]” NSE Ex. 333 at 19. SNWA is a significant shareholder of MVIC, and beneficially uses substantial water rights. SNWA Ex. 7 at 7-1 to 7-3.

<sup>81</sup> NSE Ex. 1 at 7.

<sup>82</sup> Hr’g on Order 1303 Tr. vol. 5, 942:4-6, Sept. 27, 2019 (Burns); *see also* SNWA Ex. 7 at 5-4.

<sup>83</sup> *See* SNWA Ex. 7, Figure 5-3.

This difference represents the impacts from pumping that are conflicting with SNWA's rights because SNWA is being deprived of the full beneficial use of its senior water rights at significant costs.<sup>84</sup>

Given the high degree of connectivity throughout the system, confirmed by qualitative and regression analyses, there is no location in the LWRFS where pumping can occur "without having some effect at EH-4 and, of course, the proportional effect at the springs."<sup>85</sup> SNWA-LVVWD demonstrated that impacts from alluvial pumping are 1:1 and impacts from carbonate pumping take longer to manifest but also are 1:1. Experts debated this exact ratio, but all agreed that LWRFS carbonate and alluvial pumping in the MRSA capture Muddy River flow. No party has identified a legitimate location in the carbonate aquifer where pumping can occur without negatively impacting the Muddy River springs or flows. Dr. Myers agreed with this assessment.<sup>86</sup> Similarly, Mr. Felling testified that alluvial pumping captures Muddy River flows at nearly a 1:1 ratio and that carbonate pumping captures spring flows, although not necessarily at the same rate as alluvial capture. Mr. Felling also acknowledged existing pumping captures approximately 2,300-3,750 afa to the Muddy River Flow, and thereby conflicts with senior decreed rights.<sup>87</sup>

Mr. Lazarus acknowledged that alluvial wells have a direct hydrologic connection with the Muddy River and directly capture Muddy River flows, and carbonate pumping results in some spring depletion.<sup>88</sup> Similarly, Mr. Coache and Mr. Ricci noted there was no practical way to pump carbonate "without detrimental impacts to the Muddy River Springs area."<sup>89</sup> Dr. Waddell testified that his initial assessment of allowable pumping did not consider impacts to senior water rights. When he considered the Muddy River Flow Deficit, he supported a prohibition on any additional pumping, and concluded long-term pumping cannot be above 9,318 afa.<sup>90</sup>

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<sup>84</sup> Hr'g on Order 1303 Tr. vol. 5, 942 (Burns), SNWA Ex.7 at 7-5 to 7-6. (SNWA has suffered a loss of approximately 12,040 acre feet over the last 10 years, equating to over \$2 million in costs for replacement supplies.).

<sup>85</sup> Hr'g on Order 1303 Tr. vol. 5, 943:22-44:5, Sept. 27, 2019 (Burns).

<sup>86</sup> Hr'g on Order 1303 Tr. vol. 8, 1555:8-56:22, Oct. 2, 2019 (Myers).

<sup>87</sup> Hr'g on Order 1303 Tr. vol. 10, 1815:19-16:8, 1791:5-10, Oct. 4, 2019 (Felling).

<sup>88</sup> Hr'g on Order 1303 Tr. vol. 6, 1149:19-50:3, Sept. 30, 2019 (Lazarus).

<sup>89</sup> Hr'g on Order 1303 Tr. vol. 9, 1646:4-10, Oct. 3, 2019 (Ricci).

<sup>90</sup> Hr'g on Order 1303 Tr. vol. 3, 653:19-54:7, Sept. 25, 2019 (Waddell).

In determining “the amount of groundwater that may ultimately be developed within the LWRFS *without conflicting with senior decreed rights on the Muddy River*,” SNWA-LVVWD urges the State Engineer to give strong consideration to the Muddy River Flow Deficit and recognize the current conflicts caused by existing LWRFS pumping. Pumping, whether from carbonate or alluvial wells, will have approximately 1:1 impacts on the Muddy River springs and flows. While experts debate whether capture is on a 1:1 basis, they acknowledge all carbonate pumping will capture some portion of these flows. Thus, no quantity of long-term pumping can be allowed without needing to mitigate the long-term impacts to senior rights.<sup>91</sup> And, as the State Engineer is fully aware, these means SNWA will also lose the ability to pump its LWRFS rights.

**B. Pumping Limitations Are Required To Protect Moapa Dace.**

The State Engineer asked for input on “the amount of groundwater that may ultimately be developed” without “*adversely affecting the public interest in maintaining the habitat of the endangered Moapa dace*,”<sup>92</sup> but only a few stakeholders submitted any significant evidence regarding the Moapa dace. SNWA-LVVWD’s experts Zane Marshall and Bob Williams are the most experienced individuals in the field of protecting Moapa dace. They testified that 3.2 cfs of flow at the Warm Springs West gauge is necessary to protect the Moapa dace. SNWA-LVVWD’s hydrology experts determined that only 4,000 to 6,000 afa of LWRFS pumping can be allowed without causing Warm Springs West flows to fall below 3.2 cfs.

Protecting the Moapa dace has been a priority in southern Nevada for nearly half a century. Since the 1990s, habitat restoration and other conservation efforts have been completed to increase dace populations. To complete the Order 1169 pumping test, SNWA, FWS, CSI, the Tribe and MVWD entered into the Muddy River Memorandum of Agreement in 2006 (“2006 MOA”). The MOA required such conservation measures, and mandatory pumping restrictions to maintain in-

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<sup>91</sup> Many parties either did not investigate this issue, or provided non-responsive information. *See, e.g.*, Hr’g on Order 1303 Tr. vol. 2, 470:19-24, Sept. 24, 2019 (Braumiller). Others simply analyzed their discrete basin and suggested an amount they could pump without regard to the LWRFS generally, or the Muddy River Flow Deficit, specifically.

<sup>92</sup> NSE Ex. 1 at 11. The Moapa dace is thermophilic minnow that is endemic to the spring waters and the tributary headwaters of the Muddy River. The Moapa dace is protected under the ESA and was listed as endangered in 1967.

stream flows at the Warm Springs West gage at 3.2 cfs.<sup>93</sup> The effectiveness of the conservation efforts depends on a 3.2 cfs flowrate, and the 2006 MOA and Biological Opinion were conditioned on maintaining that flowrate.<sup>94</sup> The pumping test, however, caused flows to plummet, and experts agree the existing MOA pumping restrictions cannot effectively lead to higher flowrates.

Mr. Burns, SNWA-LVVWD's hydrological expert, testified that a maximum of 6,000 afa can be pumped from the carbonate aquifer in the LWRFS without causing flows at Warm Springs West to fall below 3.2 cfs.<sup>95</sup> This conclusion was supported by data from the 1169 pumping test, and expert opinions that flows would have immediately dropped below 3.2 cfs if the test continued.<sup>96</sup> No party seriously disputed this recommendation,<sup>97</sup> and other qualified experts supported pumping restrictions to protect Moapa dace. For example, Dr. Waddell affirmed there is a continuing downward trend in "spring discharge" and indicated that it would be appropriate to set pumping at levels protective of the dace.<sup>98</sup> Dr. Myers testified that no long-term LWRFS pumping can occur if Moapa dace are going to recover. He reaffirmed that a direct correlation exists between carbonate pumping and spring discharge, and that existing pumping is causing flows to decrease.<sup>99</sup> On that basis, he recommended the State Engineer not allow any pumping of the carbonate aquifer.<sup>100</sup> Mr. Felling also testified that "*there is no room for additional stresses in the system at this time.*"<sup>101</sup> Thus, even at current pumping levels, there is a reasonable chance that the 3.2 cfs "will be reached."<sup>102</sup>

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<sup>93</sup> SNWA Ex. 8 at 1-1.

<sup>94</sup> SNWA Ex. 8 at 6-3.

<sup>95</sup> Hr'g on Order 1303 Tr. vol. 5, 921:13-17, Sept. 27, 2019 (Burns).

<sup>96</sup> SNWA Ex. 8 at 7-2.

<sup>97</sup> While CSI's expert Mr. Reich (who is not a biologist and has virtually no experience with the Moapa dace) argues that the flow data at the *Moapa gage* shows increased groundwater pumping can occur without adversely impacting the Moapa dace, he misses the point, as the Moapa gage is *downstream from the high elevation springs which provide most of the habitat for the Moapa dace*. Thus, the Moapa gage's flow data has little value in evaluating the health of the Moapa dace habitat.

<sup>98</sup> Hr'g on Order 1303 Tr. vol. 3, 611:20-17:15, Sept. 25, 2019 (Waddell).

<sup>99</sup> Hr'g on Order 1303 Tr. vol. 8, 1527:20-28:1, 1541:17-42:6, Oct. 2, 2019 (Myers).

<sup>100</sup> *Id.* at 1527:20-28:1 (Myers).

<sup>101</sup> Hr'g on Order 1303 Tr. vol. 10, 1791:18-19, Oct. 4, 2019 (Felling).

<sup>102</sup> *Id.* at 1788:20-24 (Felling).

Evidence indicates that protecting the 3.2 flowrate at Warm Springs West is important for other reasons. First, Mr. Felling warned that “it is absolutely in the state’s interest and all of the water users to protect the Moapa dace.”<sup>103</sup> Dace protection is like Devil’s Hole – if proper water management actions are not taken to protect the endangered fish, “a federal district judge” will be “managing water in Nevada and not the state [engineer].”<sup>104</sup> Second, pursuant to the MOA, if flows drop below 3.2 cfs, mandatory pumping restrictions must occur, even to permanent groundwater uses.<sup>105</sup> Thus, if parcel maps and new long-term pumping are approved, and homes are constructed in the LWRFS, the source of water for those homes can be shut off. Third, not all water users or groundwater pumping is covered by the MOA and related Biological Opinions. Non-parties to the MOA, including the State Engineer, do not have incidental take permits, or ESA coverage. If their actions result in “take” or harm to the Moapa dace or its habitat, those parties are subject to civil and criminal penalties under the ESA.<sup>106</sup> Fourth, if FWS finds that groundwater pumping in the LWRFS by non-MOA parties is reducing spring flow, FWS could impose pumping restrictions beyond those contemplated in the MOA. To avoid these consequences, substantial evidence indicates the State Engineer must restrict LWRFS pumping to no more than 4,000 to 6,000 afa in order to ensure the Warm Spring West flowrate remains above 3.2 cfs.<sup>107</sup>

**IV. Groundwater Rights Cannot Be Moved Between Alluvial and Carbonate LWRFS Wells Without Harming Senior Muddy River Rights Or The Moapa Dace.**

The fourth inquiry in Interim Order 1303 concerned the effect of moving water rights between alluvial and carbonate wells on deliveries of senior decreed rights to the Muddy River.<sup>108</sup> Moving alluvial wells to the carbonate may delay the capture of Muddy River water, but will not

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<sup>103</sup> *Id.* at 1791:22-92:8 (Felling).

<sup>104</sup> *Id.* (Felling).

<sup>105</sup> SNWA Ex. 38 at 10-11.

<sup>106</sup> *Animal Prot. Inst., Ctr. for Biological Diversity v. Holsten*, 541 F. Supp.2d 1073, 1079 (D. Minn. 2008).

<sup>107</sup> In fact, SNWA-LVVWD is the only party that provided a defensible, evidence-based amount of pumping that could conceivably be pumped over the long-term in the LWRFS without harming the Moapa dace.

<sup>108</sup> Evidence clearly proves groundwater production from the alluvial aquifer may not reduce spring flows on which the Moapa dace relies, but it captures the groundwater that would otherwise discharge to the Muddy River, thus depleting the river’s flows. SNWA Ex. 7 at 8-4; Hr’g on Order 1303 Tr. vol. 10, 1812:15-22, Oct. 4, 2019 (Felling).

eliminate the problem.<sup>109</sup> In fact, it creates a new problem, as that pumping will also reduce spring flows, thereby impacting the Moapa dace. Clearly, the Order 1169 pumping test, and modeling performed by NPS, indicate that moving water from alluvial to carbonate wells or from carbonate to alluvial wells will not change the ultimate outcome – harm to senior Muddy River rights and the Moapa dace.<sup>110</sup> Detectable impacts of groundwater production in areas farther away may take longer, but the properties of the aquifer indicate impacts will eventually result in capture of spring discharge and depletions of the Muddy River stream flow.<sup>111</sup> As Mr. Felling testified, “[c]arbonate pumping also will need to be mitigated to the extent of that conflict. Like I said, I don’t think you can pump anything without basically capturing river flow. So, to the extent that there is that conflict, it would need to be mitigated.”<sup>112</sup>

Mr. Lazarus and Ms. Braumiller both concluded that the transfer of alluvial rights to the carbonate aquifer that resulted in increased production from the carbonate aquifer would “increase and accelerate spring depletions.”<sup>113</sup> Similarly, Mr. Coache determined transfers from the alluvial aquifer to the carbonate aquifer for new uses would be detrimental, and alluvial rights should only be moved to upgrade the priority date of existing carbonate pumpage.<sup>114</sup> Thus, changing the location of alluvial or carbonate pumping will not change impacts to the Muddy River and Springs.

### CONCLUSION

The State Engineer should 1) refuse to permit any new long-term pumping 2) deny any subdivision maps in the LWRFS that rely upon groundwater, and 3) reduce current pumping to eliminate current conflicts and avoid negative impacts to the Moapa dace.

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<sup>109</sup> SNWA Ex. 7 at 8-4; Hr’g on Order 1303 Tr. vol. 5, 904:10-15, Sept. 27, 2019 (Burns).

<sup>110</sup> SNWA Ex. 7 at 8-4; Hr’g on Order 1303 Tr. vol. 5, 893:22-94:4, Sept. 27, 2019 (Burns); Hr’g on Order 1303 Tr. vol. 3, 594:12-15, Sept. 25, 2019 (Waddell).

<sup>111</sup> Hr’g on Order 1303 Tr. vol. 5, 904:20-05:6, Sept. 27, 2019 (Burns).

<sup>112</sup> Hr’g on Order 1303 Tr. vol. 10, 1813:16-20, Oct. 4, 2019 (Felling).

<sup>113</sup> Hr’g on Order 1303 Tr. vol. 6, 1150:13-15, Sept. 30, 2019 (Lazarus); *see also* Hr’g on Order 1303 Tr. vol. 2, 272:6-24, Sept. 24, 2019 (Braumiller).

<sup>114</sup> Hr’g on Order 1303 Tr. vol. 8, 1647:9-18, Oct. 2, 2019 (Coache).

DATED this 4 day of December, 2019.

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## CERTIFICATE OF SERVICE

I hereby certify that I am an employee of TAGGART & TAGGART, LTD., and that on this day, I served, or caused to be served, a true and correct copy of the foregoing document via electronic delivery, addressed as follows:

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DATED this 3rd day of December, 2019.

  
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1 have about 1500 Dace right now and as the Hatten, et al paper  
2 showed that increasing flow, even just 10, 20, 30 percent  
3 would result in a consequent increase in habitat, which would  
4 be reflected in Dace.  
5 So it's important to remember that any decrease  
6 in flow is probably going to result in a decrease in habitat  
7 and could potentially harm the Dace. That's it. Thanks.  
8 HEARING OFFICER FAIRBANK: So we have about  
9 another half-hour until we would take a break.  
10 MR. MILLER: Okay.  
11 HEARING OFFICER FAIRBANK: If you want to keep  
12 going.  
13 MR. MILLER: What did we say, 30, 40 minutes?  
14 MR. MAYER: My presentation is probably 30 --  
15 probably 45 minutes maybe, 30 to 45 minutes. So we can start  
16 it and there is a place where I could break.  
17 HEARING OFFICER FAIRBANK: If that works for you.  
18 MR. MAYER: Yeah, sure.  
19 HEARING OFFICER FAIRBANK: Let's do that.  
20 MR. MAYER: Okay. I'm Tim Mayer again. I was  
21 the primary author of our 1303 rebuttal report. That rebuttal  
22 report really focused on the Moapa Band of Paiutes Order 1303  
23 report, their initial report, and it really focused on the  
24 main argument in that report that there is long-term drought

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1 in this region and that this has affected well levels and  
2 spring flows in the Lower White River Flow System and will  
3 continue to do so in the future.  
4 So I don't mean to unfairly single out the  
5 Moapas. They were not the only one that made this argument.  
6 There are several other parties that did, too, but they were  
7 the main proponents of this argument. So I'm focused on their  
8 report.  
9 So the first thing I did in my report is I  
10 presented this figure, which is Figure 1, and this is the  
11 monthly water level record for the carbonate monitoring well  
12 EH-4 from 1987 to 2019.  
13 This is the well that's just south of the refuge  
14 that I showed you in my previous presentation and it's one of  
15 the longer records that we have of carbonate monitoring wells  
16 in this area.  
17 And if we look at this figure just real quickly,  
18 it looks like we have about a ten-year period of fairly stable  
19 water level records in the beginning of the record there.  
20 We have a decline that starts somewhere around  
21 1997 or '98, continues to 2005, then we had widely recognized  
22 wet year response to what was an extraordinarily wet year in  
23 2005. That response continued for a couple years.  
24 Then we continued to decline again. The decline

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1 steepens around 2011, beginning with the -- corresponding with  
2 the aquifer test. That continues until about 2013, the  
3 aquifer test and then the levels come back up somewhat. They  
4 don't come back up to the levels prior to 2010, but they seem  
5 fairly stable for the last few years or so.  
6 So the main question is: How much of this that  
7 we see in this record is attributable to climate and how much  
8 is attributable to pumping?  
9 So what I did in my report, the first thing I did  
10 was I looked at some of the climate data for this area. And I  
11 was a little surprised not to see climate data in the Moapas  
12 report. But they didn't include any, so I looked at climate  
13 Division 3 and Division 4.  
14 We heard about climate division data yesterday  
15 from CSI that's available from the National Atmospheric and --  
16 Oceanic and Atmospheric Administration, NOAA, and it's  
17 available all over the country.  
18 I'm focused on Division 4, which is extreme  
19 southern Nevada. It's just the southern tip of Nevada and  
20 overlays the Lower White River Flow System as it's currently  
21 defined.  
22 And then I also looked at Division 3, which is  
23 just north of the Lower White River Flow System in what is  
24 believed to be the area of recharge for the flow system. And

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1 I looked at both precip data and Palmer Drought Severity Index  
2 data or PDSI.  
3 Now, these are Figures 2 and Figure 4 from the  
4 rebuttal report. This is monthly precipitation totals in  
5 climate Division 3 on the top plot and Division 4 on the  
6 bottom plot. And this is for period 1990 to 2019.  
7 And what you see when you look at this, there's  
8 the monthly precipitation totals plotted and then there's a  
9 moving average, a 12-month moving average, which just helps to  
10 identify the pattern of the data.  
11 And what you see is quite a bit of variability,  
12 especially in the first half of the record. You'll see wet  
13 years, you see dry periods, less of that in the second half of  
14 the record. And, in fact, you may see a little bit of an  
15 increase if you look at the moving averages in monthly  
16 precipitation in the second half of the record.  
17 What we don't see and what I was specifically  
18 looking for is some kind of long-term drying trend or drought  
19 here. I see dry periods, but they're sandwiched between wet  
20 periods and so forth. I don't see any consistent long-term  
21 drying trend in these precipitation data.  
22 Next, I looked at drought indices data for the  
23 Palmer Drought Severity Index. This is, again, Division 3 on  
24 the top plot, Division 4 on the bottom plot. The same period

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1 of record, 1990 to 2019.  
2 I also looked at Palmer Hydrologic Drought Index  
3 for Division 4 and that's plotted on the bottom plot there  
4 along with the PDSI. There was very little difference so I  
5 really didn't do much with that except plot it.  
6 But, again, here, what we see if we look -- step  
7 back and look at this, first of all, let me explain what the  
8 Palmer Drought Severity Index is in terms of units. It's a  
9 standardized index. And so what that means is zero, a value  
10 of zero on the index represents average conditions. It's  
11 neither dry, it's neither wet. And the units of the drought  
12 index can be thought of as standard deviations.  
13 So if you have a value of one, that means that  
14 you are one standard deviation wetter than the average  
15 conditions. All right. And a value of negative one, you're  
16 one standard deviation drier than average conditions.  
17 And so Palmer defined negative 3 or 3 standard  
18 deviations drier than average as severe drought, okay? And  
19 correspondingly, he defined positive 3 or a 3 standard  
20 deviations wetter than average as severe wet conditions. So  
21 that gives you some idea of the relative value of what you're  
22 looking at here in these plots.  
23 So we see -- we go from severe drought to severe  
24 wet, back to severe drought, severe wet. Bounce around a lot,

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1 more so in the first half of the record, but then the second  
2 half of the record. But, again, we don't see any kind of  
3 long-term drying trend or drought in these data.  
4 And even in the second half of the record, which  
5 looks a little bit drier, you still have some wet periods in  
6 there, some average or wet periods, especially one around  
7 the -- in the aquifer test, the time of the aquifer test.  
8 And then I will note that both divisions showed  
9 that it's become severely wet in the last year or so. So  
10 things have gotten wet. We don't see that kind of similar  
11 recovery or that similar trend in the water level data or the  
12 spring flow data.  
13 So next, I looked at well hydrographs for basins  
14 that were close to or adjacent to the Lower White River Flow  
15 System, but basins where there's little or no pumping. This  
16 includes Dry Lake Valley and Delamar Valley.  
17 Delamar Valley is tributary to Coyote Spring  
18 Valley and the Lower White River Flow System and Dry Lake  
19 Valley is just north of Delamar Valley and tributary to  
20 Delamar Valley. And then I also looked at Tule Desert, and  
21 this basin is just east of the Lower Meadow Valley Wash and  
22 the Kane Springs area.  
23 So presumably all these basins are responding to  
24 the same climate signal as what's happening in the Lower White

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1 River Flow System. There's no reason to believe that there's  
2 different climate down in the Lower White River Flow System  
3 from these basins. And these basins have little or no  
4 pumping, as I say, so the well hydrographs in these basins  
5 should represent the climate response.  
6 So this is the -- this is four monitoring wells  
7 monitored by SNWA and Dry Lake Valley for the period 2008 or  
8 2010 to 2019. And if you look at these levels, the top plot,  
9 let's see, on the left there, is stable.  
10 The top right plot shows a slight decline and  
11 then the bottom two plots here show slight increases. So  
12 certainly no consistent decline in these water levels in this  
13 basin.  
14 Next, I dropped down to Delamar basin, which is,  
15 as I said, adjacent to Coyote Spring Valley, just north of it.  
16 And here we see two water levels, the top left plot and the  
17 bottom plot are stable, and then the top right plot shows a  
18 decline, but that really doesn't start until about 2015 or so.  
19 So it doesn't look like a strong drought signal in these water  
20 levels either.  
21 Next, I looked at 13 monitoring wells in Tule  
22 Desert. Now, in the report, I only graphed these four, but I  
23 did discuss all 13 and I included them as exhibits, which I'll  
24 get to when I get to the next slide. But these four were

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1 graphed in the report and you can see here that three of the  
2 wells show increases in water levels and one is stable.  
3 And there's some funny things that happen in the  
4 first part of the record in all these wells, I think maybe  
5 there was adjustment in the elevations or measuring points or  
6 something. But if you look beyond that, basically three of  
7 the four wells are increasing over this period from 2007 to  
8 2019.  
9 Next, this is six more of the 13 wells in Tule  
10 Desert for the same period and all six of these wells show  
11 increases in water levels. And then finally these are the --  
12 and I'm sorry, if I back up there, if you're looking for these  
13 graphs, these are exhibits down here in the lower left-hand  
14 corner.  
15 These were not in the report, these six  
16 monitoring wells and neither were these last three on the left  
17 part of the slide. And those are exhibits, again, listed down  
18 in the lower left-hand corner presentation. But, again, these  
19 are three -- the last three of the 13 monitoring wells that I  
20 looked at, and you see increases in water levels in all these  
21 wells in addition. So certainly no drought signal in this  
22 basin either.  
23 And then finally I looked at -- in the report,  
24 Figure 9, looked at the water levels in CSVN-5, which is the

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1 A. Yes, it is.  
 2 Q. So is this -- And as you sort of peruse this  
 3 document, is this the document that you prepared or had  
 4 prepared for the park service?  
 5 A. Yes. Let me just correct. Some of the sections  
 6 in here specifically related to some of the modeling were  
 7 prepared under my direction dealing with some of the  
 8 simulations being performed. Some of the data tables and  
 9 that sort of stuff they prepared. I did not.  
 10 Q. Okay. And, similarly, do you have a copy of NPS  
 11 Exhibit Number 3?  
 12 A. I do.  
 13 Q. And could you tell us what this document is?  
 14 A. It's entitled National Park Services response to  
 15 July 2019 Interim Order 1303 reports.  
 16 Q. And did you prepare or have prepared at your  
 17 behest this report?  
 18 A. I prepared this report in its entirety.  
 19 Q. Is that your signature on the face page?  
 20 A. It is.  
 21 Q. And, as you look through the document briefly,  
 22 does this represent the document that you prepared for the  
 23 National Park Service?  
 24 A. It is.

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1 MS. GLASGOW: At this time I would actually like  
 2 to introduce in to evidence NPS Numbers 2 and 3.  
 3 HEARING OFFICER FAIRBANK: NPS Exhibits 2 and 3  
 4 are so admitted.  
 5 MS. GLASGOW: Thank you very much.  
 6 Q. (By Ms. Glasgow) So, Dr. Waddell, prior to  
 7 preparing the park services reports for the -- for the Order  
 8 1303, had you worked in the same or had you worked in the  
 9 geographic area before?  
 10 A. Yes.  
 11 Q. Could you tell us what -- a little bit about your  
 12 experience in that area?  
 13 A. I would be glad to. When I completed graduate  
 14 school in 1977, my first job was with the US Geological  
 15 Survey working on a couple of projects at what was called the  
 16 Nevada Test Site at that time. Most of the work involved the  
 17 Yucca Mountain project. My assignments were to look at  
 18 regional geology and hydrology around the test site, prepare  
 19 a computer model of flow in the vicinity of Yucca Mountain  
 20 that basically covered the entirety as it was thought of at  
 21 that time of the Death Valley Regional Flow System. I also  
 22 did research on movement of radionuclides and fractured  
 23 rocks, specifically tufts around Yucca Mountain and  
 24 carbonates that underlie Yucca Mountain to the east or

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1 present to the east.  
 2 I left the USGS in 1985 and went in to  
 3 environmental consulting with a company then called Geotrans,  
 4 which was shortly thereafter purchased by Tetra Tech. I was  
 5 the manager of our Colorado office until 1991 when Tetra Tech  
 6 had joined with IT Corporation to submit a proposal to the US  
 7 Department of Energy to be their environmental resource  
 8 services contractor. And that work was to basically get the  
 9 process going on closing contamination sites at the Nevada  
 10 Test Site.  
 11 And part of that project that I was part of was  
 12 investigation of the underground test sites, all of the  
 13 underground explosion cavities in the vicinity. I was listed  
 14 on that proposal as the key hydrogeologist for that contract.  
 15 We won that work.  
 16 And I was informed about a year later by the DOE  
 17 project manager that the reason that IT Corporation won that  
 18 contract was because of my inclusion on the proposal, my  
 19 experience, that had been gained at the test site in the  
 20 Yucca Mountain area as well as in some of the testing areas,  
 21 underground testing areas.  
 22 And so it started about a 12-year project with IT  
 23 Corporation and later on became Shaw. Basically serving as  
 24 the key hydrogeologist for the underground testing project

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1 that the contractor was a participant in and worked in  
 2 conjunction with numerous national laboratories at the time  
 3 as well as Desert Research Institute and US Geological  
 4 Survey.  
 5 That work continued, like I said, for 12 years  
 6 when the contract was rebid and was a small business set  
 7 aside so our team did not win that work because we were a  
 8 large business. But I still maintained involvement with the  
 9 DOE project as the subcontractor to the company or the  
 10 company team that won that work. And through the years that  
 11 kind of tapered off.  
 12 But as recently as last year I served on a blue  
 13 ribbon peer review committee for modeling that was done for  
 14 closure of the Ranier Mesa corrective action unit. There  
 15 were four peer reviewers and I was the reviewer selected  
 16 based upon my experience with Southwestern US Hydrogeology  
 17 and specifically Nevada Test Site, now Nevada National  
 18 Security Site geohydrology.  
 19 Q. Thank you.  
 20 A. So that describes my experience at the test site  
 21 basically within the Death Valley Regional Flow System.  
 22 In addition, I think, in approximately 2001,  
 23 there was a hearing coming up related to applications in  
 24 Coyote Spring Valley. I was hired by the National Park

1 MX-4, the initiation of MX-5 testing, which increased the  
2 slope of decline. And then shut off of the well, we see  
3 recovery. And then it looks like we've got declining water  
4 levels going on again.

5 And what I was going to try to show on the other  
6 slide was that during the Order 1169 test, pumping stopped  
7 for a fairly short period of time, as I understand, to do  
8 some work on the arsenic treatment facility. But it resulted  
9 in a pretty sharp increase in water levels. And then when  
10 the pumping started again there was decline in one of those.  
11 It shows up nicely in the transducer data. So this is  
12 another part of the signature of the MX-5 pumping.

13 So in these two examples, you see the seasonal  
14 pumping, you see the Order 1169 pumping. MX-4 we saw Arrow  
15 Canyon pumping. I would turn these wells being well  
16 connected with the source of the stresses, those sources  
17 being Muddy River Springs area and -- Well, let's just say  
18 Muddy River Springs area for the seasonal signal and then  
19 MX-5 for the Order 1169. So it's well connected to both  
20 areas.

21 Same kind of story on CSVM-6, shown again pretty  
22 close to MX-5. We see similar types of responses. The  
23 seasonal pumping, the decline prior to initiation of MX-5  
24 pumping, the shutdown of the well about halfway through the

1 low permeability.

2 So here we see seasonal effects and transducer  
3 data indicating connection with the Muddy River Springs area.  
4 We see the increase in slope with MX-5 pumping. We see the  
5 recovery that takes place after that and then a decline  
6 starting to appear in the more recent record. And this well  
7 is quite a bit to the south.

8 I'm not going to present hydrographs from  
9 California Wash or from Garnet, but they have similar  
10 responses to these, showing that those areas are well  
11 connected.

12 CSV-3 -- The other wells that I presented are all  
13 on carbonate. And CSV-3 is completed alluvium. And it shows  
14 similar but attenuated responses. So, fairly flat hydrograph  
15 up until initiation of Arrow Canyon pumping where we start  
16 seeing water levels decline. We see the 2004-2005 wet winter  
17 creating an increase in water levels, the decline in water  
18 levels following that until initiation of MX-5 pumping, at  
19 which time the slope of the decline increases. We see the  
20 recovery from MX-5 towards the end of this record and then  
21 water levels starting to go down.

22 So what this shows us is that at least at this  
23 location the basin fill aquifer is also connected with these  
24 areas. When that means is that if you wanted to go in and

1 testing, recovery at the end of the test. And now it looks  
2 like water levels are starting to decline again after that  
3 recovery.

4 Another well, CSV-2, looks similar to what we saw  
5 with MX-4. So a fairly stable water levels early on, a lot  
6 of noise in the measurements. Measurement protocols were  
7 being worked on, developed, to improve those or perhaps  
8 getting new equipment that responded better. And transducer  
9 data that shows the seasonal effects, shows the 2005 recharge  
10 event, the decline in water levels following that event.  
11 Order 1169 pumping recovery and now water levels appearing to  
12 start downward again.

13 Okay. This is a well, CSVM-2, which is located  
14 quite a bit to the south along the highway. MX-5 is in this  
15 general location. CSI testified that that well penetrates  
16 the fault on the east side of the structural block and that  
17 the reason it's so productive is because of faults or  
18 fracturing faulting -- fracturing associated with that  
19 faulting.

20 And, according to the model of the permeability  
21 associated with faults, that permeability runs parallel to  
22 the strike of the fault, the high permeability. And then the  
23 low permeability perpendicular to it. And, again, this  
24 structural block is one that CSI has interpreted as being a

1 pump from the basin fill in this area, you would obviously  
2 get different responses because of the different properties  
3 in the basin fill compared with the carbonates. But the  
4 water level changes in the basin fill will be transmitted  
5 downward in to the carbonate aquifer. And because of the  
6 connectedness both with Muddy River Springs area and MX-5,  
7 those effects will be transmitted to those areas.

8 CSVM-4 is one that is of interest with respect to  
9 the connectedness with Kane Spring Valley. We still see  
10 similar responses, although, they are greatly attenuated  
11 compared to the others. Now, we see an increase in water  
12 levels associated with 2004-2005 wet winter recharge event.  
13 We see a decline in water levels that kind of matches the  
14 slope that we've seen in others. We see an increase in the  
15 slope associated with Order 1169 pumping. We see recovery  
16 following cessation of MX-5 pumping. And then we see water  
17 levels start to go down again.

18 So I would term this, instead of being well  
19 connected, I say this is connected. We're not seeing the  
20 seasonal effect of the pumping in ET in the Muddy River  
21 Springs area. But we are seeing all the other  
22 characteristics of the hydrographs that we've seen. And, you  
23 know, obviously there are reasons for why this is attenuated  
24 that CSI has discussed and Vidler has in their reports. And

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1 part of the flow system, the BM-ONCO-2 well, which is one of  
2 the clastic aquifers, not the carbonates. Rising water  
3 levels. PW-2 in Basin 221, shorter period of record, but we  
4 see the same kinds of things.

5 Dry Lake Valley, rising water levels. Garden  
6 Valley, rising water levels. And there's some other stuff  
7 going on. I expect the question is going to come up when we  
8 did this did we look at all the wells and did we find  
9 examples of wells going up and wells going down. I did not  
10 go do an exhaustive search for all the wells to see what  
11 their pattern is. But we see many, many instances, at least  
12 on the test site, and almost all the instances of rising  
13 water levels when we look in these other areas, it's less  
14 clear because there aren't as many wells with reducing rising  
15 water levels.

16 So what determines when recharge occurs? What  
17 Tim Mayer testified to yesterday is that there are three  
18 avenues that precipitation can take, I guess, before -- or  
19 two avenues before it becomes recharge. One is that you have  
20 to satisfy the runoff. If it rains, for example, you get  
21 runoff that occurs. And so that water is not available to  
22 infiltrate the soils. It's runoff.

23 The second thing is the water that is available  
24 to infiltrate the soils has to overcome a deficit. We're in

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1 area five radioactive waste management unit in Frenchman.  
2 These were deep borings. He did chloride balance  
3 determinations trying to measure what recharge was in those  
4 environments, and again found the same kind of thing. If you  
5 have a deep boring -- I'm talking hundreds of feet -- below a  
6 channel, he saw some evidence of recharge occurring in that  
7 location because flow was concentrated in the channel, move  
8 out of those areas and just slightly higher elevations but in  
9 non-channel environments recharge was not occurring. This  
10 was over long periods of time. I have forgotten the time  
11 frame for this. But thousands of years.

12 There were also some wells that were put in  
13 Fortymile a little bit further down gradient that were close  
14 enough to the channel that we could see changes in water  
15 levels. There were changes that we saw with the sporadic  
16 runoff events at Fortymile Wash. Fortymile Wash is a huge  
17 channel. If you're driving up to Yucca Mountain, there is an  
18 area that is probably one or two-tenths of a mile across the  
19 channel. You drive down in to it, you drive across the  
20 channel, and then you drive up the other side. There's some  
21 large flows that occur in Fortymile Wash but very  
22 sporadically. So the recharge is a sporadic process.

23 The stable isotopic data indicate that recharge  
24 occurs from cold water, occurs from snow melt, not summer

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1 an arid environment. The soils dry out. The permeability of  
2 soils is very low at low water contents. So you can't get  
3 very much movement until you get some water in the soils so  
4 that infiltration can occur. So that's number two.

5 And then after you overcome that deficit, then  
6 water can start entering the soils and move to deeper,  
7 greater depths and potentially become recharge.

8 I agree with that general model that he  
9 described.

10 And just some studies that I'm aware of related  
11 to this, Dick French, a couple of decades ago, he was a  
12 researcher at Desert Research Institute instrumented some  
13 shallow borings in stream channel Fortymile Wash coming down  
14 off of Paiute Mesa and instrumented some more upland  
15 locations just outside the channel and found that recharge  
16 did sporadically occur with the sporadic runoff events in  
17 Fortymile Canyon in the canyon -- in the wash itself, the  
18 channel deposits. But when you got up to the upland areas,  
19 you did not get recharge occurring. So the precip by itself  
20 was not sufficient to cause recharge, but the collection of  
21 water in to the channels did provide enough water for  
22 recharge to occur -- or infiltration. Not instrument. The  
23 water table.

24 Scott Tyler did a study in association with the

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1 precip. We're looking at a process of having a sufficient  
2 snow pack that you can fill up the pore spaces down to a  
3 depth that prevents evaporation from removing that water.  
4 And admit that that's not a great depth. But then it has to  
5 have enough water to continue downward because as it moves  
6 downward it's going to spread out and you'll end up with  
7 residual water in the soils and in the fractures that can't  
8 move down any further until the next recharge pulse or  
9 infiltration pulse occurs.

10 So the data indicate that as the groundwater  
11 chemistry and other data that the recharge that we're seeing  
12 is winter precipitation is basically the snow melt.

13 MS. GLASGOW: Dr. Waddell, I just wanted to let  
14 you know that you have about 35 more minutes.

15 THE WITNESS: Thank you.

16 MS. GLASGOW: You're welcome.

17 THE WITNESS: And so this information on winter  
18 precip, importance of winter precip is a concept that I've  
19 been aware of for decades or was a fellow researcher at the  
20 USGS that was doing recharge specifically looking at summer  
21 versus winter recharge and mountain environments,  
22 particularly to try to come up with the processes. So I for  
23 a long period of time I've been a believer in, at least in  
24 Nevada, of sporadic recharge associated with winter precip.

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1 avoid spending time, significant time on voir dire and  
2 questioning witnesses. But I would like, if you could for the  
3 record, to briefly describe your background in the areas that  
4 you're about to testify about so that the record's clear on  
5 your level of qualifications.  
6 So can we start with you, Mr. Burns?  
7 ANSWERS BY MR. BURNS:  
8 A. Sure. Well, my background is a hydrologist.  
9 I've worked in this area, in the Great Basin range province my  
10 whole career. I started at the Nevada test site, principal  
11 responsibilities being data acquisition and data analysis. I  
12 worked there for about six years with Ms. Drici and  
13 Dr. Waddell on the test area project.  
14 Subsequent to that, I worked for the State of  
15 Nevada and the Colorado River Commission in doing Colorado  
16 river modeling.  
17 Moved to the Southern Nevada Water Authority  
18 where I continued to do the Colorado River modeling. And then  
19 at about 2002/2001 time frame, worked in earnest on this area,  
20 setting up monitoring networks, doing investigations as we'll  
21 talk about today.  
22 So I've been working not only in this area, but  
23 in the eastern Nevada for other groundwater projects, doing  
24 this of type of work.

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1 Q. Okay. Thank you.  
2 Ms. Drici, could you please describe for the  
3 State Engineer briefly your background and experience?  
4 ANSWERS BY MS. DRICI:  
5 A. Sure. Warda Drici. So my education is in  
6 petroleum engineering and management. However, my whole  
7 experience has been in dealing with the groundwater and  
8 surface water problems.  
9 So I started out by working for the Kansas  
10 Geological Survey for a few years. From there, I moved to  
11 Long Beach to work with First Technology, the people who  
12 drilled all the wells for the MX project in Nevada. I wasn't  
13 there when they did it, though. I came in after.  
14 And then from there, I went to work for  
15 contractors for the Department of Energy. And like Andrew  
16 said, for a while, we worked on the Death Valley model for the  
17 DOE with Andrew and Dr. Waddell, too. And after that, I came  
18 to work with SNW -- for Parson's, but on SNWA projects.  
19 And since 2010, I've been working with SNWA on  
20 projects relating to groundwater and surface water.  
21 Q. Thank you. And did each of you participate in  
22 the development of the report that was submitted to the State  
23 Engineer and has been marked as State Engineer Exhibit  
24 Number 7?

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1 MR. BURNS: Yes.  
2 MS. DRICI: Yes.  
3 MR. TAGGART: And did each of you sign that  
4 report?  
5 MR. BURNS: Yes.  
6 MS. DRICI: Yes.  
7 MR. TAGGART: And then also did each of you work  
8 and contribute to what is marked as SNWA Exhibit 9, and did  
9 you sign that report?  
10 MR. BURNS: Yes.  
11 MS. DRICI: Yes.  
12 MR. TAGGART: And just for the hearing officer,  
13 those reports also include biological resource assessments and  
14 so the biological witnesses that testify on Monday will be  
15 presented. And after they're presented, then we will offer  
16 those into evidence.  
17 HEARING OFFICER FAIRBANK: So the report  
18 regarding the Lower White River Flow System assessments are so  
19 admitted and we will admit the biological reports at that  
20 time.  
21 MR. TAGGART: Okay. Thank you.  
22 BY MR. TAGGART:  
23 Q. All right. So, Mr. Burns, could you describe how  
24 SNWA went about -- how and why SNWA went about developing the

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1 two reports I just described?  
2 ANSWERS BY MR. BURNS:  
3 A. Sure. First, we appreciate the opportunity to  
4 present our summary conclusions in this presentation, and I'll  
5 first just review the general approach to how we went about  
6 analyzing -- collecting, analyzing and reporting on the data  
7 pertinent to this Order 1303.  
8 And the first part of our effort, of course, was  
9 a compilation processing of data, literature review, that sort  
10 of thing. Groundwater levels are from various sources of EWR  
11 website.  
12 Our own data basis is the USGS precipitation data  
13 from NOAA, ground water production data available to everyone  
14 to on NWRD website, and then USGS data surface water, stream  
15 flow data, perennial stream flow data, of course, and spring  
16 data. So that was the first step in our effort.  
17 Next, we performed a quality assessment. So  
18 these are time series data that we've collected and we've  
19 compiled and now we wanted to look at them in a qualitative  
20 sense through time to see what they -- how they informed our  
21 knowledge of the system as behavior. We had -- and I'll go  
22 through a series of these hydrographs, but --  
23 (Reporter interrupted proceedings.)  
24 MR. BURNS: So we looked at winter season



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1 A. Could you say the date again, please?  
2 Q. 10/14/2013. It's on the second page.  
3 A. Yes, I see that.  
4 Q. All right. And that aquifer test, the 1169 test  
5 was conducted between November 2010 and April 2013; is that  
6 correct?  
7 A. The test ended at the end of 2012, but MX-5  
8 pumping continued into April of 2013.  
9 Q. And the transducer was pulled after the end of  
10 all the pumping by about six months?  
11 A. Are you talking from 10/14 to 5/6 -- what's your  
12 reference again?  
13 Q. I'm sorry. When did the MX-5 pumping end?  
14 A. Oh, in April of 2013.  
15 Q. Okay. So between April 2013 and when the  
16 transducer was pulled in 10 of 2013, we're still having the  
17 suspect transducer or the error transducer taking those water  
18 level measurements; is that correct?  
19 A. Well, it looks to me -- yeah, there was a  
20 failure. Failure could not connect the transducer. So for  
21 the period -- I'm just looking at the measurements and there  
22 is data.  
23 So it's likely that once it's failed, we've  
24 installed a new transducer, but supplementing the transducer

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1 record are periodic measurements as well.  
2 Q. Correct. But after 10/2013, it looks like  
3 they're all sounder measurements; is that correct?  
4 A. After -- well, I'm going the wrong --  
5 Q. Yeah, you've got to go up?  
6 A. Okay. All right. That makes more sense now.  
7 Yes, they are E takes, yes.  
8 Q. Okay. And has SNWA indicated in this page from  
9 Nevada Power State Engineer Exhibit 245, what -- how long that  
10 transducer data is suspect for that CSVM-4?  
11 A. It doesn't appear so.  
12 Q. And did you take that transducer failure  
13 information into effect when you were analyzing your  
14 hydrographs?  
15 A. We use -- let me look at the hydrograph, just a  
16 sec. We have both reflected in the record, so there's a  
17 transducer and a periodic measurement.  
18 Q. Right.  
19 A. So --  
20 Q. But there's no -- you know how sometimes you --  
21 like you put on those hydrographs when the 1169 test was or  
22 there's a break because there's no data, that kind of thing.  
23 You don't have anything in your hydrographs that explains this  
24 transducer area of a foot, is there?

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1 A. No.  
2 Q. And has anybody that you've heard testify earlier  
3 this week indicated in any of their hydrographs that they've  
4 accounted for this transducer error failure of a foot or so?  
5 A. Not that I heard.  
6 Q. All right. And the drawdowns that were -- or the  
7 impacts, I guess, or the effects that everybody's been talking  
8 about this week with regard to CSVM-4 are in that one-foot  
9 range; aren't they?  
10 A. Yes.  
11 Q. All right. Directing your attention to Slide 11?  
12 A. Okay.  
13 Q. Was there an R-squared criteria that you were  
14 using?  
15 A. I'm not sure I understand your question.  
16 Q. Was there any kind of target R-squared criteria  
17 that you were trying to get to?  
18 A. Oh, for any -- for CSVM-4, the maximum.  
19 Q. Which is?  
20 A. Well, in this case, .82.  
21 Q. All right. And I know you indicated in your  
22 testimony that you thought maybe that was the maximum because  
23 of the Kane Spring Wash Fault, that there was lower  
24 permeability; is that correct?

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1 A. Well, let me clarify, if you'll indulge me for  
2 just a second.  
3 Q. Just a second.  
4 A. Okay. I'm sorry, as quick as possible. What I  
5 was saying is that the effects that we see at CSVM-4  
6 attenuated by the fabric of the Kane Springs fault structure  
7 or some other lower permeability, relatively lower  
8 permeability feature.  
9 And we use this analysis to estimate what -- the  
10 lag time that those attenuating features have on the response  
11 measured at the well.  
12 Q. And if there was an another new fault in that  
13 area, would your analysis still be the same with regard to the  
14 attenuated effects?  
15 A. Yeah, the fault -- I mean, what's there is there.  
16 Q. (Nodded head.)  
17 A. So whether we map two more faults, five more  
18 faults, this would be the same response.  
19 Q. Okay.  
20 A. You know, what's there is there, right.  
21 Q. What -- is there a scientific reference or where  
22 did you get this idea to do a regression analysis to determine  
23 interconnectedness by comparing water levels between wells?  
24 A. Well, if you remember at the start of our

1 the X axis, one on the Y axis you do see a linear trend  
2 but the scatter is significant that you cannot figure  
3 out what that slope is exactly. That's why I went back  
4 to the measurements made by Eakin. And used that ratio  
5 as an approximation. Because that's the cleanest data  
6 point that we have along that line.

7 MS. COOPER: That's all. Thank you. That's  
8 all for me. Maybe.

9  
10 EXAMINATION

11 BY MR. BENEDICT:

12 Q. Jon Benedict for the record.

13 I'd like to go to the slide 10, please, from  
14 your presentation.

15 So if we back up to CSVM-4, there was some  
16 discussion about the quality of those data with respect  
17 to the transducer.

18 I just want to make sure I understand what  
19 those data are and how they were used, if possible. I  
20 know that on this plot of CSVM-4, I think the blue dots  
21 are manual measurements and the green lines are  
22 transducer?

23 ANSWERS BY MR. BURNS:

24 A. That's correct.

1 know?

2 A. Off the top of my head, generally all of our  
3 wells that we monitor have are equipped with  
4 transducers. Now, I should say when we set the  
5 transducer, we know set depth, we make a manual  
6 measurement at that time. And from that point on, we  
7 can account for a drift in the transducer and we can  
8 account for any stretch in the cable, adjust that  
9 record to those manual measurements, which are good to  
10 about a hundredth of a foot.

11 With respect to our wells, I don't have a count  
12 for you, but, it's our practice to install transducers  
13 in all of them.

14 Q. But can you use the manual measurements to  
15 correct any drift or error in those?

16 A. If it needs it.

17 Q. Okay.

18 A. They are really used almost as a calibration in  
19 some respects. You have a manual measurement but  
20 calibrated E tape, and that is -- so we can compare  
21 that measurement with what the transducer is reading.  
22 And if we find that it's maybe the cable slipped, maybe  
23 it's stretched when it's new, those are instances which  
24 aren't frequent but those are instances, where you

1 Q. So in the correlations and various analyses  
2 that were done, which were used? Were the quota  
3 fusion. Could you describe which data were used and  
4 how?

5 A. For the -- yes, so for correlation analysis,  
6 both were used. So for a given month you will have a  
7 mean daily value. You will have maybe a periodic  
8 measurement as well. And those are averaged. So value  
9 for that month. And these are correlated with either  
10 in our report, EH-4, or MX-4.

11 Q. Do you have a sense of which are likely to be  
12 more accurate or less accurate, based on those issues  
13 that have been described?

14 A. I believe the periodic measurement would be  
15 more accurate. But I see really that they plot --  
16 better put on my spectacles. They plot pretty much on  
17 top of each other. So I wouldn't expect that one would  
18 -- I think they'd be approximately the same.

19 Q. Do -- and this is another question I don't have  
20 an answer to and maybe you can help me with because I  
21 haven't looked at all the data recently. But were all  
22 the wells employing transducers or were there some that  
23 were only water level measurements? What was of the  
24 distribution of those data that were collected? Do you

1 might correct that continuous record. To get it back  
2 on the observed, what we call the observed periodic  
3 measurement.

4 Q. Okay. Thank you.

5 And another question, then on the actual data  
6 for CSVM-4. The response in this hydrograph has been  
7 suggested to be attenuated, and maybe to have lags in  
8 it based on some of the work that's been done here.

9 And I wonder if you would provide an opinion on -- if  
10 that tells us anything about the recharge and/or the  
11 pumping in connection with respect to the fact that  
12 recharge may be coming from somewhere else rather than  
13 where the pumping comes from, and yet what I think I'm  
14 hearing you saying based on the statistics is that the  
15 recharge lag and the lag in the pumping are similar.  
16 Is that wrong, or is that --

17 A. I think they are similar because when we look  
18 at, for example, regression analysis for that well,  
19 which is on the next slide, we see that CSCM-4 or EH-4.  
20 EH-4, you know, represents the recharge in that record  
21 that represents pumping in that area or elsewhere as we  
22 find out now. So to the extent that that well is  
23 correlated with the other well, we find that  
24 connection.

1 boundaries?  
2 A. No.  
3 Q. What distance from the KPW-1 well were you able  
4 to evaluate with the KPW-1 aquifer test for the presence of  
5 boundaries?  
6 A. Well, specifically 143 feet away. But based on  
7 the maps that were submitted by Lincoln-Vidler, the fault  
8 zones that these wells were completed into was expansive and  
9 in to the Coyote Springs Valley.  
10 Q. How long did it take for the effects of pumping  
11 at MX-5 well to reach the CSVM-1 well?  
12 A. I would have to go back and look.  
13 Q. You didn't evaluate that?  
14 A. I know we looked at it. I said I would have to  
15 go back and look.  
16 Q. How long did it take for the effects of the  
17 cessation of the pumping at MX-5 well to reach the CSVM-4  
18 well?  
19 A. We would have to go back and look at the  
20 hydrographs. But, you know, in the system like this, and  
21 it's straightforward in any system that behaves like this,  
22 the further you are from the pumping center, the longer it's  
23 going to take for the effects to hit it.  
24 Q. Any time estimates that you calculated were they

1 MS. CAVIGLIA: No questions.  
2 HEARING OFFICER FAIRBANK: Again, I'll open it up  
3 to the State Engineer and staff. All right. Seeing that we  
4 don't have any questions, Mr. Morrison, you have some  
5 additional time left if you wanted to do any more redirect.  
6 MR. MORRISON: I don't think we need it. Thank  
7 you.  
8 HEARING OFFICER FAIRBANK: Okay. Then we will go  
9 ahead and conclude the presentation by the Moapa Valley Water  
10 District and we'll move on to Vidler. To allow them a little  
11 bit of time to get themselves situated, let's go ahead and  
12 take about a five-minute break and we'll go back on the  
13 record at 1:30.  
14 Actually, let's go back on really quick. One  
15 thing I wanted to provide clarification is Mr. Lazarus was  
16 proffered as an expert in these proceedings and he was not  
17 objected to. He's not -- Mr. Lazarus has not previously been  
18 qualified by the State Engineer's office, so his  
19 qualification will be limited to these proceedings based upon  
20 the absence of any objection. Thank you.  
21 (Break was taken)  
22 HEARING OFFICER FAIRBANK: Let's go ahead and go  
23 back on the record. So this is a continuation of the  
24 hearing. And next up is the Lincoln County and Vidler Water

1 consistent with your estimates of transmissivity and  
2 storativity from the KPW-1 aquifer test?  
3 A. I didn't calculate any time estimates.  
4 Q. Why don't KMW-1 and CSVM-4 wells respond to  
5 fluctuations in pumping at the MX-5 well?  
6 A. They did.  
7 MR. FREHNER: Thank you.  
8 HEARING OFFICER FAIRBANK: City of North Las  
9 Vegas? Seeing no further questions.  
10 Center for Biological Diversity. Seeing no  
11 further questions.  
12 Georgia Pacific Republic.  
13 MS. HARRISON: No further questions.  
14 HEARING OFFICER FAIRBANK: No further questions.  
15 Nevada Cogeneration? Seeing no questions.  
16 Muddy Valley Irrigation Company.  
17 MR. KING: No questions.  
18 HEARING OFFICER FAIRBANK: No additional  
19 questions.  
20 Bedroc?  
21 MS. URE: No.  
22 HEARING OFFICER FAIRBANK: No additional  
23 questions.  
24 And Nevada Energy?

1 Company.  
2 MS. PETERSON: Thank you. Karen Peterson and  
3 Dylan Frehner representing Lincoln County Water District and  
4 Vidler Water Company. And we have a panel of the five  
5 experts that have submitted reports to the State Engineer's  
6 office, either initial reports and/or rebuttal reports. And  
7 I'm going to have -- We are going to present our witnesses as  
8 a panel because we are very concerned that we want to get all  
9 the information in in the allotted time that we have. We  
10 would like to reserve 15 minutes at the end of our  
11 presentation for redirect.  
12 HEARING OFFICER FAIRBANK: Okay. Let's go ahead  
13 and have the witnesses sworn in if we may.  
14 (Five witnesses were sworn in)  
15 MS. PETERSON: Gentleman, I'd ask each of you to  
16 state your full name and spell your last name for the record.  
17 MR. BUSHNER: Greg Bushner, B-u-s-h-n-e-r.  
18 MR. UMSTOT: Todd Umstot, T-o-d-d U-m-s-t-o-t.  
19 MR. CARLSON: Norman Carlson, C-a-r-l-s-o-n.  
20 MR. BUTLER: Thomas Butler. Butler B-u-t-l-e-r.  
21 MR. MOCK: Peter Mock, M-o-c-k.  
22 MS. PETERSON: And I'll just briefly go through  
23 and indicate the witnesses that have been qualified as  
24 experts before by the State Engineer and the areas that

1 foundation for the State Engineer to make changes to his  
2 decisions that are based on a bigger set of data. So I do not  
3 think the 1169 test helps you with the far edges of response.

4 And in fact, I think the data, especially that  
5 timing issue, indicates that it did not make it into the  
6 CSVN-4 KMW-1 winter.

7 So if I'm so tough on sounders and aquifer  
8 testing, I tell you why I like those things. But what is  
9 reliable here? And what I see that is reliable and what I  
10 think is the core of the boundary delineation.

11 There is a catch from water level elevations of  
12 about 1800 to 1820 that we first saw in the CH2M Hill report  
13 from 2006, and I've seen persistently since then. It's this  
14 patch of water levels. It's plus or minus five feet that is  
15 remarkable, and I think that's something that's reproducible.  
16 I think it is reliable.

17 I think you can go out with a sounder and a drill  
18 rig and a survey crew any time you want. My only suggestion  
19 is you have one surveyor go and do all of these well heads  
20 because this is not much a change, but this is the core of the  
21 five and a half or six or seven -- six and a half -- six-basin  
22 selection.

23 The selection engineers make of core depth, I  
24 think, is just plus or minus five feet or 10 feet between 1800

1 So, next, we will go ahead and move to City of North Las Vegas  
2 and to allow some time for everyone to move around and shift.  
3 We'll go ahead and take a quick ten-minute break.

4 (Recess.)

5 HEARING OFFICER FAIRBANK: Okay. We'll go ahead  
6 and go back on the record and start with the City of North Las  
7 Vegas, Ms. Ure.

8 MS. URE: Good morning, Tracy Ure appearing for  
9 the City of North Las Vegas. And today Dwight Smith is going  
10 to be testifying on behalf of the City, so if we could have  
11 him sworn in.

12 DWIGHT SMITH,  
13 called as a witness in this matter,  
14 having been first duly sworn,  
15 testified as follows:

16 DIRECT EXAMINATION  
17 BY MS. URE:

18 Q. Thank you, Mr. Smith. Do you have a copy of the  
19 City's exhibits in front of you have?

20 A. Yes.

21 Q. Can you briefly describe your background which is  
22 presented in your CV at Exhibit 1?

23 A. I'm the principal hydrogeologist with the  
24 interflow hydrology. I have been practicing for a little over

1 and 1820. That's where something is -- very interesting is  
2 going on in the system, and it makes a lot of sense that  
3 that's the core of this. And I would say that is reliable,  
4 and I would stick with that. And that's something you can  
5 work with.

6 Now, we know that the water levels go up over  
7 20 feet as you head into northern Coyote Springs Valley, and  
8 if you head up another seven or eight feet as you go up to  
9 Kane, and I'm convinced by the geophysical data that's been  
10 shown of that normal fault -- I think that's a basin and a  
11 range fault that's -- that Mr. Carlson has found in his  
12 fieldwork.

13 It's just an idea of why would there be a water  
14 level drop? Well, there are these faults and these  
15 juxtapositions that mature.

16 So if you were to make a change to this, you  
17 might want to look at northern Coyote Springs Valley because  
18 of that water level distance and that it doesn't quite fit  
19 with this area of very uniform water levels.

20 But as it stands, the current basin  
21 configuration, I think there's support for it. I haven't seen  
22 reasonable evidence against it.

23 MS. PETERSON: Thank you. Thank you.

24 HEARING OFFICER FAIRBANK: Thank you. All right.

1 30 years. The majority of my work has been in Nevada  
2 throughout my tenure.

3 And it's been my privilege to have testified  
4 before the Nevada State Engineer on 15 prior occasions. So  
5 this is my 16th -- 16th time to be here before you.

6 Q. And have you been previously qualified as an  
7 expert in hydrogeology?

8 A. Yes, in those prior hearings.

9 Q. Okay. And did you submit reports in this case at  
10 Exhibits -- or City of North Las Vegas Exhibits 2, 3, 4 and 7?

11 A. That's correct.

12 Q. And for Exhibit 5, did you assist in drafting of  
13 this report letter as well?

14 A. I did assist Mr. Duval with that cover letter.

15 MS. URE: Okay. Mr. Smith is available for  
16 cross-examination, we will go into his testimony, but we would  
17 like to offer the City of North Las Vegas exhibits.

18 HEARING OFFICER FAIRBANK: And the exhibits are  
19 so admitted.

20 (Exhibit 2 admitted into evidence.)

21 (Exhibit 3 admitted into evidence.)

22 (Exhibit 4 admitted into evidence.)

23 (Exhibit 7 admitted into evidence.)

24

1 But the barometric efficiencies range from near  
2 zero, some wells do not show a barometric response, they tend  
3 to be the ones that have a higher storage coefficient. But  
4 some have sufficient barometric efficiencies. Some as high as  
5 60 percent.  
6 So 60 percent of the barometric -- seasonal  
7 barometric trends is going to be reflected in a seasonal  
8 variance in water levels.  
9 So, before you can go anywhere with trying to  
10 make a case that you do or do not see a pumping signal, first  
11 we have to factor out what we know. And we've done this -- by  
12 the way, this is commonly done when we're looking at trends in  
13 water levels, it's been done for published water level studies  
14 in Death Valley Regional Flow System. This is -- there's  
15 public domain software available to filter out barometric and  
16 earth tide responses.  
17 And in an aquifer system where we're dealing with  
18 very subtle, very small fluctuations in water levels from  
19 wells that do have a barometric efficiency and do respond to  
20 barometric pressure changes and earth-type changes, you need  
21 to filter that out first.  
22 You filter it out and then you're left with okay,  
23 what -- what is the additional response in the system from  
24 pumping, from ET, from recharge, whatever it may be.

1 I'll have a little more to say on that.  
2 And again, my opinion is that we have been in a  
3 dryer climate regime. There's been some attempts to contrast  
4 with other geographic areas, but, you know, as the Death  
5 Valley Regional Flow System is dominated by a much more arid  
6 and southern weighted geographic area down the White River  
7 Flow System far north in latitude.  
8 As we understand the flow system to the desert  
9 again is just a southern arid basin. So you have to be  
10 careful when you're trying to contrast one basin to the next  
11 because they all have their unique characteristics and their  
12 unique geographic extent.  
13 Q. And you were just reviewing your professional  
14 opinions on slide 28; correct?  
15 A. That's correct.  
16 Q. Okay. And you're moving to slide 29?  
17 A. Yeah. Just a brief observation here. Sometimes  
18 the simplest explanations are the best. I think what SNWA's  
19 work in both in their prior analysis and -- and in the current  
20 analysis being brought forward.  
21 It's pretty clearly demonstrated that pumping  
22 right in proximity to the Muddy River Springs, so pumping from  
23 the alluvium and the carbonate aquifer in the immediate  
24 proximity of the springs has a pretty clear capture of Muddy

1 But I've seen quite a few people trying to make  
2 arguments based off this absence of presence of a "pumping  
3 signal" when they haven't first factored out the barometric  
4 efficiency of the well and barometric response.  
5 So anybody that has offered that opinion and has  
6 not taken that step it's not a terribly difficult thing to  
7 accomplish, needs to do so and then build their case from  
8 there. Is there still a season of cycle or not.  
9 In some cases you'll see that you will resolve  
10 out all of that seasonal variation simply by filtering for  
11 barometric pressure change.  
12 So, that is just a note for the State Engineer  
13 and for hopefully everybody that's working in the system.  
14 So again, I think I've made these notes, but I'll  
15 just briefly go through my bullet ones here. Pre-1998 water  
16 levels at EH-4 were stable and there was a history of pumping  
17 in Garnet Valley.  
18 I believe this suggests that there is a  
19 manageable amount of pumping in Garnet Valley that can occur  
20 without detrimentally impacting the EH-4 water levels and  
21 therefore, high altitude spring discharges.  
22 EH-4 water levels appear to be leveling off in my  
23 opinion. I believe this may be result of starting to  
24 collaborate to pumping near the Muddy River Springs area. And

1 River Spring flows -- excuse me, Muddy River flows.  
2 And I think -- you know, there's some attempt to  
3 say that well, it's just a matter of how you stack the bars,  
4 but let's not lose sight of just practical hydrology here.  
5 You know, you're pumping some alluvial wells that  
6 are within a hundred -- a few hundred feet of the river in  
7 some cases. You're pumping from carbonate wells that are  
8 likewise in pretty close proximity to the springs and the  
9 headwaters of the river. Just fundamental hydrology here.  
10 Those near a pumping center are going to have a more immediate  
11 impact on the river system.  
12 So I would suggest that the capture that we've  
13 seen from the Muddy River to date has been overwhelmingly  
14 dominated by pumping that has occurred proximal to the Muddy  
15 River itself. And I think that's clearly shown in the data  
16 and their analysis.  
17 So where does that leave the regional pumping  
18 that has occurred in those lighter blue bars stacked in Garnet  
19 Valley. I don't think we felt much, if any, effect to  
20 reduction of the Muddy River flows from those distant pumping  
21 centers. Not to say that there isn't some small fraction and  
22 over long periods of time that's going to increase. That  
23 would be a traditional captured theory for wells that are say  
24 25 miles away in Garnet Valley.

1 EXAMINATION  
 2 By Ms. Barnes:  
 3 Q. Michelle Barnes for the record. Can we go back  
 4 to slide 24. Based on our previous questions I just want to  
 5 make sure I'm still on the same page as you, Mr. Dixon.  
 6 A. Sure.  
 7 Q. So now understanding that this graph is for  
 8 CSV-7 and CSV-3009M and slide 24 is CSV-4 and CSV-7,  
 9 you're trying to demonstrate that -- I guess, are you trying  
 10 to demonstrate that flows on the west side of the fault are  
 11 trending similarly as opposed to wells for groundwater  
 12 elevations on the east side and west side of the fault?  
 13 A. Showing a disconnect between the alluvium and the  
 14 carbonate there.  
 15 Q. Okay.  
 16 A. And a connection similar responses on that side  
 17 of the fault in north Coyote Spring Valley for the alluvium.  
 18 MS. BARNES: Okay. Thank you for clarifying.  
 19 HEARING OFFICER FAIRBANK: All right. Ms. Ure, I  
 20 will go ahead and open it back up to you for redirect if you  
 21 have any.  
 22 MS. URE: Can I have a moment to confer with my  
 23 co-counsel?  
 24 HEARING OFFICER FAIRBANK: You may.

1 redo that with your microphone on?  
 2 THE WITNESS: Thank you. Felling, F-e-l-l-i-n-g.  
 3 Q. And, Mr. Felling, were you retained by Nevada  
 4 Energy to complete a rebuttal report?  
 5 A. Yes, I was.  
 6 Q. And in preparation for this hearing did you  
 7 create a power point?  
 8 A. Yes, I did.  
 9 Q. Can you please go through your power point?  
 10 A. Yes.  
 11 Madam Hearing Officer, State Engineer staff, I'm  
 12 happy to be here at the end of this very long hearing. I  
 13 know you've heard a lot of evidence. Most of it I think  
 14 very, very good. I'll try to be succinct and clear in  
 15 presenting my four answers to your questions.  
 16 The questions were, the geographic boundary of  
 17 the flow system, what was the information that was obtained  
 18 from the Order 1169 aquifer test, the effects of movement of  
 19 the water from the alluvial to the carbonate aquifer. And at  
 20 the end of it the total amount of groundwater that could be  
 21 pumped manually from the Lower White River Flow System.  
 22 So I'll start with the geographic boundary of the  
 23 connected groundwater surface water systems compiled in the  
 24 Lower White River Flow System. I'll talk about the pros and

1 MS. URE: We have no further questions on  
 2 redirect.  
 3 HEARING OFFICER FAIRBANK: Okay. All right.  
 4 Well, then let's go ahead and take about a ten-minute break  
 5 and we will reconvene at 9:40 with the Nevada Energy  
 6 presentation. Thank you.  
 7 (Break was taken)  
 8 HEARING OFFICER FAIRBANK: Okay. We will  
 9 continue the hearing with Nevada Energy. Ms. Caviglia.  
 10 MS. CAVIGLIA: Justina Caviglia on behalf of NV  
 11 Energy. May I please have Mr. Felling sworn?  
 12 (The witness was sworn in)  
 13  
 14 RICHARD FELLING  
 15 Called as a witness on behalf of  
 16 NV Energy, having been first duly sworn,  
 17 Was examined and testified as follows:  
 18  
 19 DIRECT EXAMINATION  
 20 By Ms. Caviglia:  
 21 Q. Mr. Felling, can you state and spell your last  
 22 name for the record?  
 23 A. Richard Felling. Last name F-e-l-l-i-n-g.  
 24 HEARING OFFICER FAIRBANK: Mr. Felling, will you

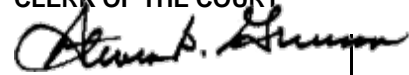
1 cons for Kane Springs Valley, Lower Meadow Valley Wash, and  
 2 the Black Mountains area in the Las Vegas Valley shear zone.  
 3 This is an image modified from SNWA Exhibit 22.  
 4 This is Rowley geologic map and my modifications here. This  
 5 shows Kane Spring Valley. And all I did here was I drafted  
 6 on top of the existing geologic map the Kane Springs Wash  
 7 fault zone. And then I also drafted in this basin bounding  
 8 fault that was basically interpreted from the two geophysical  
 9 surveys, the CSAMT survey, which had lines that ran parallel  
 10 to the northeast and to the southwest of that inferred fault.  
 11 And then there was a gravity survey that showed that there  
 12 was a gravity well just to the southwest of the mouth of Kane  
 13 Spring Valley. And I agree that that evidence is fairly  
 14 compelling that there is a range front structure there.  
 15 To the succinct figure I added this big blue  
 16 arrow. This is the direction of groundwater flow in Kane  
 17 Springs Valley pretty much agreed to by all the experts.  
 18 Vidler's expert agreed to it. Other experts agree that water  
 19 flows from northeast to southwest and that would be the  
 20 recharge in the basin. It would flow in carbonate rocks. It  
 21 would flow in the volcanic rocks. It might flow in the  
 22 alluvium.  
 23 We have range-fed boundary structures on both  
 24 sides of Kane Springs Valley clear down to the center of the

1 A. I am saying that a system appears to be reaching  
2 steady state over -- and over the last two or three years is  
3 roughly at steady state. But that is not to say that it will  
4 continue that way in the future. And that's why I say I  
5 think we actually need to observe the system for a bit  
6 longer.  
7 Q. So, I mean, I guess I'm a little confused. If  
8 it's in a steady state that implies that the decision is  
9 made, it's steady and will not be changing based on current  
10 conditions. But you're saying we need to get more data to  
11 ascertain that?  
12 A. I'm saying that if we want to be certain that  
13 steady state conditions are in fact occurring now and forever  
14 in to the future under the current pumping regime, two or  
15 three years of observations aren't enough.  
16 MR. DONNELLY: Thank you. No further questions.  
17 HEARING OFFICER FAIRBANK: And I neglected to ask  
18 City of North Las Vegas.  
19 MS. URE: No questions.  
20 HEARING OFFICER FAIRBANK: No questions.  
21 Georgia Pacific Republic?  
22 CROSS-EXAMINATION  
23 By Ms. Harrison:  
24 Q. Sylvia Harrison for Republic Environmental

1 Q. Slide 11 of your presentation, the first bullet,  
2 maximum recovery reached in 2016.  
3 A. Yes.  
4 Q. So I have a question. I think it's a  
5 clarification in answer to a question to your presentation on  
6 this slide. And I believe what I heard was along the lines  
7 that after the 1169 pump test the maximum recovery was  
8 reached in 2016 to the extent it could recover or to the  
9 extent it could something else. And I wasn't clear as to  
10 that, the latter part of that sentence. And could you please  
11 tell us what you meant by that statement, please?  
12 A. Yes. And I'll use slide 12 to explain. We see a  
13 long-term trend of decline beginning in 1996 or 1995  
14 continuing through today. And that is due to, I believe,  
15 regional carbonate pumping. We have the Order 1169 aquifer  
16 test. And the Order 1169 aquifer test couldn't recover the  
17 pre-pumping levels because there's a regional decline. So  
18 you have to superimpose your recovery on the regional trend.  
19 So we can't -- You basically -- We don't go above that line.  
20 And that helps us define that regional trend. So full  
21 recovery didn't occur and couldn't occur because we have this  
22 regional decline.  
23 MR. KING: Thank you.  
24 HEARING OFFICER FAIRBANK: Bedroc?

1 Technologies and Georgia Pacific. Good morning, Mr. Felling.  
2 I think it's still morning.  
3 A. Good morning.  
4 Q. Just one quick question. Referring to your  
5 summary of conclusions and recommendations, I think slide 35  
6 and 36. 35, you note that subsurface outflow is likely. So  
7 my question is hypothetically if pumping captured only at  
8 that subsurface outflow how would that square with your final  
9 conclusion in the previous slide that pumping from the  
10 carbonate aquifer anywhere in the Lower White River Flow  
11 System would capture Muddy River flows?  
12 A. So I'll answer that question strictly as it was  
13 posed. If pumping could just capture subsurface outflow,  
14 then that's what it would capture and it wouldn't capture  
15 anything else.  
16 MS. HARRISON: Okay. Thank you.  
17 HEARING OFFICER FAIRBANK: Nevada Cogeneration  
18 Associates? Not seeing any questions.  
19 Muddy Valley Irrigation Company?  
20 CROSS-EXAMINATION  
21 By Mr. King:  
22 Q. Hello, Mr. Felling. Steve King for Muddy Valley  
23 Irrigation Company.  
24 A. Hello.

1 MS. URE: No questions.  
2 HEARING OFFICER FAIRBANK: Seeing no questions,  
3 then we'll go ahead and open it up to Division of Water  
4 Resources staff and the State Engineer.  
5 EXAMINATION  
6 By Mr. Sullivan:  
7 Q. Regarding some of the uncertainties about bypass  
8 flow and the potential for capturing that versus the effect  
9 on the Muddy River Springs area, how important do you think  
10 it is to know exactly the amount and the location of this  
11 subsurface that started out in the Lower White River Flow  
12 System for the State Engineer to effectively manage the LWRFS  
13 over time?  
14 A. Well, I don't think it's important, and that is  
15 in part fortuitous, because I don't think one will ever know  
16 the amount or the location. It's just simply -- The studies  
17 that would be required would be prohibitive. I don't think  
18 we'll ever know.  
19 We may know that some occurs if with more time we  
20 see that capture is not at one to one. It's just something  
21 that we could observe. And in that case we could just simply  
22 say it looks like we're capturing something else. The  
23 evidence I think currently supports that. But I wouldn't  
24 go -- go too far afield with it. I just think that would



TRAN

DISTRICT COURT  
CLARK COUNTY, NEVADA  
\* \* \* \* \*

SOUTHERN NEVADA WATER AUTHORITY,	)	CASE NO. A-20-816761-C
LAS VEGAS VALLEY WATER DISTRICT,	)	A-20-817765-P
	)	A-20-817840-P
Plaintiffs,	)	A-20-817876-P
	)	A-20-817977-P
vs.	)	A-20-818015-P
	)	A-20-818069-P
NEVADA STATE ENGINEER,	)	A-21-833572-J
DIVISION OF WATER RESOURCES,	)	
	)	DEPT. NO. I
Defendant,	)	
	)	<b>Transcript of</b>
<u>and related parties and actions.</u>	)	<b>Proceedings</b>

BEFORE THE BITA YEAGER, DISTRICT COURT JUDGE

MONDAY, FEBRUARY 14, 2022

**TRANSCRIPT RE:**  
PETITION FOR JUDICIAL REVIEW

APPEARANCES:

For the Plaintiffs:	PAUL G. TAGGART, ESQ. STEVEN C. ANDERSON, ESQ.
For the Defendant:	JAMES N. BOLOTIN, ESQ. Senior Deputy Atty. General
For Lincoln County Water District:	WAYNE KLOMP, ESQ.
For Vidler Water Company, Inc.:	KAREN A. PETERSON, ESQ.

RECORDED BY: LISA LIZOTTE, COURT RECORDER  
TRANSCRIBED BY: LIZ GARCIA, LGM TRANSCRIPTION SERVICE



APPEARANCES (Continued):

For Nevada Cogeneration  
Associates Nos. 1 and 2: FRANK C. FLAHERTY, ESQ.

For Muddy Valley Irrigation Co.: ROBERT A. DOTSON, ESQ.  
STEVEN D. KING, ESQ.  
JUSTIN C. VANCE, ESQ.

For Center for Biological  
Diversity: SCOTT LAKE, ESQ.  
LISA T. BELENKY, ESQ.

For Republic Environmental  
Technologies, Inc.,  
Georgia-Pacific Gypsum, LLC: LUCAS M. FOLETTA, ESQ.  
SYLVIA L. HARRISON, ESQ.

For Dry Lake Water, LLC,  
Apex Holding Company, LLC: CHRISTIAN T. BALDUCCI, ESQ.

For Bedroc Limited, LLC,  
Western Elite Environmental: DEREK K. MUAINA, ESQ.

For Moapa Valley Water District: GREGORY H. MORRISON, ESQ.

For Coyote Springs Investment: KENT R. ROBISON, ESQ.  
BRADLEY J. HERREMA, ESQ.  
WILLIAM L. COULTHARD, ESQ.  
EMILIA K. CARGILL, ESQ.  
HANNAH E. WINSTON, ESQ.

For Sierra Pacific Power Company: JUSTINA A. CAVIGLIA, ESQ.

For The Church of Jesus Christ  
of Latter-Day Saints: SEVERIN A. CARLSON, ESQ.

ALSO PRESENT:

COLBY PELLEGRINO  
MICHELINE FAIRBANK  
WADE POULSEN  
SCOTT MILLINGTON  
DOROTHY TIMIAN-PALMER  
GREG BUSHNER  
RYAN HOERTH  
PATRICK DONNELLY  
SYLVIA HARRISON  
LISA COLE  
JOSEPH DAVIS  
LON DALLEY  
STEVE REICH



1 THE MARSHAL: Yes.

2 THE COURT: Okay.

3 MR. ROBISON: Should we do appearances, Your Honor?

4 THE COURT: Oh, yes.

5 MR. ANDERSON: That was what I was about to say,  
6 Your Honor.

7 THE COURT: Oh, yes. You know what, I totally  
8 forgot about that. Yes. Let me -- let's start with  
9 appearances. Thank you for reminding me. My clerk would have  
10 killed me.

11 All right. So who is here on behalf of Las Vegas  
12 Valley Water District and Southern Nevada Water Authority?

13 MR. TAGGART: Your Honor, my name is Paul Taggart.  
14 I'm here on behalf of the Water District and the Authority.  
15 And with me is Colby Pellegrino, who is the general manager --  
16 I mean, the deputy general manager of SNWA and Las Vegas  
17 Valley Water District, and she's seated here.

18 THE COURT: Okay, great.

19 MR. TAGGART: And also with me is Steve Anderson,  
20 who is an attorney with the Water Authority.

21 THE COURT: Okay, thank you. All right. Who is  
22 here on behalf of the Nevada State Engineer?

23 MR. BOLOTIN: Good morning, Your Honor. Senior  
24 Deputy Attorney General James Bolotin on behalf of the Nevada  
25 State Engineer. And with me I have Deputy Administrator

1 Micheline Fairbank from the Division of Water Resources.

2 THE COURT: Okay. All right. Who's here on behalf  
3 of Lincoln County Water District?

4 MR. KLOMP: Good morning, Your Honor. Wayne Klomp  
5 on behalf of Lincoln County Water District. And with me is  
6 the general manager, Wade Poulsen.

7 THE COURT: Thank you.

8 COURT RECORDER: Can I have them speak up if they're  
9 not near the microphone. I'm not picking it up.

10 THE COURT: Okay. Did you hear that was Wayne Klomp  
11 with Wade Poulsen?

12 COURT RECORDER: Yes.

13 THE COURT: Okay. All right. Who is here on behalf  
14 of Vidler Water Company?

15 MS. PETERSON: Thank you, Your Honor. Karen  
16 Peterson from Allison MacKenzie Law Firm. And with me I have  
17 Dorothy Timian-Palmer, who is the chief executive officer  
18 of the water company, Greg Bushner, vice-president of water  
19 resource development, and Ryan Hoerth, project manager.  
20 Thank you.

21 THE COURT: Thank you. All right. And who is here  
22 on behalf of Nevada Cogeneration Associates Nos. 1 and 2?

23 MR. FLAHERTY: Good morning, Your Honor. This is  
24 Frank Flaherty, Dyer Lawrence, LLP, participating via  
25 BlueJeans today.

1 THE COURT: Okay, great. Thank you. Who is here on  
2 behalf of Muddy Valley Irrigation Company?

3 MR. DOTSON: Good morning, Your Honor. Rob Dotson  
4 on behalf of Muddy Valley Irrigation Company. I have with me  
5 today Steve King and Justin Vance, my colleagues, and they  
6 also will be attending via BlueJeans. And I expect Scott  
7 Millington, who is the general manager of the irrigation  
8 company, will be attending via BlueJeans today and in person  
9 tomorrow.

10 THE COURT: Okay, thank you.

11 MR. DOTSON: Thank you, Your Honor. Pleased to be  
12 here.

13 THE COURT: All right. Who's here on behalf of the  
14 Center for Biological Diversity?

15 MR. LAKE: Good morning, Your Honor. Scott Lake  
16 for the Center for Biological Diversity. And I'll have the  
17 Center's Nevada director -- or, sorry, Great Basin director,  
18 Patrick Donnelly, and co-counsel Lisa Belenky on BlueJeans.

19 THE COURT: Okay. Who is here on behalf of Republic  
20 Environmental Technologies, Inc.?

21 MR. FOLETTA: Good morning, Your Honor. Lucas  
22 Foletta for Republic and also for Georgia-Pacific [inaudible].  
23 I believe Ms. Sylvia Harrison is also participating via  
24 BlueJeans.

25 THE COURT: Okay, thank you. Who's here on behalf

1 of Dry Lake Water, LLC?

2 MR. BALDUCCI: Good morning, Your Honor. Christian  
3 Balducci appearing on behalf of Apex and Dry Lake Water. Also  
4 appearing over BlueJeans intermittently is Lisa Cole. She's  
5 a client representative and a consultant.

6 THE COURT: Okay, great. Thank you, Mr. Balducci.  
7 All right. Next I've got -- oh, and then are you also here on  
8 behalf of Apex?

9 MR. BALDUCCI: I am.

10 THE COURT: Okay. Let's see. Bedroc Limited, LLC.

11 MR. MUAINA: Good morning, Your Honor. This is  
12 Derek Muaina, participating via BlueJeans. I'll be here  
13 monitoring for Bedroc and Western Elite Environmental.

14 THE COURT: Okay. And then are you also here on  
15 behalf of City of North Las Vegas?

16 MR. MUAINA: No.

17 THE COURT: Oh, okay. Who is here on behalf of  
18 Western Elite?

19 MR. MUAINA: Sorry, that was me as well. I'm here  
20 for Western Elite and Bedroc Limited.

21 THE COURT: Okay. Is there anyone here on behalf  
22 of City of North Las Vegas?

23 MR. MUAINA: Not that I'm aware of.

24 THE COURT: All right, thank you. Moapa Valley  
25 Water District?

1 MR. MORRISON: Good morning, Your Honor. Greg  
2 Morrison here on behalf of Moapa Valley Water District. And  
3 also on the phone are Joseph Davis, general manager, and Lon  
4 Dalley, the assistant general manager of the district.

5 THE COURT: Okay, thank you. Coyote Springs?

6 MR. ROBISON: Good morning, Your Honor. Kent  
7 Robison for Coyote Springs, together with co-counsel Brad  
8 Herrema, Emilia Cargill, and on BlueJeans is Hannah Winston.  
9 Our expert, Steve Reich, is with us today. And our technician  
10 is Mark Ivy.

11 THE COURT: Okay, thank you. Sierra Pacific Power  
12 Company.

13 MS. CAVIGLIA: Good morning, Your Honor. Justina  
14 Caviglia on behalf of Sierra Pacific Power Company and Nevada  
15 Power Company.

16 THE COURT: All right, thank you. Who's here on  
17 behalf of the Church of Jesus Christ of Latter-Day Saints?

18 MR. CARLSON: Good morning, Your Honor. Sev Carlson  
19 here on behalf of the church.

20 THE COURT: Okay. Good morning.

21 Is there anyone that I have missed? Okay, it  
22 doesn't look like I've missed anyone.

23 So with that, we will start argument. And I think  
24 first up is Las Vegas Valley Water District. Do you need a  
25 minute to set up or are you ready to go?

1 MR. TAGGART: No. We're ready, Your Honor.

2 THE COURT: Okay.

3 MR. TAGGART: Good morning again. Paul Taggart on  
4 behalf of the District and the Authority. Is the audio  
5 picking me up okay?

6 COURT RECORDER: Yes.

7 MR. TAGGART: Okay, thank you. So I'm going to talk  
8 for about an hour, I think, here this morning and I'm going  
9 to specifically address issues with 1309, Order 1309 that we  
10 oppose. And we largely agree with Order 1309, but we have one  
11 specific area that we disagree and that's what the purpose of  
12 my argument today is. In the areas where we agree with the  
13 State Engineer, we'll be arguing as a respondent intervenor  
14 after the State Engineer presents argument.

15 And then I think we have three intervenors that may  
16 argue, and then we would go in order of petitioners/responding  
17 intervenors after that. And so I'll do that. And then when  
18 we're done with our responding, with the answering arguments,  
19 if you will, and we come to the reply arguments, we'll also  
20 argue then on the same issue that I'm talking about this  
21 morning.

22 And we hope this gets done this week. I'm working  
23 hard to keep it short, as short as I can. So anyway, that's  
24 a little bit of a roadmap of where we're going to go.

25 So the Water District and the -- hold on a second.



1 While he's doing that, I have a PowerPoint that I'm going to  
2 talk from and I have copies of it that I haven't handed out,  
3 so I apologize for that.

4 May I approach, Your Honor?

5 THE COURT: Yes.

6 MR. TAGGART: So this is a copy for you. Don't be  
7 afraid, I won't be talking about all of that. It's not like  
8 five minutes per page or anything like that.

9 THE COURT: Okay. Did you want to have a copy  
10 entered as an exhibit, as a Court's exhibit?

11 MR. ROBISON: Well, Your Honor, I thought we agreed  
12 to mark our PowerPoints just so they are part of the record.

13 THE COURT: Right.

14 MR. ROBISON: And if there's a transcript we know  
15 what we're talking about.

16 THE COURT: Sure.

17 MR. ROBISON: Coyote Springs already marked theirs.

18 THE COURT: Okay. Mr. Taggart, we're going to mark  
19 this one as a Court's exhibit for Las Vegas Valley Water  
20 District and Southern Nevada Water Authority.

21 MR. ROBISON: Is there a number to that, Your Honor?

22 THE COURT: She hasn't numbered it yet.

23 (The Court confers with the clerk)

24 THE CLERK: I have yours as CSI A and B. And then --

25 THE COURT: So why don't we mark it in the order

1 that they argue --

2 THE CLERK: Okay.

3 THE COURT: -- so that way it's clear. So this

4 would be -- this would go before CSI.

5 THE CLERK: It's 1?

6 THE COURT: Yeah.

7 MR. ROBISON: So it's going to be Exhibit A with the

8 individual pages numbered 1 through 75 or 200?

9 MR. TAGGART: I think it's 78, Ken.

10 THE CLERK: So it's going to be Exhibit 1. It's

11 just going to be Las Vegas Water District Exhibit 1.

12 MR. ROBISON: All right. Thank you.

13 THE CLERK: And yours will be CSI A through --

14 MR. ROBISON: Right. All right, thank you.

15 THE COURT: All right. Thank you.

16 MR. TAGGERT: All right. So, Your Honor, I gave you

17 yours in single-sided and I made a copy -- with everybody else

18 they get double-sided so we wouldn't have too much paper.

19 THE COURT: Okay.

20 MR. TAGGERT: All right. So, Kent, that time didn't

21 count against me, right? Okay.

22 THE COURT: What time is it?

23 MR. ROBISON: You're on the clock.

24 THE COURT: Donna, what time is it right now?

25 THE MARSHAL: Five minutes.

1 THE COURT: Okay. We'll give you an extra five  
2 minutes at the end, since that took a little bit of time.

3 MR. TAGGART: That's okay, I'm just joking.

4 **ARGUMENT BY THE PLAINTIFFS**

5 MR. TAGGART: Okay. The Water District, as you may  
6 know, and the Water Authority, they deliver water here in  
7 Las Vegas to -- SNWA to purveyor members. So the individual  
8 agencies who deliver water to people, the Las Vegas Valley  
9 Water District, for instance, is a member of SNWA. We think  
10 of it as SNWA is kind of the wholesaler of water and the  
11 individual purveyors who are members of SNWA are the  
12 retailers. They deliver the water every day. That's two  
13 million residents or over that now and 40 million -- pre  
14 Covid, 40 million visitors, and so that's a large task that  
15 the District and Authority take on every day. And the  
16 interest that they maintain is that they need to maintain a  
17 sustainable water supply for all of those customers and all  
18 of those needs.

19 And so in this case the key is that we are  
20 protecting water that we get from the Muddy River that makes  
21 it to Lake Mead and then in Lake Mead we treat it -- we take  
22 it out of Lake Mead, we treat it and we deliver it in the Las  
23 Vegas valley. So there's water that we get from the Muddy  
24 River that you'll hear us talk about that we are trying to  
25 protect.

1           Also, Coyote Springs has a proposed subdivision  
2 in Coyote Spring valley and we, the Las Vegas Valley Water  
3 District, is the general manager of the general improvement  
4 district for that subdivision. So if homes got built, then  
5 those subdivisions would get built and the Water District,  
6 the Las Vegas Valley Water District was appointed by the  
7 Clark County Commission to be the general manager of that GID.  
8 So they would also be -- they would be responsible --

9           THE COURT: GID?

10          MR. TAGGERT: The General Improvement District.

11          THE COURT: Okay.

12          MR. TAGGERT: Okay. So the General Improvement  
13 District that would have to serve water and sewer to the  
14 Coyote Springs development is the Coyote Springs Water  
15 Resources GID, and Las Vegas Valley Water District is the  
16 general manager of that entity. So they would be responsible  
17 for making sure those homes have water; you know, sustainable  
18 water supplies into the future.

19           So those are two big interests. The other is  
20 compliance with the Endangered Species Act and you'll hear  
21 about that quite a bit. We want to make sure that no one  
22 in the District or Authority are ever considered to be in  
23 violation of the Endangered Species Act, based on groundwater  
24 pumping primarily, so that's another key point that we have  
25 here in this proceeding.

1           So the big picture is that there's a series of  
2 groundwater basins that the State Engineer understood existed  
3 in southern Nevada. I'll show you a map in a second of  
4 exactly where we're at. But there's too many water rights  
5 granted than there is water available in that area. So  
6 roughly 40,000 acre feet have been granted in permits, but  
7 even when only 8,000 or so pumped there's issues.

8           And so the question is, what do we do about that?  
9 And that's really what this starting. And the other really  
10 important idea is that groundwater and service water are  
11 connected. And the Muddy River is -- you know, the water  
12 comes out of the ground and then it becomes a river, so  
13 there's a connection hydrologically between ground and surface  
14 water that is really important here, and how that gets managed  
15 is a key concern for the State Engineer and for us in this.

16           So currently roughly 8,000 acre feet get pumped and  
17 we're already seeing impacts to the Muddy River to -- in our  
18 view, the rights to the Muddy River, the water rights, and to  
19 the habitat for the endangered fish. And there's all these  
20 additional water rights that haven't even been pumped yet,  
21 and so the question is how do you deal with that. And then  
22 what sort of brought it to a head is that there's this large  
23 subdivision that wants to develop, and if it does then we'll  
24 be pumping even more water in that basin when we're concerned  
25 about how much is being pumped now.

1           So the State Engineer started a process of  
2 curtailment. So that's the word -- when you've issued water  
3 above the amount that's available and you have to cut it back,  
4 that's curtailment. And he started a two phase or maybe more,  
5 but primarily kind of how we talk about it is a two phase  
6 process. One is fact-finding and that's what this was,  
7 finding out exactly what's happening out there hydrologically.  
8 And so largely what we're going to hear about here is the  
9 fact finding that the State Engineer made. Then based on  
10 those facts and those determinations, then he'll manage the  
11 groundwater accordingly. And mitigation and management kind  
12 of go hand-in-hand of if there's been impacts to senior  
13 rights, that's where mitigation might occur. Like, what can  
14 we do to fix that problem.

15           But that's down the line. Right now we're in a fact  
16 -- we're reviewing the facts that the State Engineer decided  
17 on a lot of really highly scientific and technical hydrologic  
18 decisions. And so that's kind of the big picture.

19           We, the District and Water Authority, our position  
20 here is that the State Engineer has the ability to manage all  
21 of these groundwater basins as one unit and that he properly  
22 found that they're connected hydrologically. So we agree  
23 with him on that. We'll talk about that when we come back  
24 as a respondent intervenor.

25           Also, we think that the 8,000 acre foot pumping

1 limit which he set -- so he set an 8,000 acre foot pumping  
2 limit on all those basins -- we think that was correct, so  
3 we'll again defend that decision of his later.

4           But what we disagree with is that he concluded  
5 that the existing capture of Muddy River water by existing  
6 groundwater pumping does not conflict with senior rights.  
7 So conflict is a really significant legal term that we'll  
8 talk about a lot and it means that you have taken somebody  
9 else's water right from a legal standpoint. And so the State  
10 Engineer made a conclusion that existing pumping doesn't  
11 conflict. That's what we're challenging. So what we're  
12 asking is that you reverse that conflicts decision and then  
13 uphold the rest of 1309. So that's our prayer.

14           Now, here's a map. This is like the Rand McNally  
15 version of things, and you can see Las Vegas valley down in  
16 the left in the center or in the bottom in the center. I  
17 confuse left and right a lot, so -- it drives my kids crazy,  
18 so if I do that I hope I catch myself. So down in the center  
19 on the bottom you've got Las Vegas valley. Then Highway 15  
20 heads up to Glendale. And that area that's shaded is the  
21 Lower White River Flow System boundary that the State Engineer  
22 has delineated. And the Muddy River is in a blue line that  
23 kind of flows down from -- there's a sign, Muddy River  
24 Springs, through Glendale, and then you can see it hits  
25 Lake Mead.

1           So, now, if you take I-15 up and you took 93 to the  
2 north, Coyote Springs, the development, is kind of right on  
3 each side of the county line on 93, so you can see the county  
4 line coming through there. So Lincoln on the north, Clark on  
5 the south, that's kind of where their development is.

6           This is a page out of our expert report. We'll look  
7 at it a lot later. But it's the same kind of shape area and  
8 it identifies all the wells and the monitor wells and the  
9 pumping wells and all the surface water measurements. There's  
10 an insert above there to the right which gets more granular  
11 on the Muddy River itself, so we'll be looking at that.

12           This is the page out of a State Engineer's Order  
13 1309 where he delineates that shape and all those basins.  
14 So that's what we'll be talking about.

15           Now, this is an insert that gets into more detail  
16 about the river. So there's gages and there's properties that  
17 are owned. The Church owns property. The Las Vegas Valley  
18 Water or SNWA owns a property along there. But we'll be  
19 talking a lot about where these gages are and where the river  
20 flows, where it starts and where it ends from a figure like  
21 that.

22           THE COURT: Mr. Taggart, let me interrupt you for  
23 just a minute. For the appellate record, it might be best to  
24 say this is page 8 of our PowerPoint, so that way it's clear  
25 on the record. Thank you.



1 MR. TAGGART: Okay, thank you. So, yeah, so I was  
2 just speaking from page --

3 THE COURT: It has it right up there at the top  
4 left. It's not all the way to the left, but sort of the  
5 middle of the page. See where it says 8 out of 78?

6 MR. TAGGART: Oh, yeah. I'll use that. Okay, thank  
7 you.

8 THE COURT: So, yeah, so that should be a good  
9 reference.

10 MR. TAGGART: That was page 8. Now here's just some  
11 pictures of the Muddy River. That's page 9 and page 10.

12 So the next big point is that there's a thing called  
13 the Muddy River Decree. So a decree is a court document that  
14 identifies who owns what water in a water system. And this  
15 is a decree from 1920 that was entered by, in our view, this  
16 court, the Eighth Judicial District. At the time, Clark and  
17 Lincoln were combined, but the river is in Clark County.

18 And so we consider this court to be the decree  
19 court. Like, if we were to come and ask for enforcement of  
20 the Muddy River Decree to protect our senior water rights,  
21 we would file that in the Eighth Judicial District Court.  
22 And I think there's a strong argument that we are actually --  
23 you know, we're actually evoking the decree court in this  
24 case. It's not -- it hasn't really come up in a significant  
25 way, but that's how we filed our Petition for Judicial Review

1 is we claimed multiple jurisdictions for this case to be heard  
2 and that was one of them.

3           So when a decree court enters a water decree, it  
4 has continuing and exclusive jurisdiction over that water  
5 resource. And it's in the nature of -- you know, there's a  
6 res, which is the property. It's an in rem proceeding. The  
7 first court that takes control over it keeps control over it.

8           And what the decree said was that it adjudicated  
9 the total available flow of the Muddy River and consumes  
10 and exhausts all of the available flow of the river, its  
11 headwaters, sources of supply and tributaries. So that  
12 language, we'll use that quite a bit throughout. I'll try  
13 not to get repetitive about it, but the key point is that all  
14 the water in the river was appropriated to someone when the  
15 decree was entered. So if anybody is capturing any of it,  
16 it's our position they're conflicting or they're interfering  
17 with those particular water rights.

18           The water was divided up into two sections, upper  
19 and lower. And MVIC, who is Mr. Dotson's client, they're  
20 entitled to all the flow of the lower river. So instead of  
21 saying -- in a lot of decrees what you'll see is you'll see  
22 a map which shows acreage and it will say all these acres  
23 are water righted. In this decree it just said MVIC gets  
24 all the water below a certain point in the river to use on  
25 its lands.

1           And the Southern Nevada Water Authority has shares  
2 in MVIC, so that's how we own water. That's how the water  
3 district or the Water Authority owns water in the Muddy River,  
4 is they own shares of MVIC. And that's how people's water  
5 rights are recognized in MVIC, so farmers out there, they have  
6 shares in MVIC, too, and those shares represent an amount of  
7 water that they get for their fields. So -- and it's our view  
8 that the source of supply that the decree was talking about  
9 includes the groundwater from where the river comes from.

10           THE COURT: So let me interrupt you for a second.  
11 So then, is it your contention that anyone who is granted  
12 a right for groundwater would be conflicting with the Muddy  
13 Valley Decree?

14           MR. TAGGART: Yes.

15           THE COURT: Okay.

16           MR. TAGGART: So -- okay, so this is more specific.  
17 Intentionally Created Surplus. This is the way the Southern  
18 Nevada Water Authority converts the Muddy River water rights  
19 into water that it can take out at Lake Mead, and this is the  
20 shares that were acquired. So it's a program that allows the  
21 water district to augment the water in the main stem of the  
22 Colorado River. So the Colorado River is divided up among  
23 the states and Nevada gets a 300,000 acre foot allocation.  
24 But we can add to that with what we call Intentionally Created  
25 Surplus or ICS. We create a surplus. We get water, we buy

1 water, like at MVIC, and we let that go into the lake. Then  
2 the Bureau of Reclamation, the U.S. Bureau of Reclamation  
3 authorizes us to take more water out of the lake as a result  
4 of that.

5 And this is a critical element in our water resource  
6 portfolio and particularly during drought. And as you know,  
7 right now Lake Mead is low and getting this water is really  
8 important to maintain the ability to serve customers in the  
9 Las Vegas valley. And it's the District's view and the  
10 Authority's view that pumping captures -- pumping the Lower  
11 White River Flow System captures Muddy River water and then  
12 decreases the amount of ICS that we would get.

13 THE COURT: That you would be entitled to that you  
14 would then be able to get the additional waters out of Lake  
15 Mead from the Bureau of Reclamation.

16 MR. TAGGART: Right.

17 THE COURT: Okay.

18 MR. TAGGART: Okay. Now I'll just quickly talk  
19 about the Moapa dace. So this is an endangered fish. And --

20 THE COURT: And this is page 13?

21 MR. TAGGART: This is page 13. Thank you, Your  
22 Honor. I had a hearing officer pound me over the head for  
23 20 years and I can't believe I'm not doing that. She would  
24 be really mad at me.

25 So the Moapa dace is a fish in the headwaters of the

1 Muddy River. So the Muddy River comes up in little springs  
2 and the fish are in those springs. It was listed by the  
3 U.S. Fish and Wildlife Service as an endangered fish and the  
4 Southern Nevada Water Authority owns the Warm Springs Natural  
5 Area, which is where a lot of these springs are located or a  
6 lot of the habitat for dace are located. And the Authority  
7 acquired that property to do conservation for the fish, and  
8 we'll talk more about that.

9 This is just a picture of a little pond, a little --  
10 you know, this is where -- you can kind of see where water  
11 is coming up out of the ground and the fish are in there.  
12 And these are small, little, you know, places where water  
13 comes up out of the ground and then that water gets captured.

14 THE COURT: And that was page 14?

15 MR. TAGGART: That was page 14. Then on page 15 we  
16 have an insert from that map I was telling you earlier and you  
17 can see there's Warm Springs West. Right above where it says  
18 Pederson Spring it says Warm Springs West. That little --  
19 we'll be talking a lot about that gage, the Warm Springs West  
20 area. Around that area is where the Warm Springs Natural Area  
21 is located.

22 This is page 15.

23 THE COURT: 16.

24 MR. TAGGART: Page 16. And down at the bottom where  
25 it's red, these are sections of habitat of the fish. And so

1 those waters that come up in those spring areas, they collect  
2 and then they kind of add to each other and then they flow  
3 down to what's called the Warm Springs West Gage, and we  
4 measure that to see how much water is available for fish.  
5 But that's the primary habitat for the fish. You can see  
6 temperatures listed there, too, and that's important because  
7 the fish live in warm water. And so that -- we'll get into  
8 that in more detail there, too.

9           So I think it's important to step back and think  
10 about a little bit of history. I'm watching the time to  
11 make sure we don't spend too much time on this, but it's  
12 really critical to understand where we come from and it's  
13 interesting, too.

14           So on page 17 I say, you know, where does this water  
15 come from? So out in the middle of the desert there's this  
16 river coming up out of nowhere. And when the scientists first  
17 went out there, the United States Geological Survey first went  
18 out there, they thought where is this water coming from? It  
19 just doesn't make any sense. They looked around, there's no  
20 mountains with snow. It flows at a steady rate. It's warm.  
21 You know, where is this water coming from? It can't be coming  
22 from anywhere local because there's no mountains or snowpack  
23 nearby.

24           And so they identified a regional groundwater system  
25 that went many miles to the north to where those mountains

1 were with the snow on them. And they came up with an  
2 understanding that, you know, this is really a large system.  
3 So in 1966, which is magic because that's the year I was born,  
4 in that year they wrote a report that we're going to look at  
5 in a little more detail, but it was a report that talked about  
6 this interconnected system.

7           And I guess the way I think it's simple to think  
8 about this is you think about a bathtub and you leave the  
9 faucet on and it starts to overflow and it overflows --  
10 eventually it would overflow at a constant rate. And so  
11 I think about that, you know. Well, anyway, that's the  
12 river overflowing the hydrographic system. And if you lower  
13 the water level in the bathtub, there will be less water  
14 overflowing out of the bathtub until eventually there's no  
15 water flowing out of the bathtub. And so that's the larger  
16 concept when we think about this.

17           The fact that the flow is steady, which means it  
18 doesn't go up and down during -- like, I live in northern  
19 Nevada and we have these rivers that come off the Sierra and  
20 in the spring when it warms up and the snow melts you see all  
21 this water and then in the fall there's very little water,  
22 so it goes up and down over the year. This spring just flows  
23 pretty much the same all year long. And so it's not snowpack  
24 melt, it's something else. And it's also warm, which means --  
25 the scientists said that means it was in the ground close to

1 something hot for awhile, long enough to heat it up.

2           And so that was like the original kind of concepts  
3 that they had. Here's another picture of the river. And this  
4 was the report that was done in 1966 by Eakin. And one of  
5 the things that it says, and this is on page 19, one of the  
6 things that it says is that -- and I have it highlighted:

7 "The discharge of the Muddy River Springs, the lowest of the  
8 three principal spring groups, is shown to be highly uniform,  
9 which is consistent with they're being supplied from a large  
10 regional groundwater system." So the point there being that  
11 this has been known for a long time that there's a connection  
12 between the groundwater system and the Muddy River.

13           So fast-forward to 1983 when one of the first major  
14 water rights was issued in the Lower White River Flow System,  
15 groundwater rights by the State Engineer. So, Nevada Power  
16 filed for a water right. It's currently owned by CSI and it's  
17 Permit 46777. It was protested then based on concerns for the  
18 Muddy River rights and for the Moapa dace. And when it was  
19 approved in 1997 in Ruling 4542, the State Engineer said it  
20 was approved with the understanding that groundwater pumping  
21 would be stopped should the project adversely affect the water  
22 table in the Muddy River Springs Area.

23           Then in 1995, MVWD was also granted groundwater  
24 rights with a monitoring plan required to monitor the changes  
25 in the river based upon their pumping. And then today over



1 40,000 acre feet of water has been granted in the Lower White  
2 River Flow System, all subject to existing rights, which means  
3 that if you get a water right it's subject to whoever got a  
4 water right before you because we're a prior appropriation  
5 state. Your priority is a date and who comes later comes  
6 subject to who was there first. That's like our original  
7 water law and it was common law and now it's in the statutes.

8           So all water rights were issued that way. But  
9 that -- and you'll hear different numbers, 38,000, 41,000.  
10 Somewhere in there is the block of water that exists as water  
11 permits that were issued by the State Engineer. And I think  
12 it's always important to understand, 40,000 acre feet of water  
13 permits doesn't mean there's 40,000 acre feet of pumping. So  
14 there's a lot of water rights that have been granted across  
15 Nevada where they're not actually being used, they're granted  
16 as a permit. They permit the user to go out and use the water  
17 and then it might take them 10 years, 20 years, 30 years --  
18 it might take them some time to actually put the water to use.  
19 And then once they do that, they can file for a certificate  
20 with the State Engineer. But it's that unused water that I  
21 think we need to be aware of, too, as we talk through this.

22           THE COURT: So let me ask a question because what  
23 you're saying is all of the water in the Muddy River Decree is  
24 all appropriated, so then what would be the point of issuing  
25 a groundwater permit if -- you know, if it's subject to the

1 senior water rights and you're saying it's all appropriated,  
2 then what's the point?

3 MR. TAGGART: Well, on page 20 I think the State  
4 Engineer started asking that same question.

5 THE COURT: Okay.

6 MR. TAGGART: Because when you drill the well --  
7 they drilled the well in Coyote Spring Valley and it was a  
8 massive producing well and there was all this water there.  
9 And so everybody thought, well, if they can drill a well  
10 and there's water coming out of the hole, then there must be  
11 a lot. You know, why can't I pump that well and take that  
12 water? And the Muddy River is, you know, twenty miles away  
13 or I think it's eleven. So in 2001 --

14 THE COURT: And I don't mean to throw you off track.  
15 That was just one of my questions.

16 MR. TAGGART: Right. Well, I think it's -- I think  
17 probably the answer is that they didn't think it would be so  
18 direct. And so in 2001, Coyote Springs Investment and the  
19 Water District, my client, had hearings in front of the  
20 State Engineer to appropriate tens of thousands of acre feet  
21 of water, more acre feet of water in Coyote Spring Valley.  
22 We thought there was water there, the Water District did.

23 And the State Engineer said I'm not going to grant  
24 any more water in these basins until I do a test of the system  
25 to understand what is going on when we pump water because

1 I've got 40,000 acre feet of water rights but only a small  
2 part of that is actually being pumped. Until I know what  
3 happens when a big amount of water is pumped, I don't really  
4 know how the system is going to react. And that's an  
5 engineering kind of principle is that, you know, there's a lot  
6 of reconnaissance level or, you know, estimates that can be  
7 made based upon snowpack on a mountain, but the way you really  
8 understand what happens in a hydrologic system is you pump  
9 the hell out of it and see what happens at distance and then  
10 you'll know.

11           And so in 2002, Order 1169 was issued and it  
12 required half of the existing water rights to be pumped for  
13 two consecutive years, and that was done to see what the  
14 effect of pumping existing water rights would be on the  
15 system. And so it took a long time to get this done. And  
16 part of what was being done -- so on page 22 we talk about  
17 that in order to do the pump test at that scale there needed  
18 to be a pipe built from where the pumping was happening  
19 because it's a lot of water to do something with if you're  
20 going to pump it out of the ground.

21           So my client invested and built a pipe to the Muddy  
22 River to pump that water, move that water, but we also worked  
23 on a Memorandum of Agreement to protect the dace in the event  
24 something happened to the dace during the pump test or after  
25 the pump test. And so that was -- like I think I've described

1 already, there was a lot of conservation efforts that we  
2 engaged in, that the District did with respect to the dace.

3 But at this time in this agreement the parties  
4 agreed that there's a series of triggers at Warm Springs West  
5 Gage that are really important to the fish from a habitat  
6 standpoint and habitat would lead to population. And so the  
7 parties agreed that 3.2 cfs at the Warm Springs West Gage was  
8 a significant trigger, and you'll see that that becomes a big  
9 deal -- that became a big deal in 1309.

10 THE COURT: Okay. Just in regular layman's terms,  
11 what does 3.2 cfs mean?

12 MR. TAGGART: It's cubic feet per second.

13 THE COURT: So that's the flow?

14 MR. TAGGART: Yes.

15 THE COURT: Okay.

16 MR. TAGGART: So, you know, a cubic foot, you know,  
17 is a three dimensional square; one foot by one foot by one  
18 foot of water. And, Your Honor, 3.2 cubic feet per second  
19 would be three of those passing a gage every second.

20 THE COURT: Okay. So that doesn't actually relate  
21 to the depth of the water as much as it does the flow of the  
22 water?

23 MR. TAGGART: Right.

24 THE COURT: Okay.

25 MR. TAGGART: Yeah, you'll see there's a correlation

1 between depth and flow --

2 THE COURT: Right.

3 MR. TAGGART: -- but cfs is strictly a measurement  
4 of flow.

5 THE COURT: Okay.

6 MR. TAGGART: Slide Number 23, that's a picture of  
7 the Warm Springs West Gage. So that's where the water is  
8 collected from all those individual little springs where the  
9 fish are. Then it all gathers together in a couple channels  
10 and those channels gather together and then it ends up here.

11 So after the pump test was done the State Engineer  
12 -- well, first of all, the pump test was fourteen thousand  
13 and a half -- fourteen and a half thousand acre feet of water  
14 pumped over a 25-1/2 month period.

15 THE COURT: I thought there was a 15,000 number.  
16 Was there not a 15,000 number? No, it was 14,000. Okay.

17 MR. TAGGART: Yeah. I mean, I took this out of  
18 their report.

19 THE COURT: Okay, sorry. Go ahead.

20 MR. TAGGART: So it's in that range. And after the  
21 test was done the State Engineer asked for information from  
22 all the parties about the results of the test. And then as  
23 a result of all of those reports, in 2014 he denied all the  
24 pending applications. So all those apps that the District  
25 and CSI had a hearing on in 2001 got denied in 2014. And he

1 entered a similar ruling in every one of the basins. Well,  
2 not every one but almost all of them that we're dealing with  
3 now what we're calling the Lower White River Flow System.  
4 And it was based on the impacts of pumping on the river and  
5 it said that the impacts of the aquifer test from pumping in  
6 Coyote Spring Valley was widespread, that the aquifer test  
7 pumping in Coyote Spring Valley was a significant contributor  
8 to the decline in the springs that are the headwaters of Muddy  
9 River the dace, and that additional pumping would result in  
10 significant regional water level decline.

11           So that was in 2014. The State Engineer denied all  
12 the pending applications. He's still got the problem with  
13 the 40,000 acre feet of permits, and so then in 2017 we get  
14 to what I kind of call season one of what we're doing here  
15 now. I'm not sure what season we're in now, but season one  
16 was when my client asked the State Engineer, hey, we're  
17 getting asked by CSI to approve infrastructure plans for a  
18 subdivision and we want to know from you if you are going to  
19 approve the subdivision. The State Engineer has to, under  
20 State law, has to sign subdivision maps to say that there's  
21 water available for that subdivision.

22           And so CSI as asking the District to approve  
23 improvement plans. The District asked the State Engineer,  
24 you know, what are you going to do with the subdivision map  
25 before we put a bunch of time into approving these plans,

1 these infrastructure plans? And the State Engineer came back  
2 and said that he would not approve subdivision maps based on  
3 CSI's groundwater rights in the Coyote Spring Valley. And  
4 as a result of that letter, CSI filed a petition for judicial  
5 review and ultimately that case settled and part of the  
6 settlement was to do -- was to have a hearing. And so part of  
7 what arose out of that settlement was the 1309 -- well, what  
8 came next. So this on page 26 is the letter that the State  
9 Engineer sent back to the District regarding that question.

10           So after that, after that case settled, the State  
11 Engineer issued Order 1303. 1303 said we're going to collect  
12 fact evidence first, that we want fact evidence on the  
13 geographic boundary of the Lower White River Flow System, on  
14 aquifer recovery since the pump test, and how much water can  
15 be pumped in the area and what would occur if you moved water  
16 from the alluvial to the carbonate aquifers. I'm not going  
17 to get into the alluvial to carbonate aquifers at this point,  
18 but those were the fact questions.

19           And the State Engineer indicated that he wanted to  
20 determine how much water could be sustainably pumped in the  
21 Lower White River Flow System without impacting senior rights  
22 or the dace. And then in the second phase, based on the  
23 pumping limit, the State Engineer would determine which water  
24 right holders can pump and how much they can pump. And in  
25 that second phase, and this is important for this morning,

1 he would address conflicts between junior groundwater right  
2 holders and senior water right holders and potentially through  
3 mitigation plans.

4           So that was in Order 1303. Substantively, 1303  
5 created a joint administrative unit among a group of the  
6 basins that are in the Lower White River Flow System. Kane  
7 Springs was not in this and Muddy River -- or Black Mountain  
8 Area, a different part of Black Mountain was in this, so that  
9 comes up significantly in what we're arguing about, too.  
10 And then change apps were held in abeyance and there was a  
11 moratorium on subdivision maps within Order 1303.

12           CSI appealed that order as well, but then that  
13 appeal was withdrawn pending the evidentiary hearing that we  
14 ended up having. So we went to an evidentiary hearing. The  
15 District and everyone submitted expert reports, had expert  
16 testimony. And my client's position was on what the boundary  
17 of the Lower White River Flow System should be, what  
18 groundwater area should be included in it. Our position was  
19 you don't need to change it right now; you can look at that  
20 at Phase 2. But you should take into account pumping around  
21 the boundary. Like, there might be people that are right over  
22 the boundary that that still -- just because they're right on  
23 the other side of a boundary doesn't mean it might not have  
24 an effect, so you should keep that in mind when you're going  
25 forward in Phase 2.



1           We thought that four to six thousand acre feet  
2 should be the cap on pumping, but at any level of pumping the  
3 District and the Authority indicated that the State Engineer  
4 had to deal with the capture of Muddy River rights and the  
5 conflicts with those rights, and that current pumping should  
6 not be allowed to increase while the State Engineer did  
7 Phase 2. So those are the positions we took there. And  
8 I'll skip over that slide.

9           So now I'm on Slide Number 32. And in Order 1309  
10 the State Engineer made findings. And again, so let me back  
11 up a little bit. So that's a trial. I've never done a  
12 jury trial, but I've done, you know, I don't know how many  
13 hearings. And I don't know -- I mean, I have friends who do  
14 lots of jury trials and I don't know what's harder. We end  
15 up having 20 experts and we've had hearings where we've had  
16 15 different expert disciplines, you know, testifying. And  
17 in this particular hearing we had at least 15 or at least  
18 12 parties, all with experts, and the State Engineer heard  
19 all of that testimony.

20           What the State law says is that when a court reviews  
21 those fact findings, it is not de novo; right? So the Court  
22 should not re-weigh the evidence. You don't need to read the  
23 transcripts and decide which expert was right and which expert  
24 was wrong. The State Engineer did that. And so as long as  
25 the State Engineer's decision is supported by substantial

1 evidence, then the Court must uphold his decision. And  
2 substantial evidence is what a reasonable person looking at  
3 the evidence would say, you know what, based on -- when I look  
4 at this evidence, this is a reasonable conclusion given the  
5 evidence. I mean, there might be more than one reasonable  
6 conclusion from the evidence, but if the State Engineer is  
7 reasonable, you have to uphold it.

8           So that's why the State Engineer did that huge  
9 hearing, so the Court -- you know, in one way so the Court  
10 didn't have to. But because of the State Engineer's expertise  
11 in water and everything else, that's the whole notion of  
12 having that done at an administrative panel.

13           So after the State Engineer found that nearly all  
14 the witnesses agreed that pumping was impacting flows to the  
15 Muddy River, then he issued 1309. He found in that that the  
16 primary source of water for the Muddy River is spring flow,  
17 that the Muddy River is fully appropriated by senior decreed  
18 rights, that pumping Lower White River Flow System groundwater  
19 has captured and reduced spring flow, and that since reduction  
20 of pumping after the pump test or the aquifer test, flows did  
21 not and will not return to pretest levels.

22           So what that means is that when we did the pump  
23 test water levels were drawn down, and we expected them to  
24 come back up and they didn't come up the way that people  
25 anticipated. So that all looked really good. We liked that

1 part of the order. But if water levels are declined and  
2 they're not going to come back, that's a permanent capture.  
3 That system has changed and there's a permanent capture of  
4 flow.

5           So the State Engineer then in 1309, and now I'm  
6 on page 33, he delineated the Lower White River Flow System.  
7 He established the 8,000 acre foot cap. But then, and this  
8 is where we disagree, he concluded that existing capture of  
9 Muddy River water does not conflict with senior Muddy River  
10 water rights. That's what we're challenging.

11           So with that, I'll get into three reasons why we  
12 think the State Engineer was wrong, and they're really simple.  
13 We think his decision was outside the scope of the hearing.  
14 We think that it was unlawful. There's a series of -- there's  
15 four specific legal principles that we think it violates, and  
16 then we think it's factually incorrect. So we'll go through  
17 those three.

18           But before I do, I wanted to talk about what -- I  
19 did this a little bit already. What is a conflicts analysis?  
20 It determines whether one water right holder's use of water  
21 conflicts with another person's use. I tried to think of  
22 things to compare this to. I was thinking, like, a simple  
23 trespass. A fact question would be did the defendant go onto  
24 the plaintiff's property? That would be a fact question. But  
25 a legal question might be, Did the plaintiff have the right

1 to exclude people from his property? Did the defendant have  
2 a license or some kind of an easement to go onto the property?  
3 You know, was there an emergency?

4 Those are the types of legal questions that might,  
5 you know -- and I kind of think -- I mean, I also have never  
6 done criminal law, either, but it seems like -- it's like it's  
7 one thing to prove that there was a death and sometimes you  
8 have to prove that, but it's a different thing to prove that  
9 there was a murder. And so --

10 THE COURT: Whether or not self-defense are  
11 available, you know, defenses, that kind of thing.

12 MR. TAGGART: Right. Right.

13 So that's the difference between -- that's the  
14 difference between an impact and a conflict. So we think that  
15 an impact is just factually when you pump here you capture  
16 here. That's the question we thought the 1303 and the 1309  
17 hearing was about and is there an impact. Whether that impact  
18 constitutes a conflict, a legal conflict with a water right,  
19 we think requires a whole new type of analysis than simply  
20 that factual question.

21 Okay. So, but first we don't even really need to  
22 get into some of those slides. I'm just going to jump to  
23 Slide Number --

24 THE COURT: 39?

25 MR. TAGGART: Slide Number 39. So the State Engineer

1 when he issued 1303, he specified the four areas that he  
2 wanted fact questions on. That's on page 39. Then page 40  
3 just shows you a picture of the order that he issued that  
4 listed those four areas. And he also listed (e), any other  
5 matter believed to be relevant to the State Engineer.

6 Then we went to a pre-hearing conference and at  
7 the pre-hearing conference the hearing officer or the State  
8 Engineer's office clarified what the hearing was about. And  
9 we asked or questions were asked specifically about (e). And,  
10 you know, my client and myself were asking questions about,  
11 Are we going to talk about conflicts in this proceeding?

12 So then on Slide 41, at the pre-hearing conference  
13 the State Engineer's office clarified that management of the  
14 Lower White River Flow System would be in Phase 2; that the  
15 1303 hearing was to address technical issues. Legal conflicts  
16 would not be decided at this phase. And if the parties had  
17 already admitted conflicts evidence, because this pre-hearing  
18 conference occurred after the first evidence exchange, he  
19 stated he would not consider that.

20 So after the pre-hearing conference, all the parties  
21 understood that conflicts would not be part of the hearing.  
22 Page 42 is a page from the transcript in the record. And then  
23 the next three slides are highlights of that, or the next four  
24 slides are highlights of that.

25 So one of the questions that was being discussed

1 is what does this -- any other factors the State Engineer  
2 considers relevant mean? Hearing Officer Fairbank said that  
3 "We've spoken about this before, is that really -- this is  
4 a threshold reporting aspect, that this is part of a multi-  
5 tiered process in terms of determining the appropriate  
6 management strategy for the Lower White River Flow System."

7 Then on Slide 43 --

8 THE COURT: 44.

9 MR. TAGGART: 44. On Slide 44: "And that is those  
10 four components that we've solicited in the Order 1303. This  
11 larger substantive policy determinations is not part of this  
12 particular hearing. That's part of later proceedings, but  
13 this is what has to occur in order to inform those future  
14 policy determinations and decisions."

15 And then on Slide 46 --

16 THE COURT: 45 or 46?

17 MR. TAGGART: Yeah, I'm going to skip to 46.

18 THE COURT: Oh, okay, 46. Okay.

19 MR. TAGGART: The State Engineer said, "And the  
20 purpose of this hearing is not to resolve or address  
21 allegations of conflict between groundwater pumping within the  
22 Lower White River Flow System and Muddy River decreed rights.  
23 That is not the purpose of this hearing and that's not what  
24 we are going to be deciding at this point in time."

25 And that we took for the instruction of the State

1 Engineer, but despite the fact that that was stated, the State  
2 Engineer did just the opposite and then found in Order 1309 --  
3 and so I'm on Slide 47 in the second large bullet there: "The  
4 reductions in flow that have occurred because of groundwater  
5 pumping in the headwaters (Lower White River Flow System)  
6 basins is not conflicting with decreed rights in the Muddy  
7 River."

8           Basically what the State Engineer said is the 8,000  
9 acre feet that's being pumped now, that can continue to be  
10 pumped without conflicting with Muddy River water rights, and  
11 so that was the conclusion that he made.

12           So I think it's obvious, but our argument is that  
13 that's fundamentally unfair and cannot stand. And the reason  
14 is is that in Nevada water law all parties have a fundamental  
15 right to have -- to be heard, to have notice and an  
16 opportunity to be heard. And the supreme court has been clear  
17 about this and the statutes are clear about this; 533.450,  
18 sub (2) and *Revert* is the case that says it. And these apply  
19 to every party who appears in front of the State Engineer.

20           And here on Slide 49, none of the parties had notice  
21 that conflicts would be addressed, so they were denied an  
22 opportunity to be heard on that issue. Even -- and, you know,  
23 Vidler and Lincoln County have argued that, well, SNWA put  
24 in conflicts evidence so they're not prejudiced. Well, like  
25 I said, we put in evidence at the initial evidence exchange

1 and then we had the pre-hearing conference and then that's  
2 when -- well, it became clear we weren't going to be able to  
3 use that evidence the way we had anticipated. But we were  
4 very clear that any pumping was a conflict and needed to be  
5 addressed.

6 No party also had an opportunity to rebut the State  
7 Engineer's analysis. So he came up with a brand new method of  
8 how to look at senior rights and he used evidence that no one  
9 had seen. And still -- we're still kind of scratching our  
10 heads trying to decide exactly what the method was that he  
11 used. The four main things are that there is a technical  
12 report that he relied upon that wasn't put into evidence.  
13 He calculated the average water requirement on the river  
14 differently than what the decree says. And he calculated  
15 the amount of acreage differently than what the decree says.  
16 And no one was able to review, support or challenge those  
17 findings.

18 So because of that, we ask the Court to reverse the  
19 conflicts determination. And in response to our argument on  
20 this point, the State Engineer in their answering brief said  
21 that the Court may merely strike the conflicts paragraph and  
22 affirm the remaining portions of Order 1309 because the  
23 conflicts conclusion was an incidental finding. My point  
24 here isn't to say that they agree with me. I wish, you know,  
25 everyone did. But my point is to say that if the Court finds



1 that the conflicts determination was incorrectly made, then  
2 the rest of 1309 can stand; that it was an incidental -- their  
3 point that it's an incidental finding. And so you can do that  
4 and allow the remainder of 1309 to stand. And I think that's  
5 what they were saying. So, beyond the scope, that's the first  
6 reason -- I think the easiest reason that you should reverse  
7 the conflicts determination.

8           Next is four violations of Nevada water law, and  
9 I'll go through those one at a time. First, it should be  
10 easily understood that the State Engineer cannot do any action  
11 that would violate a court decree. And if it wasn't obvious,  
12 it's in statute, and so the statute says the State Engineer  
13 has to follow court decrees. And I've listed here on Slide  
14 54 a number of the cases that we all -- well, *Nevada v. U.S.*  
15 in particular where this principle was established by the  
16 United States Supreme Court that once a decree is entered,  
17 it's final. It's final forever. It really reiterated the  
18 res judicata aspect of a court decree.

19           And at that time the Pyramid Lake Paiute Tribe was  
20 trying to get more water out of the Truckee River and trying  
21 to open up a decree on the Truckee River. It went all the way  
22 to the United State Supreme Court. Justice Brennan wrote the  
23 opinion and said no. Even as desperate as you might need  
24 water for endangered fish at Pyramid Lake, we can't open a  
25 decree, and so it's that strong.

1           And then in 2020 we get the Nevada Supreme Court  
2 in *Mineral County v. Lyon County*, which also reiterates this  
3 notion that decrees are final. So whatever the decree says  
4 is the law of the matter. The State Engineer should only be  
5 able to listen to the decree.

6           Earlier I told you about what's on Slide 55, which  
7 is the provisions of the decree that say the entire river --  
8 the entirety of the river has consumed and exhausted all of  
9 the available flow by water rights. At the time that the  
10 decree was entered there was between 33,600 and 37,000 acre  
11 feet of flowing. The State Engineer concluded that the water  
12 rights on the Muddy River are only entitled to receive 28,300  
13 acre feet. So since 28,300 is less than the full flow of the  
14 river, then he took water away from MVIC and the other water  
15 right users on the Muddy River.

16           THE COURT: And that's based on the alfalfa growing  
17 analysis?

18           MR. TAGGART: Right. That's right.

19           So this is the provision in the decree on Slide  
20 Number 56 and it talks about the total available flow of the  
21 river that's consumed and exhausted by rights. So the State  
22 Engineer was incorrect in clipping that to 28,300.

23           This on Slide Number 57 is a hydrograph that was  
24 put together by the expert for the District and the Authority.  
25 And I won't get into the details of this, but the blue line

1 is the old flow. It's how much water flowed on average,  
2 according to this expert's opinion, on average in the river  
3 before any groundwater development occurred. The red area  
4 is what is no longer in the river because it's being pumped.  
5 And so he calculated that as the impact to the river from  
6 the groundwater pumping. So that's the first point.

7 THE COURT: Let me ask you, if I -- and I'm not  
8 saying that I am, but if I determine that that part of the  
9 hearing or that part of the ruling was outside of the scope  
10 and it violated due process, would I even need to go into  
11 his analysis or any of that other stuff?

12 MR. TAGGART: No. No. Yeah, you would not, and  
13 there's a question of where are we going to debate conflicts;  
14 right? Where is that evidentiary hearing going to happen?  
15 We think that requires an evidentiary hearing. It would  
16 either happen in front of the State Engineer or in front  
17 of the decree court, so it's happened two different ways.  
18 I mean, after being with us for a week you'll probably, you  
19 know, want us to go let the State Engineer decide. But that  
20 is a large evidentiary hearing, we think, that would occur  
21 on remand.

22 So first he reduced the amount of water in total  
23 and then he changed, in our view, the duty of water that a  
24 water right holder in MVIC or in the Muddy River area can  
25 receive. So the duty of water is the amount of water in

1 acre feet, and an acre foot is if you covered an acre with  
2 one foot of water. So the duty is how many acre feet of water  
3 that acre is entitled to. And the decree has a number and  
4 the State Engineer came up with a number. And the decree's  
5 number is 8.54 and it's a blended number because there's  
6 winter water and there's summer water, but it's 8.54. And the  
7 State Engineer said that 4.7 would be enough for those fields  
8 to grow a crop. And so right there was a change in the duty  
9 and we think that was improper. Again, we're talking about  
10 violations of the decree now and legal problems with the  
11 decision.

12           So the State Engineer, when he did that, he relied  
13 on what's called the Net Irrigation Water Requirement. We  
14 also call that net consumptive use. What it means is probably  
15 for an expert to say and not for me, but it's the amount of  
16 water that the crops need to grow. It doesn't include the  
17 water it takes to get water to the crops. And so the decree  
18 was based on actual use of water and it found that the entire  
19 river was fully consumptively used and all of that was a valid  
20 beneficial use, and so the State Engineer should not have  
21 limited it based upon this Net Irrigation Water Requirement.

22           So now the second legal principle that we're  
23 challenging this decision on is the impairment of vested  
24 rights. So, I mean, I could go on for hours but I won't,  
25 because I find this stuff really interesting. But when the

1 water law was originally enacted in 1905, it was challenged  
2 and it went to the supreme court. Justice McCarran was one  
3 of the justices at the time and he wrote an opinion in  
4 *Ormsby County* which said that the State Engineer cannot do  
5 what courts do. He can't determine what water rights existed  
6 before the statutes were enacted. Before the statutes were  
7 enacted, courts decided who owns what water under common law.  
8 And all the water right owners -- many water right owners in  
9 the state weren't happy about there becoming a state engineer  
10 who was going to make these decisions now.

11           And the supreme court said that, one, you can't  
12 adopt a statutory system that impairs vested rights, that  
13 impairs the rights that came before it. And, two, you have  
14 to keep the courts involved in finally determining vested  
15 rights. So nothing the State Engineer does can impair vested  
16 rights. Well, he granted groundwater rights that when they're  
17 pumped they capture Muddy River flow. That impairs vested  
18 rights. And so that's our simple point there. On Slide 61  
19 we kind of talk about that a little more.

20           On Slide 62 you'll see another figure from our  
21 expert's report and it shows pumping in the bar chart, so all  
22 those bars are different pumping amounts per year. And then  
23 the red line is the deficit in water in the Muddy River.  
24 I showed you that line before in a different figure. So the  
25 experts were able to look at as pumping increased, declines

1 in the river increased, and so that was the analysis that  
2 they did there. So reducing flows in the river by issuing  
3 groundwater permits leads to less water for water rights.  
4 That's an impairment. It also leads to less ICS for my  
5 client.

6 We also prepared this figure. So this is on page 64  
7 of our PowerPoint, and this is a figure that the expert used  
8 to estimate the amount of ICS SNWA did not receive because of  
9 groundwater pumping. And this was presented at the hearing  
10 to show impacts. We showed impacts to our water rights in  
11 the form of ICS. This is not a conflicts determination.  
12 Some parties are arguing that, oh, well, you made a conflicts  
13 argument. We weren't allowed to do that. That wasn't what  
14 the State Engineer allowed us to do at the hearing.

15 Okay. So the third legal reason why the decision  
16 is wrong is that the State Engineer used this consumptive use  
17 approach. So that's this Net Irrigation Water Requirement.  
18 We call -- in the water community we call this a haircut,  
19 that the State Engineer will reduce a water right based on  
20 what the water -- what the crops consumed. And they had this  
21 report that we talked about before done to figure out what  
22 that was in each valley. So --

23 THE COURT: Let me just ask a quick question. Back  
24 on Slide 64 where you had your expert prepare to show the  
25 amount of ICS that your client would lose, was the purpose

1 of that to persuade the Nevada State Engineer that it should  
2 really be more in the four to six thousand range as opposed to  
3 the eight thousand range? What was the purpose of presenting  
4 that evidence?

5 MR. TAGGART: I think that this was presented to  
6 show that if it's four to six thousand, this is still  
7 happening --

8 THE COURT: I see.

9 MR. TAGGART: -- even with that amount of pumping  
10 and this needs to be addressed. And I'll show you -- maybe  
11 I'll just go to it right now. If you go to page 77, this is  
12 from his report and it kind of describes why a lot of this  
13 evidence was put in. Let's just look at the last sentence.  
14 It says, "If the conflicts with senior water right holders are  
15 adequately addressed, the annual groundwater production from  
16 the carbonate aquifer should be managed between 4,000 to 6,000  
17 over the long term." So I think that's the point I was just  
18 making.

19 THE COURT: Okay.

20 MR. TAGGART: So back to this haircut.

21 THE COURT: Sorry. You are on Slide 65.

22 MR. TAGGART: On Slide 65. So a long time ago,  
23 like in the early 2000s, the State Engineer approved a change  
24 application that was only -- and he didn't -- so it was like  
25 a person had a water right to put water on a field to grow

1 alfalfa and it had X number of acre feet per acre, 4.5 or  
2 whatever. And then they wanted to take that water and move it  
3 to a subdivision of homes. And the State Engineer reduced the  
4 amount from 4-1/2 and he said I'm not going to give you 4-1/2  
5 at the new place, I'm going to give you less. I'm going to  
6 give you the amount the plant actually used at the new place.

7           And it got litigated. I was involved in that. And  
8 it led to a settlement that put a new law into the statutes,  
9 and that law is 533.3703. And it gives the State Engineer the  
10 ability to do what I just described, except on the Muddy River  
11 and the Virgin River. So there's a specific exclusion in that  
12 statute which was required to get it passed that the Muddy  
13 River and the Virgin River would not be places where the  
14 State Engineer could do a consumptive use reduction. And so  
15 that's the first reason why we think it was improper to use  
16 a consumptive use reduction.

17           THE COURT: So let me just ask, was it -- I mean,  
18 I note that it's in the statute, but was it specifically  
19 included because -- I think there's Muddy River and one other  
20 one.

21           MR. TAGGART: Virgin.

22           THE COURT: Yeah, Virgin. Was that because those  
23 existed pre-statute?

24           MR. TAGGART: Yes. And I guess -- I can't speak for  
25 the legislators and why they voted for it that way, but yes.



1 And, I mean, ICS was in the wings at the time. I mean, I'd be  
2 speculating on exactly what led to it. But, yeah, they were  
3 excluded and that was a big part of why the bill was able to  
4 ultimately pass.

5 Now, then this consumptive use haircut is also  
6 inconsistent with other decisions that the State Engineer  
7 made on the Muddy River. So there's -- a number of change  
8 applications were filed on the Muddy River where the State  
9 Engineer did not do consumptive use reduction. We think that  
10 shows, you know, that he's been arbitrary in this case. And  
11 what is really important is that on an annual basis ICS is  
12 certified by the State Engineer and the Bureau of Reclamation  
13 and the calculation for the certification of ICS uses the full  
14 duty of the Muddy River water rights. And the State Engineer  
15 signs that. You know, he signs off on that report. And so  
16 this is a completely inconsistent methodology from how those  
17 water rights are treated in the ICS report. So it's arbitrary  
18 and capricious, I guess you'd say, because it's so different  
19 for no reason.

20 Okay. Then the fourth reason why this is unlawful  
21 is that it essentially reallocates water and gives it to  
22 juniors. So by saying that 8,000 acre feet is not being --  
23 is not conflicting with the rights on the Muddy River, he's  
24 saying that juniors can continue to pump that water. And so  
25 he's taken 8,000 acre feet that used to be seniors' water and

1 giving it to juniors. The way a prior appropriation works  
2 is juniors get zero and seniors get 100 percent. And as  
3 Draconian as that might sound, that is the law in this state  
4 and it's been recently upheld by the supreme court. And so  
5 it's inappropriate to just take water from seniors and give  
6 it to juniors, you know, in that fashion.

7           So those are the four reasons why it's unlawful,  
8 in our view, for the State Engineer to make the conflicts  
9 determination that he did. It violates the decree. It's an  
10 impairment of vested rights. It's using consumptive use when  
11 you can't use consumptive use on the Muddy River. And it  
12 reallocates water in violation of the prior appropriation  
13 doctrine.

14           All right. So the last point is that factually the  
15 decision is not sound. And here we're going to shift over --  
16 I should have said this. You know, what I just argued, that's  
17 de novo review. Those are legal determinations the Court can  
18 look at in the first instance. But on these fact questions  
19 I'm about to talk about, the State Engineer has to have  
20 substantial evidence in the record to support his decision,  
21 and I talked a little bit about what that means before.

22           So given all the evidence in the record, is it --  
23 was it reasonable for the State Engineer to find that only  
24 28,300 acre feet is required to serve Muddy River decreed  
25 rights? All the other evidence, what the decree says, what

1 people have been receiving, how ICS has been approved, when  
2 you look at all these things, is it reasonable for him to say  
3 28,300 is enough and therefore existing pumping can continue  
4 without mitigation?

5           So, first of all, the first big problem he's got is  
6 that the evidence he relied on is not in the record. As Your  
7 Honor knows, the record was established at the evidentiary  
8 hearing. It came up to you and that's what you're restricted  
9 to look at. The Net Irrigation Water Requirement report  
10 wasn't in the record. The State Engineer's method where he  
11 calculated the 4.7 acre foot duty, that's not in the record.  
12 How he came up with 2,614 acres of land that gets water,  
13 that's not in the record. So -- and extra record evidence  
14 is necessary to look at to see whether his methodology was  
15 correct. So it's our view the Court can't even review this  
16 finding of fact because it doesn't have the evidence it needs.

17           Now, so factually speaking -- and I know we're  
18 getting tired and I want to finish this up, but this is really  
19 important -- Net Irrigation Water Requirement is the wrong way  
20 to look at how -- what water demands are on the Muddy River.  
21 And this is what experts would have testified about if this  
22 had been an issue to be heard. If an expert had come in and  
23 said, oh, we think it's 4.7, that's enough per acre, I would  
24 have brought in experts that would have said no, it's not,  
25 because you have to get water to the field before you can

1 irrigate. If at a field you're growing plants and the plants  
2 themselves require a certain amount of water, well, I get to  
3 deliver water to that field with water, and that has always  
4 been part of the water right.

5           The Muddy River is muddy because it has a lot of  
6 salts and soils in the water. Well, that has to be flushed  
7 out. You know, you can imagine how much that soil clogs up  
8 irrigation works. They have to flush out those systems every  
9 year. That water they have a right to. So flood irrigation,  
10 which is the standard in Nevada where you run water across a  
11 field and that's how you irrigate, not necessarily sprinklers  
12 and that sort of thing, that requires a lot more water than  
13 just what the plant requires. We talk in terms of irrigation  
14 efficiency. How much water does it take? How much do I put  
15 on the field versus how much does the plant use? And many  
16 times it's less than 50 percent efficient and that's an  
17 allowed use in flood irrigation in Nevada. So two to three  
18 times the Net Irrigation Water Requirement could in some cases  
19 be required to effectively irrigate a system.

20           All right. I said earlier the State Engineer  
21 ignored prior decisions where he determined that the river was  
22 fully appropriated and where he awarded water rights at full  
23 duty, so I'm not going to go into that, which is on page 71.

24           On 72, I mentioned this a little bit earlier, the  
25 State Engineer has continuously recognized that SNWA can use

1 the total duty of decreed Muddy River rights to create ICS,  
2 and that's always been the full decreed amount. And without  
3 any legal authority, he did not adhere to these past practices  
4 and did not recognize the fully duty in the decree.

5 Now, the duty calculation also ignores winter water  
6 use. I won't go into that anymore than just to say it. When  
7 that is a decreed use, the 4.7 doesn't give you enough water  
8 for that. It also assumed that everyone -- on Slide 74, we  
9 talked about this, it assumed that everybody in the area used  
10 water for irrigation, calculated the water that way, and  
11 that's not the facts on the ground.

12 On Slide 75, I'll just leave that to our briefs.  
13 It's not clear where the 4.7 came from because the river runs  
14 through multiple basins and different basins have different  
15 NIWR numbers. And so somehow he had to come up with an  
16 aggregate. He had to add an average in these four areas.  
17 None of that math is in the record; none of that.

18 And so then the last point is that the acreage, the  
19 5,614 is not readily repeatable. I mean, normally whenever  
20 someone testifies as an expert, you've got to be able to  
21 repeat their work. Otherwise, you know, that's something  
22 that you'd ask them about on cross-examination. The parties,  
23 particularly Lincoln and Vidler, have made an effort to  
24 reconstruct the numbers that the State Engineer must have used  
25 to get to 5,614, but it's still unclear whether those are the

1 right methods. And it also requires a lot of analysis of  
2 outside record information. So that's -- we think that's  
3 improper.

4 So those are the factual reasons. I went through  
5 that quick, why the State Engineer doesn't have substantial  
6 evidence to support his decision there's no conflicts because  
7 his numbers just don't make sense.

8 So I said one hour and fifteen minutes; right?

9 MR. ROBISON: You are way over.

10 MR. TAGGART: Okay. Now, what I've got here on  
11 this slide is what was said in SNWA's submittal to the State  
12 Engineer. And an argument was made by the State Engineer that  
13 SNWA and the District waived or conceded to conflicts from  
14 existing pumping, and we didn't. I mean, the fact that we're  
15 not -- again, we thought it should be four to six. The State  
16 Engineer selected eight. I'll tell you in a couple days why  
17 we didn't challenge and say, no, it shouldn't be eight, it  
18 should be four to six. We felt like we could live with the  
19 eight as long as there were conditions, and those are in  
20 that rule. But we never said that we're waiving any claim  
21 of conflicts. I mean, we said it right here, that that has  
22 to be addressed.

23 So to finish, Your Honor, we think the conflicts  
24 determination should be reversed. We think 1309 can be upheld  
25 without it. We think mainly that it's outside the scope.

1 I think that's so clear that this was not something that any  
2 of us anticipated would be done. And then if you wanted to  
3 go beyond that, then you would look at these four problems  
4 legally that I've said exist with the conflicts determination.  
5 And then if that's -- you know, and then beyond that, there's  
6 factual problems with it and I went through those three  
7 things.

8 So for those reasons, Your Honor, I appreciate your  
9 time, and we ask that this part of the decision be reversed.

10 THE COURT: Thank you.

11 Donna, what's the time?

12 THE MARSHAL: 2:45 and 25 seconds.

13 THE COURT: Okay. And then I will give you an extra  
14 five minutes, since you were trying to figure that out, so  
15 we'll put it at 2:50 and 25 seconds. Okay.

16 Should we take a five minute break or do you guys  
17 want to proceed through? How do you feel?

18 MR. ROBISON: Five minutes would be perfect for us,  
19 Your Honor. Thank you.

20 THE COURT: Okay. So let's take a quick five minute  
21 break and then we'll come back.

22 (Court recessed from 11:20 a.m. until 11:28 a.m.)

23 THE COURT: Are we ready?

24 MR. ROBISON: Ready to go.

25 THE COURT: Okay. You may proceed.

1 MR. ROBISON: Is the Court ready?

2 THE COURT: I am.

3 **ARGUMENT BY COYOTE SPRINGS INVESTMENT, LLC**

4 MR. ROBISON: May it please, Your Honor. Kent  
5 Robison again for Coyote Springs Investment, LLC. I'm here to  
6 argue, Your Honor, on behalf of my client, but I will concede  
7 that I probably won't be as good as our briefs. I probably  
8 won't be as good as our petition. And most importantly, I  
9 won't be as concise and precise and persuasive as our proposed  
10 findings of fact and conclusion of law. They say probably  
11 everything I'm going to say today, Your Honor, but I feel  
12 compelled to embellish.

13 I'm going to divide my argument into four different  
14 areas. Overview. I want to go through a timeline of  
15 chronology to explain to the Court really the history of how  
16 we got here. This is my fifth year of litigating with the  
17 State Engineer's Office and there's some history to talk  
18 about in this case.

19 I want to talk about the statutory authority, most  
20 importantly, or more correctly stated, I want to talk about  
21 the lack of statutory authority. I want to talk about prior  
22 appropriation. I agree with Mr. Taggart how that concept,  
23 which has been in effect in Nevada since the 1980s, has been  
24 obliterated in this case. And I also want to talk a little  
25 bit more in depth and with more specificity with the due



1 process violations that occurred at the hearing and tell  
2 you what has been the ramifications of what has occurred  
3 throughout the preparation and entry of Order 1309.

4 First, Your Honor, for a basic overview, I'd like  
5 to go to Slide 1, just to orient the Court as to where we are.  
6 Can I have Slide 1, please.

7 THE COURT: It's actually Slide 2. Slide 1 was the  
8 cover sheet.

9 MR. ROBISON: Oh, I'm sorry, Slide 2. Got it.  
10 All right. We put on Slide 2, actually, a little rectangle.  
11 Highway 93 going north, that's where the Coyote Springs  
12 development is. Coyote Springs has been endowed with water in  
13 this case since the 1980s. It has done everything the State  
14 Engineer has required it to do to preserve its water rights.  
15 It has gone through immense expenses to get subdivision maps  
16 approved. It's installed water treatment facilities. It's  
17 installed infrastructure. It's installed electrical below  
18 ground, wiring throughout. It's constructed a \$40 million  
19 Jack Nicholas signature golf course.

20 It has done so not without substantial reliance on  
21 the position that's been afforded us by the State Engineer's  
22 Office. We started this process a very long time ago and  
23 every step of the way we were getting approvals from various  
24 regulatory agencies throughout Clark County and indeed in  
25 Lincoln County, including those of the State Engineer.

1           And so we stand here realizing that there's  
2 substantial equities involved in this case. Justice Pickering  
3 said it best in the *Happy Creek* case, in which she said  
4 equities are an important part of the water management in  
5 this state.

6           If I could show Slide 3, please. This is how the  
7 project looks on paper. This is what's been shown to the  
8 State Engineer. This is what's been approved and shown to the  
9 various regulatory agencies in Clark County and the State of  
10 Nevada, and that represents about \$300 million acquiring  
11 property rights and developing those rights. That's where we  
12 are in this scenario.

13           We put on Slide 4, Your Honor, a quote from Justice  
14 Pickering in the *Happy Creek* case. And the reason we're  
15 talking about the massive investment that my client has made  
16 on this project is in line with what Justice Pickering has  
17 said should be considered by this Honorable Court in analyzing  
18 this case. Fairness and equity are cardinal principles  
19 underlying ever enduring water management systems. And we  
20 don't dispute that until November of 2017. The State Engineer  
21 honored that proposition that's articulated by Justice  
22 Pickering in the *Happy Creek* case.

23           So what we're now taking is basically a position,  
24 Your Honor, that there's been more or less of a bait and  
25 switch in this case. And Coyote Springs Number 2, the large

1 chart, I also have an 8 by 11 for the Court's record -- if you  
2 could raise that up, Mark -- these are the 232 basins depicted  
3 in the state of Nevada by the State Engineer since 1968 when  
4 it and the United States Geological Survey mapped out 232  
5 basins. And we're talking about one. We're talking about  
6 Basin 210. We're not talking about a mega basin. We're not  
7 talking about a bathtub. We're not talking about obliterating  
8 the lines and boundaries of the basins designated by the  
9 State Engineer himself. We're talking about Basin 210. And  
10 it should not be confused with a mega basin which has now  
11 become a mega mess because of obliteration of specific basins.

12           So, Your Honor, we know that the State Engineer has  
13 put itself in a position where it giveth and it taketh. And  
14 the process by which it taketh has brought us here today. But  
15 I want to stress right now, Your Honor, in reaction to page 34  
16 of the State Engineer's brief that seldom do we see a party to  
17 a lawsuit so dismissive of the judiciary. They have indicated  
18 in their brief that perhaps this Court should not delve into  
19 science, because it is far more equipped to do so. Perhaps.

20           But seriously, 24 briefs, 10,000 pages of exhibits,  
21 experts, the findings of fact that we've all submitted, the  
22 arguments that you're going to hear for a week, and they have  
23 the audacity to say that you should defer to their analysis  
24 of everything in this case. What I'm here to say, Your Honor,  
25 adamantly as I possibly can, nobody can stand at this lectern

1 and tell this Honorable Court that it's not a judge's duty  
2 to interpret these statutes.

3           There are four branches of government. There's the  
4 State Engineer and three subsidiary branches of government.  
5 The State Engineer says we don't have to interpret the  
6 statutes by the plain meaning in the statutes. We get to take  
7 liberty. We get to read into those statutes and you should  
8 show us deference and give us preference in our interpretation  
9 of statutes. Those are questions of law, Your Honor. They're  
10 not entitled to deference. They're not entitled to  
11 preference.

12           This Honorable Court is the one that interprets the  
13 statutes that apply to this proceeding. And this Honorable  
14 Court is the one that makes the findings with respect to  
15 whether or not the proposition, Order 1309, is arbitrary,  
16 in violation of existing procedures and law. This Honorable  
17 Court is the only one, based upon the evidence, the briefs and  
18 the arguments, that determines whether this is a capricious  
19 act. And this Honorable Court is the only one, not the State  
20 Engineer, that determines whether or not its findings are  
21 supported by substantial evidence. Those are judicial  
22 determinations and no one should stand here and tell you that  
23 you don't have enough knowledge or information so that you  
24 would have to yield to some interpretation from a party in a  
25 lawsuit.

1           So with that, Your Honor, I'd like to go to Slide  
2 11. This is the timeline. And it gets a bit confusing, but  
3 I want to walk through it. It goes like a clock.

4           THE COURT: Okay.

5           MR. ROBISON: And the bewitching hour that started  
6 this thing, at least for this, Your Honor, is not on there,  
7 but it's the 1800s when the prior appropriation doctrine was  
8 adopted by the State of Nevada, like most western states.

9           But the 1983-84 time frame, according to the 1169  
10 Order, the understanding about the hydrology and the area of  
11 Basin Number 210 was unknown. It was chaos.

12           Next slide please. Your Honor, on this particular  
13 slide, this is a page out of 1169 and it's an articulation  
14 of how much information was missing, how much confusion there  
15 was, how much inaccuracies there was. And at this time, Your  
16 Honor, there were approximately 100, maybe 102 applications  
17 pending for approval. And 1169 said because there's such  
18 essentially chaos and lack of understanding about the  
19 hydrology with respect to these applications, we're going to  
20 do a pump test.

21           But those applications, Your Honor, they were filed  
22 on a basin-by-basin basis. They were filed, some in Coyote  
23 Spring Valley, and they were filed in Garnet Valley and they  
24 were filed in Hidden Valley, but they were filed on a basin-  
25 by-basin basis. And that's required by statute. If you're

1 going to apply to pump groundwater or with a well, you have  
2 to apply with respect to that particular basin.

3           So the State Engineer took these individual basins  
4 and said we're going to analyze this and we're going to order  
5 a pump test back in 19 -- excuse me, 2002. Can I go back to  
6 11, please.

7           In 2001 there was a hearing that led to the issuance  
8 of 1169. So what happened after 2002 with respect to this  
9 order? You've got five parties pay for pumping these various  
10 wells to see what effect that might have. There was nothing  
11 in there to determine whether faults exist. There was nothing  
12 in there to determine the geochemistry of the water to see  
13 whether the isotropic characteristics of the water in Kane  
14 Springs were anywhere consistent with the geochemistry of the  
15 water in Warm Springs. There was no ask or order to analyze  
16 what water came off the Sheep Mountains in the east -- excuse  
17 me, the west to see whether or not there was water that came  
18 out of those mountains that wasn't accounted for in north-  
19 south flow of the hydrological system. There was just go pump  
20 and let's take a look at the pump. No science, just pump.

21           And so we go forward. In 2006, Your Honor, my  
22 client, based upon a biological opinion, entered into the MOA.  
23 And what we did, Your Honor, based upon the desires of the  
24 United States Fish and Wildlife, is we gave \$200,000 to help  
25 promote protection of the Moapa dace. We gave 460 acre feet

1 from our 460 that the State Engineer had permitted us to use.  
2 We gave that up so that the dace had a habitat. Now, like Mr.  
3 Taggart said, one acre, 46 stories tall, per year, for months  
4 for the habitat for the Moapa dace. And we actually thought  
5 that was benevolent. Well, I thought we were doing a good  
6 thing, a good environmental thing, and we did.

7 Well, after that, Your Honor, in 2007, Ruling 5712  
8 came out. And oddly enough, Your Honor, what it said is that  
9 there's not substantial evidence to include Kane Springs in  
10 the 1169 pump test. They talked about a fault. They talked  
11 about the hydrological connection. But the finding in that  
12 order, that ruling is that there is not substantial evidence  
13 to justify including Kane Springs in what now is referred to  
14 as a mega basin, a super basin, but putting specific basins  
15 into one what they now call administrative unit. But that  
16 was a basin-by-basin determination when 5712 came out; very  
17 specific.

18 We then start the pump test in 2010. And I think  
19 you're absolutely right, Your Honor, I think it was about  
20 14,000, maybe 16,000 -- 14,000 acre feet pumped for a 25-month  
21 period of time. And only from pumping were determinations  
22 to be made. So after the pump tests were completed, what  
23 happened? What happened was that the State Engineer asked for  
24 input and that input was then put into the State Engineer's  
25 analysis of what it was going to do as a result of the test.

1           So in 2014, out came the rulings. Your Honor, the  
2 rulings didn't come out for one bathtub. The rulings came out  
3 on a basin-by-basin analysis. And the one that affects us,  
4 of course, was the Coyote Springs applications. And if you  
5 go through, Your Honor, the rulings, and the rulings are  
6 very important. First of all, they say we don't have much  
7 information. We don't have significant information. But what  
8 we have on each application, over 100 applications in these  
9 various distinct and separate basins, is the reoccurring  
10 statement that this order denying all 100 or 102 applications  
11 for water is made to protect existing water rights. There's  
12 not one word in those 12 rulings that say you can't have what  
13 we've already permitted you to have. There's not one ruling  
14 that says your water rights are going to be restricted or  
15 limited or reduced or curtailed.

16           Each and every one of those rulings for each one  
17 of these distinct basins say that we are denying the water  
18 applications to protect existing rights. We had existing  
19 rights. At that time, Your Honor, because we had already  
20 given the 460 to the dace habitat, we were left with 4,100  
21 acre feet. More importantly, we have rights to 1,000 acre  
22 feet in Kane Springs. So, you know, silly us, we actually  
23 thought that was a green light, let's go, and we turned on  
24 the faucet.

25           THE COURT: Let me ask you a question, then. Is it



1 your position that if you have an existing water right, it can  
2 never be curtailed --

3 MR. ROBISON: No.

4 THE COURT: -- by the Nevada State Engineer?

5 MR. ROBISON: No. But I'm saying there's a process  
6 for that.

7 THE COURT: Okay.

8 MR. ROBISON: You know, Your Honor, that's a very  
9 astute question. Everybody has treated this -- Mr. Taggart  
10 just mentioned it's a curtailment. They didn't follow the  
11 curtailment process articulated by the statute. Everybody  
12 knows we've lost our water rights, in effect, but this wasn't  
13 processed as a curtailment proceeding.

14 But do I agree that there can be a reduction? Yes.  
15 And the statute that says that, Your Honor, says within the  
16 basin. It doesn't say within a mega mess created for a mega  
17 basin. It does isolate that curtailment process to a basin.  
18 And it's a very good point Your Honor brought up. We agree.

19 THE COURT: Let me ask you, because, you know, the  
20 Nevada State Engineer and other parties argued that your  
21 position has a very narrow reading of the word basin.

22 MR. ROBISON: Well --

23 THE COURT: So are there -- is there other support  
24 that you have that shows that basin can only mean one basin,  
25 as opposed to a whole management district?

1 MR. ROBISON: Well, first of all, let's go to this  
2 Exhibit 2 for CSI. That's on the website of the State  
3 Engineer. That tells the entire world what it's a basin-by-  
4 basin analysis. It identifies 232 basins. And right down in  
5 the lower half corner it articulates each single basin. Now,  
6 Your Honor, I understand that the State Engineer has taken  
7 this position in this case, well, a basin is a basin. A basin  
8 is anything that we say a basin is. That's what they're  
9 saying. That's what they're saying here.

10 We've showed you what they've said in previous  
11 litigation. One. It is undisputed that groundwater is  
12 managed on a perennial yield basis for the entire hydrographic  
13 basin. The system contemplated by the statutes allows the  
14 Nevada State Engineer to take various acts on a basin-wide  
15 basis. A permit is required before a well may be drilled in  
16 a designated groundwater basin. There are 232 designated  
17 groundwater basins on CSI 2. 534.035 allows establishment of  
18 groundwater boards for individual basins. The State Engineer  
19 has identified 232 administrative groundwater basins.  
20 Patently reasonable to manage the basins on the basis of its  
21 perennial yield to ensure the basin will remain in balance.  
22 That's important that a distinct basis remain in balance based  
23 upon perennial yield.

24 We didn't say this. These are the words of the  
25 State Engineer in a prior case, Your Honor. They argued this

1 to the court. And now they go, forget what we said in the  
2 past, we didn't mean it. What we meant to say is that a basin  
3 means what we say a basin means.

4 Here's the challenge. There's more than 14 statutes  
5 in Chapter 533 and 534 that use the term basin. A basin.  
6 Within the basin. Think back, Your Honor, what the reliance  
7 factor is. How many people, how many water users, how many  
8 courts, the legislature has relied on the distinct basins  
9 being the operative unit for water management? We've all  
10 relied on that. Everything we've done at Coyote Springs is  
11 predicated on our rights and our seniority in Basin 210.

12 So they say, well, contrary to what we said in  
13 previous cases, we can now obscure the lines. And here's how  
14 that happened. I was involved in these proceedings before  
15 there was a Lower White River Flow System. Now what we have  
16 instead, Your Honor, is this is going to be an administrative  
17 unit, so we are not bound by the statutory reference to  
18 basins. We're not bound by the distinct basins that have been  
19 set up by the Nevada State Engineer for decades.

20 What we all know, Your Honor, is what they put on  
21 your lap, it's a case of first impression. It's the first  
22 time any judge has heard mega basin. This is the first time  
23 any court has been confronted with a newly-created excuse to  
24 abolish rights by creating a super basin. This is the first  
25 time a court has been asked to look at all the positions taken

1 by the State Engineer in various cases where it's a basin-by-  
2 basin analysis and change that at the convenience of the State  
3 Engineer's wishes so that it can effectually reduce our senior  
4 rights to junior rights and thereby take our rights.

5 They cite four statutes in essence, Your Honor, that  
6 they rely on to say that they have the right to create this  
7 administrative unit that is no longer a basin. What they're  
8 saying, Your Honor, is that by creating the mega basin we  
9 become a sub-basin. A sub-basin is not addressed in the  
10 statutes. It's not addressed in any cases.

11 And so what it does is creates legislation. The  
12 Legislature makes the laws. This Honorable Court as the  
13 judiciary interprets those statutes without deference to  
14 anyone. And the State Engineer, the executive branch enforces  
15 the law. This is a pretty simple equation because they can't  
16 find a supreme court decision. They can't find any case  
17 authority that justifies this obliteration of boundaries.  
18 They can't find a statute. So they say, well, we get  
19 preference in interpreting these statutes. Not true.

20 So they say we're going to look at four statutes  
21 that says we can do this. And basically the philosophy,  
22 Your Honor, is novel. It offends Justice Scalia's article  
23 on how to interpret statutes. They say, surprisingly, if  
24 not astonishingly, if a statute doesn't say we can't, we can.  
25 But that's contrary to very fundamental, rudimentary statutory

1 interpretation. We are obligated when we interpret or argue  
2 interpretation to follow the plain language, the plain meaning  
3 of the words used in the statute. And the case law says that  
4 which is not permitted is expressly and implicitly rejected.  
5 So they can't say because a statute doesn't say we can --  
6 excuse me, that we can't, we therefore can create a mega  
7 basin.

8           The first statute that they rely on, Your Honor,  
9 is the policy statute, 533.024. And it says the court should  
10 show deference to the State Engineer; they know water. They  
11 do. They're not consistent about how they know water and  
12 sometimes they know water and sometimes they don't in prior  
13 cases. And you'll see in later arguments that they have  
14 reversed themselves from this case to a more recent case,  
15 completely reversed themselves, and I'll let Vidler argue that  
16 or Lincoln County. But the policy does not mention anything  
17 about being able to simply disregard the plain language of  
18 these statutes. It doesn't say that.

19           In fact, Your Honor, I want to point out this. The  
20 policy statute, 533.024, reads as though it gives power to the  
21 State Engineer, and indeed it does. The very next statute,  
22 533.0241: Duty of State Engineer to reserve certain amount  
23 of groundwater. Important statute. It follows the policy  
24 statute. The first three words are dispositive. "For each  
25 basin" is how the next statute starts with regard to the

1 State Engineer's duty to manage each basin with regard to the  
2 10 percent hold. Each basin. How easy is it for the State  
3 Engineer to say those words don't mean anything to this  
4 Honorable Court because they've already determined what the  
5 basins are. The Legislature has referred to these basins.  
6 The courts have referred to these basins. And we are  
7 referring to our basin, Number 210, the one where we were  
8 permitted to pump groundwater. 4,100 acre feet of groundwater  
9 has now basically been curtailed and taken as a result of  
10 1309.

11           The other statute that they rely on, and this is  
12 about as big a stretch as we're going to be confronted with  
13 in this case, they rely on 533.045. And that says State  
14 Engineer, you cannot manage water to violate a decree, a  
15 compact, a statute or an agreement. Unbelievably, the State  
16 Engineer says, well, therefore we can create a mega basin,  
17 based upon the language of that statute. Again, the statute  
18 says what the State Engineer cannot do. And they say because  
19 this statute doesn't say we can't create a mega basin for  
20 joint administration, we therefore can. A simple reading of  
21 this statute cannot in any way be interpreted, given the plain  
22 language of the statute, to say you can do something else when  
23 we're telling you what you can't do.

24           They rely, too, on what I call the investigation  
25 statute in 534, that the State Engineer is permitted to

1 conduct investigations. That's what they want the Court to  
2 understand that statute says, but that statute goes on to  
3 say within -- the investigations may occur within a basin.  
4 The State Engineer would have you ignore that very crucial  
5 language and say that you read these all together, all of  
6 these statutes jointly; therefore, we can do whatever we want  
7 to do without any judicial scrutiny whatsoever.

8           That is not what this case is about, Your Honor.  
9 We're relying very faithfully and adamantly on the statutes  
10 and as they read word for word, and ask this Court to  
11 interpret those statutes with respect to whether or not the  
12 State Engineer has statutory authority to change the course  
13 of history and therefore extinguish and give a death sentence  
14 to Coyote Springs because they're the ones that set us up for  
15 this situation.

16           Your Honor, I have about another half hour. Can we  
17 take our lunch break at this time? No?

18           THE COURT: I don't actually care. How does  
19 everyone else feel? Would you like to take the lunch break  
20 now or would you like to go through? How are you feeling?  
21 Would you like to take the break now?

22           MR. ROBISON: Oh, I feel like I missed the Super  
23 Bowl, Valentine's Day. Other than that, I feel great, Your  
24 Honor, but I would like to recess.

25           THE COURT: All right, that's fine. So we'll take

1 an hour recess.

2 MR. ROBISON: That would be fine.

3 THE COURT: All right. And then we'll be back at  
4 one o'clock. Thank you.

5 (Court recessed from 12:00 p.m. until 1:00 p.m.)

6 THE COURT: Let me know when you're ready.

7 MR. ROBISON: I'm ready, Your Honor.

8 THE COURT: Okay, go ahead.

9 MR. ROBISON: Your Honor, I want to step back,  
10 without being redundant. I cannot stand acronyms, but I want  
11 to go back to what I referred to as the MOA where the 460 acre  
12 feet were dedicated back in 2006. I want to point out that  
13 at that time we also entered into a contract, a multi-party  
14 contract with Las Vegas Valley Water District, and that  
15 resulted in the creation of the GID. The GID became in place.  
16 It was going to be the entity managed by Las Vegas Valley  
17 Water District to provide the hookups, the water to our  
18 facility.

19 The reason that's important is because that was a  
20 component of the development that had been approved here in  
21 Clark County, which basically becomes an ordinance; that our  
22 rights and our position in Coyote Springs becomes an ordinance  
23 pursuant to an approved development agreement.

24 Now let me move back to where I was before the lunch  
25 break, Your Honor. I was talking about the impact of the



1 rulings and the fact that the rulings state very specifically,  
2 each and every one of them, and 6511, which is page -- the  
3 rulings please, Mark. No, those are not the rulings. Let me  
4 move on.

5           Once the findings were made by the State Engineer  
6 in 2014 that the applications would be denied to protect  
7 existing water rights, money started pouring into the  
8 development. A wastewater facility was constructed; approved  
9 by the State Engineer. A retention dam was constructed, about  
10 twenty million dollars worth; approved by the State Engineer.  
11 We were cooking, as they say. We were going forward. We're  
12 optimistic. We're pouring money into the project. And the  
13 State Engineer in 2014 to 2015 was our ally. And bear in  
14 mind, Your Honor, that there had been no science, there had  
15 been no technical data developed between 1169A -- excuse me,  
16 the rulings in 2014 until 1309.

17           So there we are proceeding in 2014, in no small part  
18 because of those rulings and the language of the rulings. We  
19 didn't get our applications granted, nobody did, but we got  
20 the green light.

21           In 2017, things changed inexplicably. A letter was  
22 sent to the State Engineer by our contracting party, Las Vegas  
23 Valley Water District, saying we don't think CSI has water.  
24 We want you to make that determination. Out of the clear  
25 blue. No scientific data to prove that or represent that.

1           Now, at this point in time, Your Honor, I want to  
2 take just a brief look at senior rights. Sixteen thousand,  
3 approximately, give or take, acre feet a year were permitted  
4 at that time for Coyote Springs Valley. Nine of that was  
5 purchased from us by SNWA, who was therefore junior. So of  
6 the remaining 7,000 acre feet, we had senior rights in 4,600  
7 acre feet. We were in a really good position in terms of  
8 seniority in Coyote Springs Valley where we got those permits  
9 and where we put them to beneficial use and we honored all  
10 the demands of the State Engineer. We were in great shape  
11 in terms of senior rights.

12           So in 2017, a letter from Las Vegas Valley Water  
13 District goes to the State Engineer. The State Engineer then,  
14 on May 16th, 2018, based on that one letter with no technical,  
15 no scientific backup, shut us down. Entered a moratorium on  
16 subdivision maps, a moratorium on construction permits out of  
17 the clear blue sky in a letter sent to us saying you're shut  
18 down. Unless you can find water from another source, no  
19 subdivision maps will be signed off on by the State Engineer.

20           Your Honor, as harmful and as financially painful  
21 that was, it's more important in this hearing to show the  
22 total lack of scientific justification for certain decisions  
23 that have been made for decades by the State Engineer.

24           THE COURT: So let me ask you, then, Mr. Robison.

25           MR. ROBISON: Yep.

1 THE COURT: If you're saying that there was a lack  
2 of scientific evidence in shutting you down, are you also then  
3 saying there was a lack of scientific evidence in granting you  
4 the permit?

5 MR. ROBISON: Yes.

6 THE COURT: So --

7 MR. ROBISON: You would think there would be  
8 scientific evidence to justify the permit.

9 THE COURT: Okay.

10 MR. ROBISON: Remember, there's 40,000 acre feet  
11 that was permitted by the State Engineer over the years.

12 THE COURT: And I assume that the actual Nevada  
13 State Engineer, the person, changes as, you know, one retires  
14 and the next one does -- and maybe one may be more detail  
15 oriented than the other. But then is it your contention  
16 that if there's a prior order by one stage engineer that a  
17 subsequent stage engineer cannot touch that prior order or  
18 adjust it?

19 MR. ROBISON: That is not our position.

20 THE COURT: Okay.

21 MR. ROBISON: Pete Morros, Hugh Ricci over the years  
22 has been the state engineer and has given permits. Your  
23 Honor, quite candidly, the permit itself says that the water  
24 can be restricted or limited. In fact, some of our water  
25 permits as they got transferred and assigned specifically

1 refer to 1169. So, yes, every water user is aware of the fact  
2 that the State --

3 THE COURT: That it's subject to change.

4 MR. ROBISON: The State giveth and the State can  
5 take it.

6 THE COURT: Okay.

7 MR. ROBISON: Provided the State taketh properly and  
8 in accordance with legislative authority. We don't dispute  
9 that, Your Honor. I don't think anybody that holds a water  
10 permit would dispute that.

11 But getting back to 2017, Las Vegas Valley Water  
12 District apparently had made a decision that the water wasn't  
13 there, based on what, we don't know.

14 But, May 2018, there was a letter written that says  
15 basically you're shut down. The development agreement that  
16 became an ordinance is immaterial. You're not going forward  
17 unless you find water outside of the basin. We challenged  
18 that. We filed a petition for judicial review. It was not  
19 fully litigated. We went to a settlement conference and the  
20 record shows that we settled. Part of that settlement was  
21 that the State Engineer agreed in good faith to process our  
22 applications.

23 Well, looking back, it looks like the plan was,  
24 in fact, to do just the opposite. We were then told that  
25 whatever water we found would have to be there for perpetuity,

1 somewhere between the Big Bang and when Mars collides with  
2 Jupiter. No one knew what perpetuity meant.

3           Then 1303 comes out, Your Honor, Order 1303. And  
4 it was an interim order and it said -- I'm going to paraphrase  
5 and condense what I believe it says. We still don't know  
6 what's going on out there. It has admissions throughout that  
7 interim order that substantially more investigation and data  
8 is necessary to determine what the hydrological aspects of  
9 this area of Nevada are. But even though we don't know,  
10 we formally impose through that interim order a moratorium.  
11 No building permits, no subdivision maps, no construction.  
12 Acknowledging that no scientific data has been done since a  
13 pump test, you're shut down.

14           Well, not surprising to you, I'm sure, that we filed  
15 another petition for judicial review and we call them on it.  
16 We said, How can this be? How can you be issuing moratoriums  
17 when, in fact, you're saying that we have to do investigation  
18 and technical inquiries into the actual propensities of the  
19 hydrological consequences going on in those valleys?

20           Again, after that we had so much invested in this  
21 project. So Order 1303 comes out. We get procedurally bogged  
22 down and we were set for the hearing on 1309, so that action  
23 is stayed. So 1309 then, Your Honor, as I've argued, violates  
24 the statutes that are in place and we argue that there are  
25 no statutes to authenticate or to allow what they've done.

1 A decision --

2 THE COURT: Let me play devil's advocate for just  
3 a minute. So you're saying that there are no statutes that  
4 allows them to create a mega basin?

5 MR. ROBISON: I'm saying there's no statute that  
6 even makes mention of a mega basin.

7 THE COURT: I understand that. But if I go to NRS  
8 534.120, which has to do with the State Engineer authorized to  
9 make rules, regulations and orders when groundwater is being  
10 depleted in designated areas; preferred uses of water;  
11 temporary permits to appropriate water; revocation of  
12 temporary permits; restrictions placed on certain wells, it  
13 doesn't say within a basin. It says within an area that has  
14 been designated by the State Engineer, blah, blah, blah, you  
15 know, may make the rules, regulations and orders. I should  
16 say it says, "Within an area that has been designated by the  
17 State Engineer, as provided for in this chapter, where, in the  
18 judgment of the State Engineer, the groundwater basin is being  
19 depleted." Now, it says --

20 MR. ROBISON: I'm sorry. The groundwater basin?

21 THE COURT: It says where the groundwater basis is  
22 being depleted.

23 MR. ROBISON: Right.

24 THE COURT: But area can be outside of that basin  
25 and he could be considering other basins.

1 MR. ROBISON: Your Honor, that --

2 THE COURT: What is your position?

3 MR. ROBISON: It says basin.

4 THE COURT: Well, it says, "Within an area that has  
5 been designated by the State Engineer, as provided for in this  
6 chapter, where, in the judgment of the State Engineer, the  
7 groundwater basin is being depleted." Now --

8 MR. ROBISON: The groundwater basin in that context  
9 refers to Basin 210. We're entitled to that. Everything  
10 we've ever done is based upon that particular basin. And,  
11 Your Honor, if you look at the difference between area, and  
12 statutory interpretation principles tell us that if it's  
13 further defined by basin, then that's the way you interpret  
14 the statute. You don't just --

15 THE COURT: So your position is area has to be  
16 within a basin, not that the area could actually extend  
17 outside of the basin?

18 MR. ROBISON: Every -- Yes. Yes.

19 THE COURT: Okay.

20 MR. ROBISON: Why? Because not only that statute  
21 that refers to basin, it is supported by all the other  
22 statutes that refer to a basin.

23 Your Honor, the State Engineer has a presence in  
24 Carson City. That happens to be where the Nevada Legislature  
25 meets every two years. And we know that they have a presence

1 in the creation of legislation. Why is it then, given the  
2 legislative presence of the State Engineer, why isn't there  
3 a legislation, a piece of legislation that says more clearly,  
4 more succinctly, more precisely in plain words, yes, the State  
5 Engineer can expand the creation of basins to include several  
6 basins; it can combine basins. Your Honor, the word combine  
7 is so easy to have the Legislature -- if I was sitting in  
8 front of the judiciary committee it would be very easy to say  
9 we just need that one word, senators, and that is combine.  
10 Why is that not there? Because there's no legislative intent  
11 to do that.

12           And this is all hindsight because, again, this is  
13 the first time in history they've done this and now they're  
14 trying to reach back in and scrutinize the statutes, Your  
15 Honor, that were used forever on a basin-by-basin basis and  
16 saying where can we find some language that might justify what  
17 we've done. Oh, area. And there's others that they've tried  
18 to say, well, within the basin means within a bathtub that  
19 we create the basin. It still gets down to this fundamental  
20 proposition.

21           THE COURT: So then let me ask, then, as to the --  
22 what is it, 533.024, the legislative declaration; right?

23           MR. ROBISON: Yep. The policy.

24           THE COURT: It's the legislative declaration that  
25 -- you know, "It is the policy of this State to manage



1 conjunctively the appropriation, use and administration of  
2 all waters." Are you saying that that really has no teeth?

3 MR. ROBISON: All waters in the state of Nevada.

4 THE COURT: Right.

5 MR. ROBISON: The next statute. A basin can be  
6 managed by the State Engineer. They go hand in hand, Your  
7 Honor. Just because they have a legislative articulated  
8 policy that they manage all waters in the state of Nevada,  
9 which we agree --

10 THE COURT: Right.

11 MR. ROBISON: -- of course they do. I think the  
12 management is very hard.

13 THE COURT: But you're saying that there's no  
14 statute that gives them the authority, then, to expand outside  
15 of the basin-by-basin designation?

16 MR. ROBISON: Yes, Your Honor. On the other hand,  
17 there a multitude of statutes that say a basin, within the  
18 basin.

19 THE COURT: Right.

20 MR. ROBISON: And we cited a case where the State  
21 Engineer specifically refuted an ability to consider the  
22 hydrology of an adjoining basin when the State Engineer was  
23 considering the management of a part of another basin. And  
24 I said you can't do that. They can't do that. But everything  
25 they couldn't do and they have agreed that they can't do over

1 the years has suddenly changed with 1309. Suddenly changed  
2 with 1309.

3           If there is a violation of established rules of law,  
4 and we argue, as you know, these statutes are rules of law,  
5 that these statutes are interpreted solely and exclusively  
6 by this Honorable Court, if there's violations of the law or  
7 it's contrary to evidence or established rules of law, that  
8 decision is capricious. The burden, then, on CSI is to say  
9 the mega basin is contrary to the statutes that have been  
10 in place and upon which we relied and they have relied for  
11 decades. If a decision is made without regard to the facts,  
12 and in this case I'm saying facts is the application of the  
13 applicable statutes to a proceeding like the 1309 hearing,  
14 not the 1303 hearing, or if it's without consideration of  
15 circumstances fixed by rules or procedures, it's arbitrary.

16           Think for a moment, Your Honor, the procedures that  
17 we have followed so long in these various basins to get our  
18 permits, to get rulings, to get orders, all basically a basin-  
19 by-basin situation, a basin-by-basin analysis. This 1309  
20 decision, then, has been made without consideration of those  
21 procedures, and that's the very definition of arbitrary. And  
22 obviously we're asking that you impose that kind of reasoning  
23 in this case.

24           It wouldn't have taken that much to say to the  
25 Legislature we need the legislative authority to combine

1 basins for conjunctive management. The fact that it's not  
2 there suggests that it's not there for a reason; that there  
3 is not mega basin expressed authority. There is not combining  
4 basins for administrative units in the statutes. And  
5 therefore, it fits right on all fours with the definition of  
6 both capricious and arbitrary.

7 Your Honor, I'd like to move, if I could -- but let  
8 me back up a moment. What's most problematic about this is  
9 the reliance factor.

10 THE COURT: I think you've made that clear.

11 MR. ROBISON: Yeah.

12 THE COURT: You've talked about your client spending  
13 millions of dollars, relying on the fact that it would be on a  
14 basin-by-basin situation and that you had senior water rights  
15 in the basins that you --

16 MR. ROBISON: I want to expand that.

17 THE COURT: Okay.

18 MR. ROBISON: The reliance is not just CSI. The  
19 reliance is on every single party that is part of the supreme  
20 court decisions that you've read. The reliance is on behalf  
21 of regulatory agencies. The reliance is on behalf of all  
22 water users. This system has been in place and been relied  
23 upon until 1309. 1309 has turned that history on its head.

24 The prior appropriation, Your Honor, is very simple.  
25 I want to do some math to illustrate how 1309 violates the

1 prior appropriation doctrine. I need a map and 34 will do,  
2 or 33 even better.

3 THE COURT: Oh, wow, that's fancy.

4 MR. ROBISON: We have 33 up --

5 THE COURT: We do.

6 MR. ROBISON: -- correct; Mark?

7 I.T. TECHNICIAN: Yes, we do.

8 MR. ROBISON: So, Your Honor, in Coyote Springs  
9 Valley, Basin 210, there's about 16,000 acre feet per year  
10 appropriated. And as I said, we have very high priority  
11 there. There's one user, Bedroc, that had a higher priority  
12 than us, four hundred and some sixty feet they had because of  
13 their vested rights, but right under that is Coyote Springs,  
14 4,600 acre feet priority -- priority in Basin 210. And go  
15 south to either Garnet Valley, California Wash, Garnet or the  
16 Black Mountains, once we combine these basins and there is  
17 a right in Garnet Valley that was acquired prior to us, we  
18 become junior. That's a taking. The cases that we've cited  
19 to you, Your Honor, the most important component of a water  
20 right is the seniority. That gives water rights its value.

21 Moreover, priority is a property right acknowledged  
22 by the decisions we've cited. Priority is very valuable.  
23 As Mr. Taggart pointed out, juniors are gone if there's a  
24 drought because of the importance and the significance of  
25 being senior. Obliteration of the boundary lines in this

1 mega basin context absolutely jeopardizes and destroys prior  
2 appropriation doctrine because we have become junior to  
3 someone who we never thought we were going to be junior to,  
4 and our rights are then jeopardized and taken because of  
5 the creation of a mega basin, which is an absolute clear  
6 violation, Your Honor, of the prior appropriation. And no one  
7 disputes in this case that our state is a prior appropriation  
8 state, as it should be. First in time, first in line. First  
9 in time, you've got your rights. We're there until you  
10 obliterate the boundary lines.

11           And if that would have gone to legislation, if they  
12 would have been in a position where they're asking for a bill  
13 to combine basins for conjunctive management, there would have  
14 been people lined up down the hall of that judiciary committee  
15 hearing saying, hey, what about my senior rights? You can't  
16 do that, Legislature. You will be abolishing the long-adopted  
17 prior appropriation. And they wouldn't have been able to do  
18 that unless there was a mechanism involved in that process  
19 to protect. There isn't in this case, which makes it further  
20 arbitrary and as much capricious as my previous argument  
21 because they have not protected valuable property rights.  
22 In fact, 1309 was implemented; within days after that our  
23 subdivision maps were denied for no water.

24           THE COURT: Let me ask you, then. So, you know,  
25 if in a situation like this where there's testing that's been

1 done that shows that there are -- I'll speak up a little bit  
2 -- that there are multiple basins that are interconnected and  
3 the water is being depleted, what would be the proper process  
4 for the Nevada State Engineer?

5 MR. ROBISON: Well, one, you could legislate. You  
6 could try to get the legislation to do what they've done, but  
7 they didn't think about that. Your Honor, these basins going  
8 up to Ely, that is what's called the Lower White River Flow  
9 System. That flow system goes up to Ely. It goes up ten  
10 basins. We know where the water comes from. And, yes, the  
11 basins are hydrologically connected, but they draw the line at  
12 the northern end of Coyote Springs Valley, knowing that water  
13 comes into that basin from the northern Delamar and Pahranaगत  
14 basins. We know there's hydrological connections to some  
15 extent. We know that.

16 Well, then why aren't they involved in the mega  
17 basin? Why doesn't the mega basin extend up to Ely so we  
18 can track all the hydrology and make sure that the dace are  
19 protected because we're not over-pumping and Pahranaगत  
20 Valley? The reason is is they haven't undone their perennial  
21 yield. But we know there's hydrological connections. That  
22 doesn't justify the exclusion of our rights in a particular  
23 basin when the statutes say that it should be managed by a  
24 basin-by-basin basis. We don't say that. That's what the  
25 State Engineer said in prior litigation. So we believe that,

1 Your Honor, the prior appropriation is also a big part of the  
2 statutory interpretation. Those basin-by-basin analyses in  
3 these statutes are there to help protect prior appropriation.

4 And finally, Your Honor, I don't think there's a  
5 whole lot of disagreement in this case with respect to the  
6 petitioners, most if not all of them except for a small  
7 minority say we got surprised. We have a little due process  
8 issue. And in this case, in addition to not being notified  
9 about the abolition of our rights, particularly our senior  
10 rights in this case, we have an issue where they're going to  
11 subject our senior rights to more senior rights in a different  
12 basin, which constitutes a due process issue in terms of a  
13 taking.

14 So, Your Honor, unless the Court has questions, I'm  
15 going to yield the floor to my colleague, Brad Herrema, but  
16 I appreciate your patience and attention.

17 THE COURT: Thank you.

18 MR. ROBISON: Thank you.

19 THE COURT: So I think this is still part of CSI's  
20 argument.

21 MR. HERREMA: Good afternoon, Your Honor.

22 THE COURT: Good afternoon.

23 MR. HERREMA: Can you hear me okay?

24 THE COURT: I can.

25 MR. HERREMA: Okay. Brad Herrema on behalf of CSI.

1 Mr. Robison talked about the lack of authority for the State  
2 Engineer to enter the order that he did, and so accordingly,  
3 we think the Court need not even reach the issue of whether  
4 substantial evidence supports the State Engineer's factual  
5 conclusions. But in the event that the Court does find that  
6 the State Engineer had authority to enter the order, the  
7 State Engineer's conclusions are arbitrary and capricious  
8 and they're not supported by substantial evidence.

9           Now, I can tell already today that you've read our  
10 briefs and you've spent time with this, so I'm not going to  
11 just repeat what we have in our briefing on substantial  
12 evidence. There are a few topics that I do want to explore  
13 this afternoon. And in thinking about Order 1309, I think  
14 it's helpful to me to think about the questions that we teach  
15 -- it's like my 7-year-old, you know, who, what, why, where,  
16 how. And so the what is 1309. One thing I've been struggling  
17 with as I've been getting ready for this trial is why. So why  
18 is it that the State Engineer has entered 1309 at this time  
19 as a final order in regards to these factual findings?

20           Mr. Taggart said earlier going into the 1303 hearing  
21 he knew that there was a two phase approach to this process  
22 and that we're going to do a factual finding in the first  
23 phase and then we're going to leave the management structure  
24 to another phase. And while I think maybe it's true that  
25 that approach developed or evolved as we got into things,



1 there was never any indication by the State Engineer that  
2 there was going to be an order like 1309, which is sort of  
3 halfway through the process. If you look at --

4 THE COURT: So are you saying that you were  
5 expecting then you would actually have a two phase process  
6 where they also -- where you also presented evidence about  
7 the claims before that order came out?

8 MR. HERREMA: I think if you look at Order 1303,  
9 ordering -- paragraph 1, page 13, it identifies what at that  
10 time was, I would say, the putative Lower White River Flow  
11 System. I know the State Engineer says they finalized it  
12 there. I don't think that was what everyone thought was  
13 happening in terms of the process. But what it says is: "All  
14 water rights within the Lower White River Flow System will be  
15 administered based upon their respective dates of priorities  
16 in relation to other rights within the regional groundwater  
17 unit." Now, that's a pretty clear idea of how they're going  
18 to manage water rights within the Lower White River Flow  
19 System. That's 1303. It's teeing up the 1303 hearing that  
20 we had September-October of '19.

21 But then we get Order 1309 and we get into the 1309  
22 process a little bit. Well, I guess we get the Order 1309,  
23 which is a final order, but it doesn't have any management in  
24 it. And so the question is why is it that the State Engineer  
25 is looking to enter an order now, 1309, that only talks about

1 these factual findings and doesn't take the next step to what  
2 the management will look like? You asked Mr. Robison, well,  
3 what should the State Engineer have done in regard to 8,000  
4 acre feet being allocated among all these basins? Well, what  
5 he should have done is gone basin-by-basin and found within  
6 that cap that there is this much available for appropriation  
7 in each of the individual basins, within what they now want  
8 to administer as this larger flow system.

9 THE COURT: Is that practical?

10 MR. HERREMA: It can be done and it is done.  
11 Determining how much water contributes -- you know, each  
12 basin -- it comes into each basin and goes out of each basin.  
13 That's something the State Engineer has done for a long time  
14 in terms of water budgets. Definitely practical, yes.

15 THE COURT: Okay.

16 MR. HERREMA: So getting back to 1309 and the  
17 question of why not. Why are we having these factual findings  
18 which the State Engineer had to know we would end up here on  
19 petitions or on a petition or petitions for a judicial review.  
20 So effectively there's a validation attempt at these factual  
21 findings now. Why is it being done that way?

22 Now, I spend a lot of time practicing in California  
23 as well. There's a statute in California called the  
24 California Environmental Quality Act. Environmental review.  
25 I'm sure folks in Nevada are glad they don't have to deal

1 with it. Attorneys in California might feel otherwise.  
2 But there's a concept under what we call CEQA that you can't  
3 segment the review of the impacts of a particular project by  
4 splitting it up into smaller pieces because what it risks is  
5 that you don't have review of the entirety of the impacts  
6 when you combine all the pieces together.

7           And so where we are now is we have sort of segmented  
8 this process and we didn't know going into the 1309 hearing  
9 that we were going to have an order that was just a final  
10 order based on the facts, but we've got it now. And so we  
11 have this segmented process where potentially the facts as  
12 the State Engineer sees them will be validated. And then if  
13 those are validated, the Court upholds those findings, then  
14 we go into a management phase, and the only thing left to do  
15 then would be vacate a future management plan. But we can't  
16 look at the management plan really in light of those factual  
17 findings because we don't see the whole picture together.  
18 It's been broken up into little bite-sized pieces, and so we  
19 can't see it all together.

20           And so why am I bringing this up at this point?  
21 Well, in regard to substantial evidence, this concept of why  
22 we have 1309 focused on just the facts, why is it segmented  
23 the way it is, well, we can't determine whether there's  
24 substantial evidence to support Order 1309 because of the  
25 lack of a definition about how it's going to be used. And it

1 begs the question that the Court might ask, that I asked, is  
2 there substantial evidence for something that we don't know  
3 what it's going to be?

4           And so thinking about the substantial evidence  
5 review, I want to talk a little bit about the way the State  
6 Engineer approached it and I was struck reading the State  
7 Engineer's brief where he told the Court that this is a  
8 situation where the State Engineer is entitled to something  
9 called peak deference. I've never heard of that term before  
10 this. But the State Engineer is telling the Court this is  
11 a place where you have to defer to the State Engineer's  
12 interpretation of what his powers are and then you also have  
13 to defer to his scientific expertise in determining whether  
14 there's support for his factual findings.

15           So the Court might have asked itself, well, what  
16 exactly is my role here if I'm just -- this is a peak  
17 deference situation? The State Engineer also reminded the  
18 Court that the State Engineer's decision is prima facie  
19 correct under the statute and characterized in his brief the  
20 petitioner's burden as extremely onerous. But that prima  
21 facie correctness is really just something that has to do with  
22 who bears the burden of proof in this case, which we do and  
23 we know we do.

24           And finally, the State Engineer characterized  
25 petitioner's arguments as simply asking the Court to violate

1 the standard of review basically by conducting any review  
2 at all of the State Engineer's support for his conclusions.  
3 But meaningful review of the State Engineer's determinations  
4 must take place. The process of judicial review of the  
5 State Engineer's decisions is absolutely necessary as it's  
6 fundamental to due process and to ensure that the State  
7 Engineer does not act in excess of his limited statutory  
8 authority.

9           So what is the standard of review for substantial  
10 evidence? Courts have said where the issues involve technical  
11 or complex scientific issues, the State Engineer's orders must  
12 be sufficiently explained and supported to allow for judicial  
13 review. Even under deferential substantial evidence review,  
14 courts must not merely rubber stamp agency action, but they  
15 must determine that the agency articulated a rational  
16 connection between the facts presented and the decision.

17           This Court reviews the State Engineer's findings  
18 for abuse of discretion, and abuse of discretion exists where  
19 the State Engineer's decision is arbitrary and capricious,  
20 as it's baseless or there's an apparent absence of ground or  
21 reason for the decision.

22           Now, what does substantial evidence mean? The State  
23 Engineer in his brief downplays what a substantial evidence  
24 requirement is. He says it's merely the amount of evidence  
25 a reasonable mind would accept as adequate. So this is not

1 a very high burden, apparently, in the State Engineer's  
2 estimation. Courts have said, though, that substantial  
3 evidence is that quantity and quality of evidence which a  
4 reasonable person could accept as adequate to support a  
5 conclusion. So it's not just that there be something in  
6 the record that supports the finding, which is absolutely  
7 necessary and we'll talk about that in regard to the 8,000  
8 acre foot cap, but it's also that the evidence in the record  
9 be of the quality that a reasonable mind would accept it could  
10 be relied on to support the conclusion. So in this case what  
11 that means is the quality of evidence is informed by whether  
12 the evidence is suitable for the purpose for which it's used.

13           And finally, in rendering decisions regarding  
14 available surface and underground water in Nevada, NRS  
15 533.024 states that it's the policy of the State that the  
16 State Engineer consider the best available science.

17           THE COURT: So on that point, it says that it  
18 encourages; right? It doesn't necessarily mandate the best  
19 available science. Correct?

20           MR. HERREMA: I don't have the full statute in front  
21 of me, but I'll take your word for it.

22           THE COURT: I have it. Hold on. So, 533.024,  
23 subsection (c) says, "To encourage the State Engineer to  
24 consider the best available science in rendering decisions  
25 concerning the available surface and underground sources of

1 water in Nevada." So to me that means they're telling the  
2 State Engineer we really want you to use the best available  
3 science, but it doesn't necessarily mandate that if there is  
4 other better available science that that has to be used.

5 MR. HERREMA: I think it's clear that the  
6 encouragement is to use it to the extent it can be used.

7 THE COURT: Okay.

8 MR. HERREMA: So, CSI has thoroughly briefed that  
9 at a high level the central problem with Order 1309 is that  
10 the State Engineer over-emphasizes and unreasonably relies  
11 on the 1169 pump test results. So not only does this narrow  
12 focus on the pump test results demonstrate that 1309 is not  
13 based on substantial evidence, but it also makes clear that  
14 the State Engineer didn't heed that instruction about using  
15 the best available science for decision making.

16 It's important to bear in mind that the purpose of  
17 the 1169 pump test was to determine not how to set boundaries  
18 for what some have called the mega basin or the super basin,  
19 not how to set a cap on the existing rights, but it was to  
20 determine how much water was available for applications that  
21 had been filed for additional appropriations.

22 The pump test was designed, as I said, to determine  
23 how much water was available for new appropriations. It was  
24 not designed to test the hydraulic connection or define any  
25 boundaries within the Lower White River Flow System, and the

1 parties were certainly not aware of the criteria that the  
2 State Engineer would use to later determine the closest of  
3 any hydraulic connection back when the 1169 pump test was  
4 developed. There's no mechanism in the pump test to allow  
5 parties to identify specific relationships among any of the  
6 wells or basins.

7           And it's fair to ask that if the water right holders  
8 had known at the time of the 1169 pump test that the data that  
9 they were gathering would be used for this purpose, whether  
10 they would have designed the test differently. Would they  
11 have put wells in different locations, included pumping in  
12 different locations in regard to geologic structures or  
13 alluvium versus carbonate rock?

14           And notably, there was no pumping in the Kane  
15 Springs Valley as part of the 1169 pump test. Mr. Taggart  
16 said earlier this morning the way to understand what happens  
17 in a system is to pump the hell out of it, but there wasn't  
18 any pumping in the Kane Springs Valley as part of the 1169  
19 pump test.

20           So what do we -- what can we learn from the 1169  
21 pump test results? Well, there's data from across multiple  
22 pumping zones located in six different basins. There's an  
23 average of almost 5,300 acre feet pumped from Coyote Spring  
24 Valley. Cumulative total of about fourteen and a half thousand  
25 acre feet. In total, 30 wells pumping at uncoordinated rates



1 and schedules throughout about 25-1/2 months. This results  
2 in a brief snapshot of time. It results in water level trends  
3 across a brief snapshot of time that don't reflect climate  
4 factors such as the period of wetness between 2004 and 2005,  
5 and they don't allow for a consideration of how structural  
6 barriers in the area impact pumping or the identification of  
7 specific relationships between either wells or basins.

8           Now, because those things were not included as  
9 design features in how the test was set up, the results can't  
10 pertain to those individual wells or individual basin  
11 relationships, either. And so interpreting the results as  
12 though all 30 wells have a similar affect on groundwater  
13 levels, spring flow or surface flow in the Muddy River springs  
14 area is incorrect.

15           When all the information about the existing flows  
16 in the -- before the 1169 pump test was done, there was  
17 information that had been gathered. Now, Mr. Robison showed  
18 that there was still a lot of information that wasn't  
19 understood, but there had been information developed previous  
20 to that. And so when we combine that information with natural  
21 and anthropogenic stresses such as evapotranspiration, spring  
22 flow, pumping, you can make an estimate of the water available  
23 for development.

24           But instead, the State Engineer myopically relied on  
25 the cause and effect analysis from the 1169 pump test, which

1 notably was interpreted differently by many different parties.  
2 At best, this 2-year aquifer test represents just a snapshot  
3 or a narrow glimpse of a groundwater system that may cycle  
4 between wet and dry cycles. At worst, these pump test results  
5 are unrepeatable and they suggest that all pumping in this  
6 1,100 square mile area affects one set of springs in the Muddy  
7 River spring area the same.

8 THE COURT: So let me ask. You're saying that the  
9 pump tests are unrepeatable. Are you saying that those  
10 entities that had those wells didn't keep an accurate log of  
11 how much water was pumping at what rate from what wells?

12 MR. HERREMA: No. I'm just saying that if you look  
13 at the snapshot in time and that's all you look at, sort of  
14 absent -- so context is key. If you look at the snapshot in  
15 time and say, well, these wells pumped this much and the water  
16 levels over here moved up this much but you don't look at that  
17 snapshot in the broader context, such as what was happening  
18 in terms of the climate, what was happening in terms of a wet  
19 period or a dry period --

20 THE COURT: So you're talking about like dry years,  
21 wet years, that kind of thing.

22 MR. HERREMA: Right.

23 THE COURT: Okay.

24 MR. HERREMA: I won't get into the six individual  
25 criteria one by one, but the State Engineer did, after

1 receiving all the evidence in the 1303 hearing process, set  
2 these six individual criteria that he said he could use to  
3 determine hydraulic connections. And while Order 1309  
4 attempts to address the fact that -- you've heard from many  
5 parties that these criteria were not developed and they  
6 weren't given to the parties ahead of time.

7 Now, the State Engineer says in Order 1309 that  
8 these are consistent with characteristics that were critical  
9 to the earlier rulings in 6254 through 6261 that Mr. Robison  
10 talked about. But that begs the question, if the State  
11 Engineer knew that these were the criteria and they were the  
12 criteria that were going to be used, why weren't they included  
13 in 1303, and why didn't they let the parties know that these  
14 were the criteria that were going to be used to evaluate the  
15 evidence that either they would be commenting on? Or in cases  
16 like CSI and Vidler and some of the other parties, they went  
17 out and gathered additional evidence.

18 THE COURT: So let me ask, you know, if you're  
19 talking about not letting the parties know what those six  
20 individual criteria were, how in your mind did that compromise  
21 your ability to present -- to have a full and fair hearing  
22 or to present evidence regarding that? Would that have been  
23 different in the hearing?

24 MR. HERREMA: Would which have been different?

25 THE COURT: Would what you had presented at the

1 hearing, the evidence that you had presented at the hearing,  
2 the arguments, would that have been changed somehow --

3 MR. HERREMA: I think we would have --

4 THE COURT: -- if you had known beforehand?

5 MR. HERREMA: I'm sorry. I think we would have  
6 gone back even further than the hearing itself to the reports  
7 that were submitted in advance and the work that parties like  
8 CSI and Vidler did where they went out and did things like  
9 geophysical evaluations. So one of the criteria talks about  
10 geological structures that have caused juxtaposition of  
11 carbonate rock aquifer with low permeability bedrock. If we  
12 had known that that was the sole criteria and that was going  
13 to focus on geological structures as opposed to some of the  
14 faulting evidence that CSI paid to have done, then we would  
15 have looked at that. We would have looked at the geological  
16 structure in light of that specific criterion and that  
17 language, as opposed to some more general faulting analysis  
18 that was done.

19 I think it was Georgia Pacific, in their reply brief  
20 they had what I thought was an apt analogy when they said it  
21 was as if there was an essay contest that was held. All of  
22 the essays were submitted and then the judges said this is  
23 -- we're only going to accept essays that are shorter than  
24 five pages. So if you knew what the criteria were before,  
25 you would have been able to provide better evidence, best

1 evidence, but also would have known what it was that the  
2 State Engineer was looking for.

3           Additionally troubling about these criteria is the  
4 fact that they don't necessarily lead to a unique result, so  
5 they're subjective in that they can be applied in multiple  
6 different ways. The State Engineer applied the criteria along  
7 a scale or a spectrum of what it calls weak connection to  
8 close connection, but the way it applied this estimation of  
9 what was close and what was weak or strong is arbitrary.

10           And even the State Engineer recognized the perils  
11 of using this subjective methodology. There was a proposal  
12 by the National Park Service that all adjacent hydrographic  
13 areas where any hydraulic interconnection exists, whether weak  
14 or strong, be included in the Lower White River Flow System.  
15 The State Engineer rejected that and said there has to be what  
16 they said was a reasonable and technically defensible limit  
17 to the geographic boundary. If the management were to be  
18 based on the entire spectrum of weak to strong hydraulic  
19 interconnection, then exclusion of an area from the flow  
20 system would require absolute isolation. As Mr. Robison  
21 talked about, we know that there are contributions from basins  
22 that are miles and miles north of the Lower White River Flow  
23 System that eventually reach the system.

24           But given the subjectivity of the State Engineer's  
25 labeling to describe things as either close or weak or strong

1 or direct, there is no reasonable or technically defensible  
2 limit to the boundary. Under the State Engineer's standards,  
3 every basin in the state could potentially be combined as  
4 long as there's some amount of contribution between the  
5 systems.

6           Determination of the boundary of the Lower White  
7 River Flow System, particularly where you have the State  
8 Engineer now looking to cap pumping, should not be so  
9 subjective or dependent on whoever it is that's applying those  
10 criteria.

11           In terms of the Kane Springs Valley, other parties  
12 will emphasize this, I think, further, but the primary reason  
13 the State Engineer includes the Kane Springs Valley is a  
14 subjective characterization of the hydraulic connection  
15 between Kane Springs Valley and Coyote Spring Valley as being  
16 close. And the State Engineer relied on results from the 1169  
17 pump test to find what he characterized to be a cause and  
18 effect relationship between pumping and the Lower White River  
19 Flow System and the Kane Springs Valley.

20           But the 1169 pump tests, as I said earlier, were not  
21 designed to show individual relationship between basins. And  
22 again, there was no pumping at all in the Kane Springs Valley  
23 during the 1169 pump tests. And if the State Engineer were  
24 going to rely on the 1169 pump tests for determining -- so  
25 strongly for determining what should be included in the Lower

1 White River Flow System, it sort of begs the question of why  
2 the State Engineer solicited additional input through the  
3 Order 1303 process when it did disregard that geological data  
4 that Vidler and CSI went out and did field tests to obtain.

5           And the State Engineer also does not, in making  
6 his determination, articulate why he should deviate from his  
7 findings in Ruling 5712 that the Kane Springs Valley at that  
8 time should not be included in the Lower White River Flow  
9 System for purposes of the 1169 pump test. In that ruling  
10 the State Engineer relied on carbonate water levels near the  
11 boundary between the two basins, Kane Springs and Coyote  
12 Spring, being about a difference between 50 and 75 feet. The  
13 1169 pump test did not refute that difference, a change in the  
14 water levels. But the State Engineer instead dismissed that  
15 difference in hydraulic ebb and found I think half a foot  
16 impact on water levels was enough to show that the two were  
17 closely related.

18           In regard to the aquifer recovery conclusions that  
19 the State Engineer included in Order 1309, these set the  
20 stage for his finding as to the long term annual quantity of  
21 water that could be pumped from the flow system. The State  
22 Engineer in evaluating what he calls aquifer recovery doesn't  
23 articulate why the recovery should be immediately prior.  
24 Why is it important to look for recovery to water levels  
25 immediately prior to the pump test?

1 THE COURT: You mean as opposed to the wetter years  
2 and that kind of thing?

3 MR. HERREMA: Right. Again, context is important.  
4 So if we're only looking at what happened in 25-1/2 months, it  
5 takes out of the equation other things that are happening in  
6 the system. It's not -- the pumping itself is not happening  
7 in a vacuum. There are other things going on. We know what's  
8 being pumped and we know the changes in water levels, but if  
9 we only look at that we don't take into account whether we're  
10 in a wet period or a dry period.

11 THE COURT: Well, I mean, so let me ask you this,  
12 because, you know, the recovery levels change, right, through  
13 time, don't they, depending on if it's been a wet year or if  
14 it's been a dry year, if there's been a long period of time  
15 where it's been dry? So wouldn't it make the most sense to  
16 have the recovery levels be more contemporaneous with the  
17 pump test?

18 MR. HERREMA: You can define a recovery level  
19 however you'd like. If you want to say it's immediately  
20 previous to when we started this pump test, that's fine, and  
21 you would know where to measure from. But what's lacking  
22 here is why is it necessary or why is it desired that water  
23 levels return to that particular level. If something else is  
24 happening in the system, like a drought, then on top of the  
25 pumping that's taking place you may have less water coming



1 into the system.

2           There could be other things that are going on,  
3 especially given the way these basins are all strung together.  
4 There could be other things going on up-gradient that might  
5 have an impact during that particular snapshot in time. So  
6 if we say, well, we have to get back to the point at which we  
7 started but we disregard other things besides just the pumping  
8 that took place during the 25-1/2 months, then that may not be  
9 appropriate to actually require or think that recovery itself  
10 is getting back to that same water level.

11           And I don't have the graph to present today, but we  
12 do have in -- in CSI's brief there is a -- it's Exhibit 19 to  
13 the opening brief. We have a chart that shows that there was  
14 a wet period those last couple --

15           THE COURT: It was I think 2004, 2005, something  
16 around there.

17           MR. HERREMA: I'm sorry. 2004, 2005 was the wet  
18 period. The last -- the 25-1/2 months of the pump test were  
19 in a dry period, the last -- the tail end of a dry period.

20           So as to the 8,000 acre foot cap, I do think it's  
21 important to understand the value of that, each of those acre  
22 feet. I think perhaps when we're talking about a quantity  
23 and we're throwing around numbers like 4,000 or 8,000 that  
24 maybe we lose the perspective of the value of each of those  
25 individual acre feet. And for parties like CSI trying to get

1 a subdivision map approved, each of those acre feet is very  
2 important. So having a range that varies by ten times, from  
3 4,000 to 40,000, that's a very big difference when one acre  
4 foot is so important to each of these projects.

5 And I think it's also helpful to look at what the  
6 basis for that 8,000 acre foot number was. It's a number  
7 that is intended to represent the long term annual quantity  
8 of water that can be pumped without conflicting with the Muddy  
9 River rights that Mr. Taggart was talking about earlier.

10 THE COURT: Well, it's 8,000 or less; right?

11 MR. HERREMA: You make an even better point.

12 THE COURT: Okay.

13 MR. HERREMA: But the basis for it is not -- it is  
14 an impact-based analysis. It's not an analysis that's based  
15 on looking at how much water is available in different parts  
16 of the Lower White River Flow System. It doesn't look at  
17 what's happening in each of the individual hydrographic basins  
18 that the State Engineer now wants to call sub-basins to the  
19 larger basin. There isn't an analysis basin-by-basin of how  
20 water moves through the system.

21 This is a really sort of a crude or rough justice  
22 approach of we can say that once we hit 8,000 or less we're  
23 interfering with the Muddy River rights, which are senior  
24 rights, and so now we need to cap the total pumping in the  
25 flow system, what they're calling a tributary flow system,

1 based on that. It's not -- I'm sorry, go ahead.

2 THE COURT: I was going to say, so then are you  
3 suggesting with your position that the basins need to be  
4 analyzed basin-by-basin that additional testing would need  
5 to be done before they actually impose or restrict the --  
6 you know, restrict it to 8,000 afa for the entire area?

7 MR. HERREMA: Certainly additional analysis needs  
8 to be done. Additional testing would definitely be helpful.  
9 There hasn't been any pump test at all or there wasn't pump  
10 testing as part of 1169 in Kane Springs Valley. I think  
11 1309 itself indicates that additional data gathering will be  
12 helpful in understanding things, yes.

13 So as I mentioned earlier, you asked Mr. Robison  
14 what the State Engineer should have done. It should have done  
15 this basin-by-basin analysis. So how much water comes into  
16 each of the basins, how much water goes out of each of the  
17 basins, that means the difference is how much is available  
18 for appropriation in those basins.

19 Now, the State Engineer --

20 THE COURT: Well, let me ask a question.

21 MR. HERREMA: Sure.

22 THE COURT: I mean, maybe I'm outside of the house  
23 on this, but when you're talking about how much water flow  
24 between the basins or on a basin-by-basin analysis, so is --  
25 does each basin have a definitive this is where the water

1 flows in and out? I mean, that I don't know the answer to.

2 MR. HERREMA: These basins initially were identified  
3 based on in some cases assumptions, but some information that  
4 could be seen by going out into the field and understanding  
5 where there are geological differences between here. And so  
6 if we define them the way that they are defined in terms of  
7 the borders there, you can do that calculation, yes.

8 THE COURT: Okay.

9 MR. HERREMA: In terms of this analysis that we're  
10 talking about right now, it's something you might call a water  
11 budget. So what comes in --

12 THE COURT: The water budget. Uh-huh.

13 MR. HERREMA: I apologize for my voice.

14 THE COURT: That's okay.

15 MR. HERREMA: It's what you might call a water --

16 THE COURT: Would you like some water? Oh, you've  
17 got some. Okay.

18 MR. HERREMA: I've been trying.

19 THE COURT: All right.

20 MR. HERREMA: It's water comes in, water goes out.  
21 You know, evapotranspiration. All the different inputs and  
22 outputs of a basin, that's a water budget. Now, the State  
23 Engineer sort of scoffed at that idea and some of the other  
24 parties did, too. And it makes sense for parties like the  
25 Water Authority. They care only really about the Muddy River

1 flows; right? But this isn't a proceeding that's dealing  
2 with new appropriation. It's a proceeding now that we're  
3 dealing with the State Engineer attempting to limit pumping  
4 under rights that have already been either permitted or  
5 certificated. And so it is critically important that the  
6 amount of water available in each of these areas is determined  
7 by the State Engineer, not this rough justice gross quantity.

8           And again, we thought we knew, maybe, after 1303,  
9 how the State Engineer might propose to administer these  
10 water rights by putting them all together and then using their  
11 priority dates regardless of the sub-basin in which they had  
12 originated, what the State Engineer now calls a sub-basin, but  
13 we don't know now what the State Engineer is proposing to do  
14 in terms of how to manage pumping within that 8,000 acre foot  
15 cap. I'm not sure -- perhaps because they say that or he says  
16 that pumping is sort of declining to that amount anyway, he's  
17 hoping that that will just stay the case. I'm not sure.

18           In regard to the specific substantial evidence for  
19 the 8,000 acre foot number, no participant in the hearing  
20 provided evidence to support 8,000 acre feet as the long term  
21 annual quantity of water that can be pumped from the system,  
22 nor even argued that 8,000 was the appropriate amount of water  
23 to be pumped from the system. Each participant argued that  
24 evidence supported a different amount. The State Engineer  
25 selected the 8,000 because in the years following the 1169

1 pump test, 7,000 to 8,000 acre feet of water per year had been  
2 pumped without showing a decline in the groundwater levels or  
3 spring flows. But again, 7,000 to 8,000 acre feet is a wide  
4 range and here every acre foot is very important.

5 And so we don't see any support in 1309 for why it's  
6 8,000, why it's not 7,000, why it's not some number within  
7 that 7,000 to 8,000 acre foot range.

8 THE COURT: Well, but the 8,000 is not an absolute.  
9 I mean, it's a cap. Correct?

10 MR. HERREMA: Right.

11 THE COURT: So it still can be reduced.

12 MR. HERREMA: But how and when and what's next?  
13 We don't know. And so, again, Mr. Robison talked about the  
14 importance of certainty for our client. I think every client  
15 -- or, I'm sorry, every party in this proceeding who has water  
16 rights, certainty of what's available is critical.

17 THE COURT: So your position, then, is that showing  
18 that the 7,000 to 8,000 that had been pumped without a  
19 substantial change in the water levels in the years following  
20 the pump test is not substantial evidence?

21 MR. HERREMA: It's not substantial evidence for  
22 the selection of that 8,000 acre foot number. There was no  
23 specific evidence that supported that number. And again,  
24 you know, to your point, if the finding of 7,000 to 8,000 is  
25 based on this is the amount that had been pumped just before

1 stabilization, then any number that was pumped just before  
2 stabilization could have been selected as a number. If we had  
3 been, you know, in a wet period over the last number of years,  
4 which I think everyone recognizes we haven't been, if we had  
5 been in a wetter period then perhaps the number could have  
6 been, 10,000, 12,000. Who knows?

7           There wasn't -- this number was sort of backed into  
8 by this effects analysis as opposed to being determined by  
9 what water should actually be available on a long-term basis.  
10 This is, again, looking at what happened over the last few  
11 years preceding recent stabilization.

12           One note. The State Engineer in his brief, in his  
13 answering brief argues that the way that CSI has argued this  
14 would impose a burden on the State Engineer to disprove every  
15 other number that any of the hearing participants said should  
16 be the cap. But CSI's point is just the opposite. If the  
17 State Engineer says that 8,000 is the number, then there needs  
18 to be substantial evidence that 8,000 acre feet per year is  
19 the maximum that can be pumped from the system, and that's  
20 not in the record.

21           One last point. On the movement of water within  
22 the Lower White River Flow System, the greatest factor  
23 affecting flow and movement of groundwater in the system is  
24 heterogeneity; the differences within the composition of the  
25 basin itself associated with geologic faults and structures

1 creating different flow paths. And while Order 1309 recognizes  
2 that these structures do exist, it sort of ignores their  
3 impact on the movement of water throughout the system.

4           There was evidence presented during the 1303  
5 hearing, geophysical data from studies conducted by CSI,  
6 geophysical data from studies conducted by Vidler. You have  
7 the groundwater level changes. You've got water budgets that  
8 have been identified by the State Engineer back in Order 1169,  
9 CSI's proposed water budget, and lots of data and analysis  
10 from parties like -- not parties, but entities like USGS, the  
11 U.S. Geological Survey, Desert Research Institute and others.

12           These data combined represent the best available  
13 science for the State Engineer to assess groundwater movement  
14 within the system. The fact that you had fourteen and a half  
15 thousand acre feet of pumping during the 1169 pump test,  
16 almost 5,300 acre feet of that within Coyote Spring Valley,  
17 and there's only a 300 acre foot to 450 acre foot impact on  
18 the spring flow suggests that there's something else going  
19 on within the system other than just, you know, one-to-one  
20 or equal pumping impacts from all the wells in the system.

21           And Order 1309 didn't distinguish between the  
22 groundwater available in the alluvial aquifer compared to  
23 that of the carbonate aquifer. It doesn't distinguish between  
24 local recharge and regional recharge. It doesn't do this  
25 analysis that we've talked about in terms of basin-by-basin



1 what are the different components that make up the supply in  
2 each basin. And the State Engineer also disregarded isotope  
3 studies I think Mr. Robison mentioned earlier. These all  
4 suggest that there may be discrete local aquifers or flow  
5 paths within the system that don't have an equal connection  
6 to the Muddy River springs area.

7           So based on what Mr. Robison and I covered today,  
8 it's clear to us that the State Engineer lacked authority to  
9 issue 1309. 1309 violates CSI's constitutional rights because  
10 it constitutes a taking without due compensation. It violates  
11 CSI's due process rights because the State Engineer engaged  
12 in the post hoc rule making. And the State Engineer -- I'm  
13 sorry, CSI requests that the Court grant CSI's petition for  
14 judicial review and enter an order declaring the order void  
15 on that basis. As well, if the Court finds that the State  
16 Engineer had authority to enter the order, that the Court  
17 should determine that the State Engineer's action entering  
18 the order was arbitrary and capricious, as it wasn't supported  
19 by substantial evidence or best available science.

20           And I think we'd like to reserve the balance of our  
21 time for our intervenor's argument and our rebuttal.

22           THE COURT: Okay, thank you.

23           Okay. So it is now two o'clock. Do you all want  
24 a five minute break or can you power through? How do you --  
25 how does everyone feel?

1 UNIDENTIFIED SPEAKER: I'd be a fan of a break.

2 THE COURT: Okay. All right, that's fine. We'll  
3 take a five minute break. We'll be back at 2:15.

4 (Court recessed from 2:08 p.m. until 2:17 p.m.)

5 THE COURT: All right. Mr. Balducci, whenever you  
6 are ready.

7 (Speaking to the marshal) Oh, yeah, you need to  
8 reset it. Sorry. Well, when we're ready. Donna, is it  
9 ready?

10 THE MARSHAL: Yes.

11 THE COURT: Okay. The floor is yours.

12 **ARGUMENT BY DRY LAKE WATER, LLC AND APEX HOLDING COMPANY**

13 MR. BALDUCCI: Thank you, Your Honor. Christian  
14 Balducci appearing on behalf of Dry Lake Water and Apex  
15 Holdings. I'm going to be very brief today. I think everyone  
16 in this case has briefed the issues very thoroughly. In fact,  
17 I'd be surprised if I took more ten minutes of your time.  
18 So if my time was sellable like a carbon credit, I'd be open  
19 for business.

20 THE COURT: I'm sure.

21 MR. BALDUCCI: I'm not going to repeat what my  
22 colleagues from Coyote Springs have said. I may try to  
23 emphasize a few points that they made or say it a different  
24 way just to justify my presence here today, but we'll see.

25 What we're dealing with in this case is the first

1 time the State Engineer has ever taken independently  
2 designated basins, designated, by the way, by the Engineer  
3 himself however long ago, and converted them into a mega  
4 basin. Sometimes I think the most obvious things are the  
5 hardest to see in that the State Engineer and the State of  
6 Nevada has been governing water law and water rights not just  
7 since the enactment of our statutory scheme, but by way of  
8 the common law as well going back to -- I'll let someone else  
9 comment, but at least the 1880s. The fact that this is the  
10 first time this has ever happened in 140 years sometimes is  
11 indicative of whether it's allowable to do so in the first  
12 place.

13           My clients own the land known as Apex. You go by,  
14 when you take the 15 to Utah, there's the Love's Gas Station  
15 out there. What many people don't know is the history behind  
16 Apex. Apex lands were carved out by the federal government  
17 out of federal land shortly after the PEPCON explosion in  
18 Henderson, which killed two workers and injured at least 200  
19 others. Governor Bryan himself at the time was the one that  
20 formed a committee to investigate PEPCON and how to avoid  
21 mass casualties and mass injury due to chemical explosions  
22 near the city. They picked Apex for that. Governor Bryan,  
23 the committee and Nevada itself made the recommendation to  
24 the Federal Government to carve that land out, which it then  
25 did by way of Congressional Act.

1           At the time the Congressional Act was made, nobody  
2 ever questioned or thought of whether the Engineer would take  
3 away the water rights that Apex would be able to get by way  
4 of water permit applications, which, by the way, it and its  
5 predecessors were able to get. 1309 essentially eliminates my  
6 client and their land's right and their ability to have water  
7 rights. I put together -- actually, I didn't, my client did,  
8 just pages of when water rights had been issued post Muddy  
9 River Decree, up and through the most recent being I think  
10 2014, ironically, by my client. And it's pages long. We've  
11 got charts like this.

12           There are a lot of people that will be affected by  
13 this and I think the theme you're going to hear is none of us  
14 knew the Engineer could do this. Had we known, we wouldn't  
15 have got the rights or made the decisions we made. And the  
16 reason that nobody knew is because not only is there an utter  
17 lack of authority in the chapter -- and I appreciate Your  
18 Honor's comments about subsection 120, the rule making  
19 statute, of which I'm sure everyone is going to be discussing  
20 a lot during this case.

21           But not only do we believe and assert there is  
22 a complete lack of authority that says they can do that,  
23 historically over the last 140 years the fact that the  
24 Engineer himself has not engaged in such conduct perhaps tells  
25 us what the Engineer was thinking himself, that he knew he

1 didn't have the authority.

2           As a government agency, what the Engineer can and  
3 cannot do previously was prescribed by the common law. And  
4 since the enactment of our water chapters, for lack of a  
5 better term -- I probably used an improper verbiage for it  
6 but that's okay -- I believe 532, 33 and 34, I mean, that's  
7 what governs. And when we evaluate what a government agency  
8 can do, we have to look at the law, the authority for them  
9 to do what they can do. If the statute says they can do it,  
10 they can do it. If the statute says they cannot, they cannot.  
11 When we have silence, we have to look to the rules of  
12 statutory construction and case law interpreting those to  
13 determine what they can do.

14           As Your Honor noted, there are a number of chapters  
15 or statutes, like roughly ten, that make reference to basins.  
16 We all know what a basin is because the Engineer has told us  
17 what a basin is. He's told us that by creating the roughly  
18 230 or 40 or 50 or 60 -- my eyes are bad to begin with and  
19 that font would be small to me if I were three inches from it,  
20 so I'm not going to begin to try to guess how many there are.  
21 But the Engineer told us what the basins are, how many there  
22 are and what they look like. They're right there on the map  
23 that Coyote Springs has brought before us, taken directly from  
24 the Engineer's information himself. So we really don't need  
25 to do a deep dive to find out what it is because the Engineer

1 has told us. It's all done right there.

2           When we think about why the Legislature -- I think  
3 we like to call them the wise Legislature and I think all of  
4 us have opinions about how wise they are when they do the  
5 things they do, but unfortunately we have to live with what  
6 they do and what their statutes do and do not say. There's  
7 probably a reason why, and although we don't want to guess  
8 at what the Legislature was thinking, we can certainly make  
9 certain assumptions and reach logical ideas about why they  
10 did certain things or did not.

11           If we think about why the Legislature did not  
12 provide for a mega basin to be created from basins, it helps  
13 us understand why the Engineer has never done it and the  
14 Legislature didn't provide for it. Number one goes to the  
15 mixing of priorities. My clients are in Garnet Basin and  
16 Black Mountain. We are essentially on the outermost fringe,  
17 so we're different in that respect. And we're also different  
18 when it comes to priorities. Our Apex lands were carved out  
19 in roughly 1988, not 100 years after the Muddy Valley Decree  
20 but not too far from it.

21           There would have had to have been a way to evaluate  
22 how do we take seven basins, throw them in a grinder or a  
23 mishmash and evaluate what are their priority dates. There  
24 would have to be. It's almost property law 101; priority.  
25 It's something we all learned the first year of law school.

1 Certainly that would have been addressed by the Legislature.  
2 But because the Legislature omitted a provision or statute  
3 allowing the Engineer to do this tells us he cannot.

4           We also have to think about how the evaluation or  
5 investigation into the conjoinment of multiple basins would  
6 have to operate. We're not talking about just one bathtub  
7 here, nor are we talking about seven bathtubs that might  
8 possibly contribute to the spa at the JW Marriott. This  
9 is way different. We're talking about seven independent  
10 hydraulic basins, all with their own, unique characteristics  
11 that have to be taken into consideration where pumping is done  
12 to evaluate.

13           This large bathtub is important. Could the Engineer  
14 game the system by running pumps next to the Moapa dace?  
15 Perhaps. Could they game the system by running it in Garnet  
16 Valley, which would show no effect? Maybe. I'm not an  
17 engineer. I'm not a water construction person for that  
18 matter, either, but simple logic would dictate to me that if  
19 you ran the pumps very far away from the fish, the fish are  
20 probably okay. I don't know. I'm not a water person. That's  
21 something that should have been looked at. And it helps us  
22 understand why our Legislature didn't provide statutory  
23 authority to the Engineer to do what he did.

24           I told you I'd be a few minutes. I promised I'll  
25 be a few minutes and I'm nearly done here.

1 THE COURT: You have four hours, so however you want  
2 to use it is up to you.

3 MR. BALDUCCI: Well, you know what, if you want to  
4 make them like carbon credits, I'll be really short then, too.

5 THE COURT: I don't want you to feel like there's  
6 any pressure coming from me.

7 MR. BALDUCCI: No. I don't want to repeat what's  
8 been said. I'm cognizant of the Court's time and everyone  
9 else's time here.

10 The one thing I'll kind of close on is lawyers have  
11 been here in Nevada probably longer than Nevada has been  
12 Nevada, since we've been a state. There's a reason there was  
13 never a case on this. There's a reason no one has found a  
14 district court opinion or a decision talking about this.  
15 Conduct matters. The fact the Engineer has never done this  
16 says a lot. The fact that we've never seen this litigated  
17 in Nevada, even since before it was Nevada, tells us what the  
18 Engineer can and cannot do. The Engineer did not have the  
19 authority to take seven independently designated basins and  
20 combine them into one, basically turning the priority rights  
21 into some kind of weird Jenga game where everything is going  
22 to fall apart with the first piece you pull.

23 I'm happy to answer questions. The only thing I'd  
24 add about the subsection 120, the Engineer here isn't really  
25 saying I made a rule and I can do whatever I want. They're



1 backing themselves in the statute, which tells us that the  
2 Engineer knows they couldn't have done this.

3           With that, I'll reserve my remaining three hours,  
4 ten minutes and fifteen seconds.

5           THE COURT: All right, thank you.

6           So, Center for Biological Diversity.

7           MR. LAKE: Yes, Your Honor.

8           THE COURT: If you need a minute, you know, to  
9 gather yourself.

10          MR. LAKE: I need a few minutes --

11          THE COURT: That's fine.

12          MR. LAKE: -- to just set up the presentation.

13          THE COURT: Absolutely. No problem.

14          MR. LAKE: I also don't want to interfere with the  
15 microphone, so let me know if I'm coming through all right.

16                   (Pause in the proceedings)

17          MR. LAKE: Excuse me, Your Honor. I'm having a  
18 little bit of trouble with the technology.

19          THE COURT: No problem. Mr. Balducci, you know,  
20 didn't use three hours plus time, so I think you have a minute  
21 to set up.

22          MR. LAKE: I also don't plan on using a lot of time.  
23 I'm going to try to keep it under an hour. I know that we  
24 have covered a lot of ground today and I will do my best not  
25 to be redundant.

1 THE COURT: Let me know when you're ready.

2 MR. LAKE: Ready when you are.

3 THE COURT: Okay. You may proceed.

4 **ARGUMENT BY CENTER FOR BIOLOGICAL DIVERSITY**

5 MR. LAKE: All right. I'm Scott Lake and I represent  
6 the Center for Biological Diversity. Good afternoon, Your  
7 Honor. I'd like to start by just briefly summarizing the  
8 Center's position on appeal. We have five main points here.  
9 I aim to cover two today and the remaining three in our  
10 response argument and intervenor.

11 So, first of all, we believe the State Engineer  
12 does have statutory authority to jointly manage the Lower  
13 White River Flow System. We also support the State Engineer's  
14 consideration of the Endangered Species Act and finding  
15 that there is potential liability for a take attached to  
16 groundwater pumping in the system. We support the State  
17 Engineer's designation of the Lower White River Flow System,  
18 including the inclusion of Kane Springs Valley.

19 However, like the Authority and the District, we  
20 feel that there are two discrete issues here that need to be  
21 addressed. One is that the 8,000 acre foot pumping cap is not  
22 based on substantial evidence, and in particular the idea that  
23 the system is stabilizing or approaching a steady state is not  
24 established in the evidence in the record. And second, that  
25 the State Engineer's rationale for arriving at that 8,000

1 acre foot cap fails to consider the public's interest in the  
2 conservation of the Moapa dace. Essentially -- and I will  
3 elaborate on this later, but essentially what happened is the  
4 State Engineer looked at the apparent stabilization, which is  
5 not reflected in the data, and also looked to the conflicts  
6 analysis with the Muddy River Decree to arrive at that number,  
7 neither of which considers the long-term habitat needs for  
8 the dace.

9           So to start off, I'd just like to -- excuse me.  
10 I'm still on that slide. I'd just like to address the fact  
11 that the White River Flow System is a very unique hydrologic  
12 region. And we've heard a lot today about how this is the  
13 first time the State Engineer has ever done something like  
14 this. And that's true. And the reason that the State  
15 Engineer had to do something like this is because you have a  
16 lot of unique circumstances all coexisting in this one system.  
17 It's an extremely large system, so you have water originating  
18 in some cases as far north as the boundary between White Pine  
19 County and Elko County and traveling distances of over 200  
20 miles to get down to the Muddy River Springs and, you know,  
21 what we're calling the Lower White River Flow System. It's  
22 a really extraordinary hydrological phenomenon.

23           The system is highly transmissive, meaning that  
24 changes in any one part of the system are going to radiate  
25 quickly throughout the system. And there are limits to that

1 and I'll be discussing these in more detail in later  
2 arguments, but one example of that is the Pahrnagat Shear  
3 Zone where there is what they call a steady state inflow,  
4 meaning the water that flows into Coyote Springs Valley and  
5 Kane Springs Valley, because of the geology and hydrology  
6 it's basically staying no matter what happens lower down in  
7 the system.

8           There's a low amount of recharge in the system  
9 as well, and we've addressed this. Mr. Taggart spoke of  
10 something called permanent capture, and that reflects this  
11 idea that there is a very low level of recharging the system.  
12 This water was built up over a very long period of time. And  
13 stresses like the Order 1169 pump test, it basically reset the  
14 system. They draw it down and it's going to take a very long  
15 time for the system to recover. And, you know, as long as  
16 pumping stress continues, our position is that there is not  
17 going to be any recovery. And, in fact, the data reflects a  
18 declining trend in groundwater levels that's less than the  
19 sharp trend we saw during the pumping test but nevertheless  
20 apparent.

21           And finally, and this is where I'd like to spend the  
22 most time on today, you have the habitat of a very restricted  
23 endangered species at the end point of this flow system and  
24 that's the Moapa dace. And with that I'd like to discuss the  
25 dace and give some background basically to the Court and the

1 idea of why this species is important, why we're considering  
2 the fish here and why it's -- you know, what's necessary for  
3 its protection and its recovery.

4           So the dace is found only in the upper Muddy River  
5 system. It's the only member of its genus in the world. And  
6 concern about the dace goes back to the 1960s. It was listed  
7 under the precursor to the ESA, which is called the Endangered  
8 Species Preservation Act in 1967. Because it was listed under  
9 that act, it received the protection of the ESA when that act  
10 was passed in 1973. The U.S. Fish and Wildlife Service, which  
11 administers the Endangered Species Act, gives the dace its  
12 highest priority for recovery for a variety of reasons, some  
13 of them being the high degree of threat to its continued  
14 existence and also its high potential for recovery.

15           As I'll get into later, with habitat restoration and  
16 conservation efforts, the only limiting factor we're dealing  
17 with at this point really is spring flow, and as long as  
18 spring flows are maintained, the species has a good chance of  
19 recovery. As we'll get into later, it looks like to get to  
20 the point where the species is considered recovered and that  
21 it's delisted is going to require a lot more habitat than we  
22 have now. But it's still an accomplishable goal and that's  
23 more than you can say for a lot of species on the list.

24           So first I'd like to talk about the restricted  
25 range of the Moapa dace. This slide is showing a map of the

1 springs and stream systems where the dace is found. All of  
2 the graphics in this presentation come from the Southern  
3 Nevada Water Authority's expert reports. They reflect data  
4 that is found throughout the record. The reason I used SNWA's  
5 reports is because they had the clearest graphics.

6 But you can see that the dace is highly restricted  
7 to these upper tributary stream systems and about 95 percent  
8 of the population occurs within 1.78 stream miles. It's a  
9 very, very small range. The streams that contain the dace are  
10 the Apcar Jones spring. That's the one in the upper left-hand  
11 corner.

12 THE COURT: You know what I just realized? You've  
13 been -- you haven't been saying what pages that you're  
14 actually referring to.

15 MR. LAKE: I'm sorry. I'm sorry.

16 THE COURT: So will you please start.

17 MR. LAKE: Yeah. Let me -- okay, we're on Slide 5  
18 right now.

19 THE COURT: Okay, thank you.

20 MR. LAKE: Okay. I'll be sure and mention that.

21 THE COURT: Thank you.

22 MR. LAKE: So you have the Apcar system and that's  
23 the green one on like the upper edge of that box. Pederson,  
24 that's the one that originates in the lower part of the box  
25 and flows roughly north. Little Springs and Plummer is the

1 one on the far right side. And Muddy Creek, there's some  
2 limited distribution in Muddy Creek and that's the tributary  
3 that's running approximately parallel to the Muddy River in  
4 the bottom of the channel. Almost all of the occupied dace  
5 habitat, with the exception of that Muddy Creek section and  
6 I'll talk about that later, occurs within either the Muddy  
7 Valley National Wildlife Refuge or the Warm Springs Natural  
8 Area. So you have those two, you know, designated areas and  
9 that essentially comprises that species entire habitat.

10           And moving on to Slide 6. The reason for this --  
11 there are a lot of reasons for this. One big reason for this  
12 is that the dace is what we call thermophilic. It requires  
13 warm water and it reaches its greatest extent at around 82 to  
14 86 degrees Fahrenheit. Research has shown that the dace will  
15 stop feeding at approximately 81. Spawning occurs at slightly  
16 higher temperatures, so we're talking about closer to the  
17 86 range, so the warmer waters are absolutely necessary for  
18 reproduction.

19           On this map the 80 degrees, so about the approximate  
20 limit of the dace's range is represented by the light blue  
21 to light green parts on the map. So you can see there's a  
22 barrier to movement on that Apcar Stream. And that's one of  
23 the problems with the conversation of the species is that you  
24 have these very small, very isolated populations and that  
25 makes them vulnerable to unpredictable, catastrophic events.

1 That vulnerability only increases as habitat is decreased.

2 And habitat generally is a function of spring flow.

3 I'm going to move on to Slide 7. The dace depends  
4 on unique hydraulic conditions, so that means that, you know,  
5 the pressure of the water in the spring actually creates  
6 certain flow patterns of riffles in still areas, and the dace  
7 is very specialized to that environment. So changes in that  
8 environment adversely affect the dace and that's reflected  
9 in the 2006 Programmatic Biological Opinion and all of the  
10 biological opinions in the record that also adhere to that  
11 2006 biological opinion.

12 Another kind of interesting feature of the dace and  
13 another one that makes it vulnerable is that it's scaled to  
14 water volume. And this is the idea that, like, if you put  
15 a goldfish in bigger bowl it grows bigger. The dace works  
16 the same way. The catch is that you also get a reduction in  
17 fecundity, and that's the reproductive success of the species  
18 as it gets smaller. So as water levels decrease, size  
19 decreases and so does reproductive success. So there's a  
20 direct correlation there between the amount of water in the  
21 stream and the species long-term viability.

22 Slide 8. These are the threats to the dace,  
23 according to the Fish and Wildlife Service. You have habitat  
24 degradation and modification. This was a major factor when  
25 the dace was listed. You had a lot of streams being



1 channelized, a lot of diversions. A few of these springs were  
2 actually converted into soaking pools or swimming pools and  
3 that was a concern. And a lot of -- this has been addressed  
4 through some of the conservation efforts that the Fish and  
5 Wildlife Service and the authorities have undertaken.

6 Also, fire from invasive plants, primarily palm  
7 trees. You can have some catastrophic fire events due to  
8 species that aren't supposed to be there and that will  
9 adversely affect the stream system. Invasive fish species  
10 has been a historical threat to the dace, but that is also  
11 largely resolved and we'll talk about that in a minute. And  
12 habitat loss from reduced spring discharge. And that's the  
13 main reason we're here today and that's the main reason I'm  
14 talking about the dace in these proceedings.

15 I want to give a little bit of history. This is  
16 Slide 9, showing a timeline. You had relative abundance in  
17 the Muddy River system from 1933 to 1950. Declines beginning  
18 in the mid 20th Century with habitat modifications and water  
19 development. At this point you start to see changes in the  
20 water quantity and quality, the introduction of invasive  
21 species, changes to the habitat, various things that adversely  
22 affect the species.

23 By 1983, the dace has been restricted to a range  
24 that we're more familiar with today in only about two springs  
25 and two miles of stream. In 1994, there's an invasion of

1 tilapia. And this has been mentioned in briefing and I want  
2 to address it here because it's been suggested that tilapia  
3 might be a greater threat to the dace than pumping and that's  
4 just not true. Tilapia was recognized as a serious threat  
5 to the dace and you had numbers decline from almost 4,000 to  
6 a low of 907 in the 1990s. However, the Fish and Wildlife  
7 Service introduced a fish barrier and systematically removed  
8 tilapia from the stream.

9           And I'm going to switch slides now to Slide 10.  
10 And those efforts were successful. By 2013, the tilapia were  
11 eliminated, leaving the main limiting factor on the dace to  
12 be stream flow. So after the elimination of tilapia, the  
13 population increased over 2,000, but you see in 2016  
14 continuing through 2019 there's a decline, and currently the  
15 species hovers around between 1,100 and 1,500 fish, at least  
16 according to the data that's in the record. Now, this is far  
17 short of the U.S. Fish and Wildlife Service's recovery goal  
18 of 6,000 fish for de-listing, so there is still a lot of work  
19 to do on this species before it can be considered recovered  
20 and no longer threatened.

21           With that, I'm going to turn to groundwater pumping  
22 impacts and how they affect the dace. Going to Slide 11.  
23 We've talked about some of this already, so I'll try to be  
24 brief. The regional carbonate aquifer is the source of the  
25 Muddy River Springs. I don't think for purposes of this

1 presentation it's necessary to distinguish between carbonate  
2 and alluvial. We don't need to get into that distinction.  
3 But we're talking about the aquifer that was tested in the  
4 pumping test and the aquifer that you see be discussed as  
5 having various water levels.

6           Those water levels correspond directly to the  
7 outflow from the springs, so I'd like to continue with Mr.  
8 Taggart's bathtub analogy here. You know, as the bathtub  
9 lowers, the amount of water spilling over decreases, and  
10 that's what we're seeing here. As the groundwater levels in  
11 the Lower White River Flow System decline, it leads directly  
12 to a decrease in spring flow. And the particular concern  
13 here are the higher elevation springs. The higher elevation  
14 springs are those springs that still have populations of  
15 the Moapa dace and they're also the springs that are most  
16 vulnerable to impacts from groundwater development.

17           Again with the bathtub analogy, what's actually  
18 going on here is a difference in pressure, so it's pressure  
19 that's driving the water to the surface and the pressure is  
20 lower at the higher elevation springs just due to physics.  
21 But it can be useful to think of it as like a lake or a tub in  
22 that if you have a spout in the tub that's like halfway up and  
23 a spout that's on top and the water level in the tub declines,  
24 the one at the top is going to stop flowing first and that's  
25 essentially what we're observing here.

1           So when you're talking about groundwater levels  
2 dropping, say, a foot or two feet, you know, in a system that  
3 wasn't this unique and didn't have these problems that might  
4 not be a source of concern. It might be something that just  
5 doesn't affect the ecology. It might be something that can be  
6 easily mitigated. But here with those high elevation springs  
7 being so important, those two foot drops in groundwater  
8 matter. And as we saw in the 1169 pump test, they can result  
9 in extremely sharp declines in flows from those higher  
10 elevation springs.

11           So spring flow is the primary limiting factor on the  
12 dace and this is reflected throughout the record. There were  
13 two parties that gave detailed analyses of the dace, actually,  
14 you know, its biological needs at the Order 1303 hearing, and  
15 those would be the U.S. Fish and Wildlife Service and Southern  
16 Nevada Water Authority. And they both pointed out that the  
17 distribution of the Moapa dace is directly related to flows  
18 from the springs and that any reduction in flow levels  
19 decreases the amount of habitat for the dace and in turn  
20 decreases the number of individual dace, leading to the  
21 conclusion that reductions in spring flow levels can result  
22 in a take.

23           So just to give an example, moving on to Slide 12,  
24 I believe. Okay, Slide 13. This is a summary of Fish and  
25 Wildlife Service modeling that was introduced at the Order

1 1303 hearing, and it showed that if Warm Springs West flows  
2 reached 2.7 cfs it would eliminate 6 percent of the dace's  
3 total habitat. And the really important part, 31 percent,  
4 so almost a third of the dace's spawning habitat. Flow  
5 reductions also impact habitat quality through hydraulic  
6 changes. Those riffles change and you get a weaker flow.

7           And the range is further restricted by temperature  
8 reduction. So as less water flows from the springs, it cools  
9 more quickly. A smaller volume water, it just doesn't hold  
10 heat as long as a larger volume of water. And what you see  
11 as spring flow reduces is that the amount of suitable habitat  
12 basically contracts upstream and that's what this chart is  
13 showing. With a 10 percent spring flow reduction, this is  
14 all based on flows at the Warm Springs West Gage, a 10 percent  
15 spring flow reduction you lose 66 stream feet of habitat.  
16 At 20 percent you lose 131 feet; 30 percent you lose almost  
17 200 feet.

18           THE COURT: So when you're talking about 131 feet,  
19 do you mean --

20           MR. LAKE: Like linear.

21           THE COURT: -- in length?

22           MR. LAKE: Yes, linear. Yeah.

23           THE COURT: Okay. Not like --

24           MR. LAKE: Not like --

25           THE COURT: It's not like a square unit or anything

1 like that?

2 MR. LAKE: Yeah. So this leads to the conclusion  
3 that maintaining spring flows is necessary to protect the  
4 dace. And the evidence in the record, the State Engineer's  
5 analysis in Order 1309, the Fish and Wildlife Service's  
6 analysis in its various biological opinions indicates that  
7 3.2 cubic feet per second is the flow that must be maintained  
8 to protect the dace. And again, that's 3.2 cubic feet per  
9 second passing -- or 3.2 cubic feet of water passing by the  
10 Warm Springs West Gage every second. And I think there's a  
11 lot of verbiage in this slide. This is just essentially  
12 demonstrating the various evidence supporting that conclusion  
13 that 3.2 csf is necessary.

14 If there are no further questions, I'm just going  
15 to move on.

16 THE COURT: Okay. Yeah, that's fine.

17 MR. LAKE: Okay. So I'm going to talk about the  
18 pumping test. You know, why -- what the pumping test showed  
19 about the relationship between groundwater pumping and the  
20 dace habitat and just a few basics. The pumping test  
21 demonstrated that the Warm Springs Area springs connected  
22 with the carbonate aquifer and that the spring flows rise and  
23 fall with groundwater levels over this 1,100 square mile area.  
24 Now, that doesn't necessarily mean -- I think there's been  
25 a distinction drawn here between whether it's actually like

1 a bathtub or whether it's heterogenous. So saying that the  
2 impacts occur over this broad area and in a short amount of  
3 time doesn't necessarily mean it's not heterogenous.

4 THE COURT: Meaning that the different levels at  
5 different areas could impact it differently?

6 MR. LAKE: It simply -- it means that -- I mean,  
7 what we saw in the pump test results was a uniform decrease  
8 in levels. There are some exceptions. I think the one  
9 obvious one is Bedroc's wells, which is just drawing from a  
10 different source than the carbonate aquifer. But in general  
11 when you're looking at the carbonate aquifer, you see this  
12 sort of universal decline over a broad area.

13 Now, it doesn't necessarily mean that, you know,  
14 were saying there's no faulting there, there is no changes in  
15 transmissivity within the system. It's just that the impacts  
16 do propagate throughout that area. So if you sink a well in  
17 Coyote Spring Valley or Kane Springs Valley, that's going to  
18 impact the springs and that's going to capture flow that would  
19 otherwise discharge from the springs. So during the pumping  
20 test you saw -- when those 14,000 acre feet were pumped, you  
21 saw sharp declines in both groundwater levels and the spring  
22 flows.

23 And I'm going to discuss -- since we've talked about  
24 the aquifer in general quite a bit today, I'm going to discuss  
25 -- move on to discuss the high elevation springs and what

1 happened there. The Pederson Spring flow decreased from about  
2 0.22 cfs to 0.08 cfs. Pederson East decreased from 0.12 to  
3 0.08. Now, I think these numbers demonstrate a few important  
4 points that we're dealing with. One is that the amount of  
5 water discharging from these springs is actually very small.  
6 Mr. Taggart's presentation included the photo of the  
7 springhead. Basically it's a tiny pool; it's almost a puddle.

8           So while at the Warm Springs West gage you might be  
9 dealing with a larger volume of water, it's the aggregate of  
10 all of those streams that come together at the Warm Springs  
11 West area. When it comes to individual springs, and these are  
12 -- this is where, you know, you're actually seeing the dace  
13 habitat occurring, you're dealing with much smaller volumes  
14 of water, leading to potentially much larger impacts on the  
15 population if those volumes decrease.

16           So again, like in a different system that didn't  
17 have these characteristics, some small decline in spring flow  
18 of this magnitude that we're seeing at Pederson Spring might  
19 not be that much of a concern, but here, you know, you're  
20 seeing that it's removing in the case of the Pederson Spring,  
21 you know, over half the amount of spring flow -- or sorry,  
22 I'm not good at math, so --

23           THE COURT: Neither am I. That's why I became an  
24 attorney.

25           MR. LAKE: I believe the percentage was 41 percent.



1 It's a lot. And, you know, further, you see a direct  
2 correlation between groundwater levels and spring flow. So,  
3 in particular, for every foot decline in EH-4, and that was  
4 the main monitoring well during the pumping test, the springs  
5 lose about 0.06 cubic feet per second. So the main takeaway  
6 here is that it's necessary to maintain groundwater levels  
7 in order to maintain spring flows. And in order to maintain  
8 groundwater levels, there has to be some kind of limit on the  
9 amount of groundwater pumped.

10 So defining that limit is what I'm going to get  
11 into next. I'm going to start with the Endangered Species  
12 Act. This hasn't really been discussed yet. You know, the  
13 Center's position is that this is, in addition to the Muddy  
14 River Decree one of the two main limiting factors on how much  
15 water can be pumped in the system. I'm going to give a brief  
16 overview today just so we have a working understanding of it.  
17 I feel like a lot of this discussion, a lot of the detail  
18 in this discussion is more appropriate for the intervenor  
19 argument; however, I'm happy to answer any questions.

20 So the intent of the ESA, and I think this is  
21 important to point out here, was to halt and reverse the trend  
22 toward species extinction at whatever the cost. The ESA is a  
23 uniquely uncompromising statute. And specifically, Section 9  
24 of the ESA prohibits all, quote, "persons," and these are all  
25 terms of art, "persons" from "taking" any endangered fish or

1 wildlife species.

2           And what makes this relevant here is that take and  
3 person are broadly defined. Take means to harass, harm,  
4 pursue, hunt, shoot, wound, kill, trap, capture or collect  
5 or attempt to engage in any such conduct. One of those  
6 components of take is harm. Harm has been further defined in  
7 federal regulations to mean "an act which actually kills or  
8 injures wildlife, including significant habitat modification  
9 or degradation which kills or injures wildlife by  
10 significantly impairing essential behavioral patterns,  
11 including breeding, feeding or sheltering." So this is  
12 essentially behavioral changes leading to death or injury of  
13 members of the species.

14           Person, meanwhile, includes "any officer, employee,  
15 agent, department or instrumentality of any state,  
16 municipality, political subdivision of a state, or any state  
17 -- you get the idea, state and local government.

18           A state or state agency could be liable under these  
19 provisions for authorizing conduct that takes a threatened or  
20 endangered species and a take can occur through significant  
21 habitat modification. We have covered that. And this is  
22 going to be --

23           THE COURT: Oh, you know what, can you tell us which  
24 slide?

25           MR. LAKE: Yeah. What was the last slide I named?

1 THE COURT: Let's see. I think the last slide you  
2 named off was Slide 13.

3 MR. LAKE: Okay.

4 THE COURT: And that was more about talking about  
5 the lowering the temperature.

6 MR. LAKE: Sorry, Your Honor.

7 THE COURT: Yeah. Sorry, I need to be a little bit  
8 better about policing you all to refer to your slides.

9 MR. LAKE: Okay. They really should have numbered  
10 these. Okay, I think we're at Slide 20 now.

11 THE COURT: 20? Okay.

12 MR. LAKE: Yeah.

13 THE COURT: And that has to do with the 2006 MOA?

14 MR. LAKE: Yes. So the 2006 MOA, I'd just like  
15 to clarify, you know, having discussed the liability for a  
16 take here, the mechanism for which a take occurs, the legal  
17 framework, what the 2006 Memorandum of Agreement does and  
18 does not do in this context.

19 The parties to the Memorandum of Agreement are Fish  
20 and Wildlife Service, CSI, the Moapa Band of Paiutes and the  
21 Muddy Valley Water District. So these are the only parties  
22 covered under the MOA's terms. They are also the only parties  
23 through whose participation the 2006 programmatic bi-op was  
24 prepared. The MOA, as we've heard, was prepared in  
25 anticipation of the Order 1169 pump test, reflecting concern,

1 especially from the U.S. Fish and Wildlife Service, that  
2 even before the pumping test that drawing down the carbonate  
3 aquifer would adversely affect the springs and the dace.

4           So the parties agreed in the Memorandum of Agreement  
5 that the Fish and Wildlife Service would prepare a biological  
6 opinion, and I'll get to that in a second. There are three  
7 additional components. One is the dedication of water rights,  
8 which you've heard about. Habitat restoration and recovery.  
9 This is -- these were habitat restoration efforts that were  
10 undertaken by the Authority and the Fish and Wildlife Service  
11 and have been relatively successful in limiting threats like  
12 diversions and tilapia invasion. And finally, spring flow  
13 triggers beginning at 3.2 cfs.

14           Now, the MOA itself doesn't protect against "take"  
15 liability, and I want to make that especially clear because  
16 there is a paragraph in Order 1309 that states that the MOA  
17 provides protection for take, and it simply can't do that.  
18 The only thing that can provide protection for take liability  
19 is an incidental take statement issued by the Fish and  
20 Wildlife Service under a very specific procedure that's  
21 conducted under the ESA. Parties just can't get together  
22 and agree that a take is not going to occur, even if one of  
23 those parties is the Fish and Wildlife Service.

24           So along with the MOA, the Fish and Wildlife Service  
25 did prepare a biological opinion. And a biological opinion

1 is a device that derives from ESA Section 7. Section 9 is the  
2 one that prohibits a take and Section 9 applies to everybody.  
3 It's simply unlawful to take an endangered species. Section 7  
4 is both more specific and also more conservative in terms of  
5 preventing impacts to the species.

6 Section 7 provides that: "Each federal agency shall,  
7 in consultation with the assistance of the Secretary of the  
8 Interior, ensure that any action authorized, funded or carried  
9 out by such agency is not likely to jeopardize the continued  
10 existence of any endangered species or threatened species."

11 So the important parts, they are federal agencies. This  
12 applies only to federal agencies. And this is called the  
13 jeopardy mandate. And we're not just talking about killing  
14 or injuring individual specimens now, we're talking about  
15 jeopardizing the continued existence of the species, looking  
16 at both the short-term conservation and the long-term recovery  
17 of the species. It's a fundamentally different inquiry than  
18 take.

19 So the 2006 bi-op evaluates, as the proposed action  
20 by the federal agency in question, the execution of the MOA  
21 by the Fish and Wildlife Service. That's the action. It  
22 contemplates a certain level of groundwater pumping, but at  
23 the end of the day what the opinion is really evaluating is  
24 what are the consequences to the face of the Fish and Wildlife  
25 Service entering into this agreement. And consistent with

1 that, it does not authorize any incidental take for  
2 activities, including the MOA, including groundwater pumping.

3 Slide 21. So this is stated in the biological  
4 opinion itself. It's also apparent from the fact that no  
5 incidental take statement was issued with the biological  
6 opinion. And that's procedurally the only way Fish and  
7 Wildlife Service can tell any party anywhere, okay, it's okay  
8 to take some of the species, and that just wasn't done in  
9 connection with the 2006 Programmatic Biological Opinion.

10 I should mention that there have been some  
11 additional biological opinions. One was issued to Lincoln  
12 County and Vidler, one was issued to Southern Nevada Water  
13 Authority and one was issued to Coyote Springs Investment  
14 that do authorize some level of incidental take. But those  
15 biological opinions apply only to the discrete actions  
16 analyzed and they apply only to those parties. It's not a  
17 blanket authorization for any groundwater pumping anywhere  
18 in the Lower White River Flow System to cause take of an  
19 endangered species.

20 So that leaves us with declining spring flows linked  
21 to declining groundwater levels and an imminent threat to this  
22 incredibly range-restricted and imperiled species which the  
23 State Engineer recognized in Order 1309. This is Slide 22.  
24 So this is just recapping Order 1309. And as I mentioned  
25 before, there are a number of findings made in that order,

1 some of which we agree with, some of which we don't. The  
2 important part for today's discussion is the maximum amount  
3 of water that can be pumped from the Lower White River Flow  
4 System and the State Engineer's conclusions regarding aquifer  
5 recovery. And those were that 8,000 acre feet can be pumped,  
6 in part because water levels in the Warm Springs Area may be  
7 approaching a steady state. The State Engineer noted, though,  
8 that the trend is of insufficient duration to make this  
9 determination, essentially admitting that there really wasn't  
10 enough evidence in the record to draw a conclusion on this,  
11 but nevertheless allowing up to 8,000 acre feet of pumping.

12           So I'm going to go -- start discussing the State  
13 Engineer's rationale for 8,000 acre feet from Order 1309.  
14 This is Slide 23. And this basically breaks down in two  
15 components. One is that aquifer recovery is approaching  
16 equilibrium or a steady state. This is reflected in a  
17 discussion at page 60 and page 63 on the slide, saying, one,  
18 that pumping of 8,000 or less has correlated with an apparent  
19 stabilizing trend and that the evidence and testimony  
20 projecting continual decline at current levels of pumping  
21 is compelling but not certain.

22           I'd like to stick on this language a little bit  
23 because what's essentially being said here is that we don't  
24 have enough evidence to really conclude that the system is  
25 stable, and there's compelling evidence that it's not. But

1 the order is going to reject that compelling evidence because  
2 it's not certain. And, you know, importantly, the substantial  
3 evidence standard does not demand certainty. And, indeed,  
4 in complex hydrological questions like this one, if certainty  
5 was the standard that was demanded, there would probably never  
6 be a decision made. There's always some grey area in this.

7           The second component of the decision is the  
8 conflicts decision. As long as senior rights are being  
9 served, there's no conflict with Muddy River Decree rights.  
10 That's been addressed today and I feel like other parties are  
11 also going to address that. I would like to note that the  
12 Center does agree that that position is incorrect and that  
13 it's arbitrary and capricious to base that no conflict finding  
14 on the irrigation of a hypothetical alfalfa crop. But that's  
15 not the focus of the discussion and I believe it will be  
16 covered adequately by other parties.

17           So discussing the steady state idea, this is Slide  
18 24. And this is discussed in both the expert report submitted  
19 in response to Order 1303 and the testimony that was given at  
20 the hearing. Pumping after the pumping test, and particularly  
21 from 2015 to 2019, shows a slight but steady decline in both  
22 carbonate groundwater levels and spring flows. And these  
23 declines occurred in spite of decreases in carbonate pumping.  
24 So the carbonate pumping is going to decrease over this period  
25 from just under 8,000 to just over 7,000. And in that period



1 as well you have two higher than average precipitation  
2 events.

3           So I think there's also been some argument in this  
4 case that, you know, parties looking at the limits of the  
5 system and looking at sort of the unique way that this aquifer  
6 and these springs are reacting to pumping aren't taking into  
7 account climate, and that's simply not the case. You know,  
8 this shows that, you know, even when you do factor in climate  
9 and the idea that, you know, above average years you might see  
10 some recharge in the system, the fact that you're still seeing  
11 a decline demonstrates an ongoing impact. And that means  
12 that the system is not, as the State Engineer concluded, in  
13 equilibrium.

14           I'm going to move on to Slide 25. And here's some  
15 of that evidence. Again, you know, these are hydrographs that  
16 represent spring flow measurements before, during and after  
17 the Order 1169 pump test. Again, I'm using Southern Nevada  
18 Water Authority's graphics because they seem to be the most  
19 clear. There are similar representations throughout the  
20 record. Essentially what you see here is -- so carbonate  
21 groundwater pumping begins in the system around 1993.  
22 Following that period you see a steady decline trend in  
23 groundwater levels continuing through 2005.

24           Precipitation data is the third chart down on this  
25 slide. It's the red and blue bars. And we see a massive

1 recharge event, an anomalous recharge event, even, in 2005  
2 and then we see the declining trend resume. After that, you  
3 see the impacts of the Order 1169 pump test with the curve  
4 increasing in slope substantially and essentially bottoming  
5 out shortly after the pump test. Following that you see a  
6 slight recovery beginning in 2013 and reaching its maximum  
7 around 2016. And then --

8 (Mr. Balducci confers with Mr. Lake)

9 MR. LAKE: So picking up again at 2016, you see,  
10 you know, a peak in both of these hydrographs around that  
11 time. And water levels decline, you know, not as dramatically  
12 as we've seen before, but nevertheless if you look at the  
13 3.6 line -- or, sorry, the 0.18 line on the upper one and  
14 the 3.6 line on the second one down, you can see that it  
15 starts at around 0.08, 3.6, and by the time we get to the  
16 1303 hearing in 2019 we're hovering around 0.12 and 3.3.  
17 Testimony reflects that the gage actually reached 3.2 during  
18 the hearing, so it's been approaching that trigger level even  
19 at current rates of pumping.

20 I'm going to move on. This is Slide 26 showing more  
21 hydrographs. The text of the last slide was testimony from  
22 or reports from Center's expert and Southern Nevada Water  
23 Authority's expert. This is more analysis from Southern  
24 Nevada Water Authority and I'm going to go through the various  
25 parties' positions on this, not to suggest that the State

1 Engineer should simply take a poll or, you know, that this is  
2 a process where everybody gets to vote on a number, but simply  
3 to show what the weight of the evidence was that was being  
4 presented.

5           So these graphs look similar but they're measuring  
6 something else. They're measuring the water levels in various  
7 wells. And I don't know if you can see the text, it's pretty  
8 small.

9           THE COURT: I can look over here and I've got my  
10 glasses, so.

11           MR. LAKE: Okay.

12           THE COURT: Just point me out to where I need to  
13 look.

14           MR. LAKE: Okay. Well, I'm looking at the top one.  
15 And, you know, essentially what I'm really trying to get  
16 across here is the similarity of these graphs to each other  
17 and to the spring flow graphs. The top one is CSV-1 in  
18 Coyote Springs Valley. Again, you see that peak around 2016  
19 and a steady declining trend toward 2019. EH-4 in Muddy  
20 River Springs Area, it appears to show the same trend, less  
21 pronounced than CSV-1. Paiutes TH-2 in California Wash, and  
22 this is in the more southern part of the system, all showing  
23 a similar trend but a little bit more stable. Garnet Valley  
24 showing a steady decline and the Black Mountains Area also  
25 showing a slight decline.

1 THE COURT: Is there any significance to the yellow  
2 dots?

3 MR. LAKE: I believe the blue dots are like once in  
4 time measurements and the yellow or green ones are continuous  
5 measurements.

6 THE COURT: Okay.

7 MR. LAKE: It's two different ways of measuring the  
8 level of the well.

9 So looking at these graphs, you'll see on the side  
10 the various parties' interpretations of what these graphs  
11 mean. And one issue here is that, you know, we being in court  
12 are not -- you know, we're not presenting expert testimony  
13 here. This is the expert testimony that was presented.

14 So from Southern Nevada Water Authority, you know,  
15 estimating about 5,900 acre feet is the most that you can pump  
16 without continuing this groundwater decline. Muddy Valley  
17 Irrigation Company noting that pumping from the carbonate  
18 aquifer anywhere in the Lower White River Flow System captures  
19 Muddy Rivers flows, also reflecting that there is -- you know,  
20 with continuing pumping there is continuing capture. Nevada  
21 Energy noting both that full recovery to pretest levels did  
22 not occur and that water levels regionally were still  
23 declining due to existing pumping. Nevada Cogen also noting  
24 that recovery was maxed out in 2016 and that levels have been  
25 trending lower since then.

1           And the State Engineer actually acknowledged this  
2 evidence, and these are a few excerpts from Order 1309  
3 demonstrating the State Engineer's analysis and how he got  
4 to that 8,000 acre foot figure.

5           THE COURT: And which slide is this?

6           MR. LAKE: This is 27.

7           THE COURT: Thank you.

8           MR. LAKE: Thanks, Rob. So the State Engineer  
9 agrees that the levels, and this is talking about spring  
10 flows, springs flows may be approaching a steady state,  
11 but the trend is of insufficient duration to make this  
12 determination. Again, you know, the evidence of continuing  
13 decline is compelling but not certain. And I think this  
14 relates to not the quality of the data but the duration.  
15 It's true that, you know, the system does have to be examined  
16 in context.

17           And, you know, with things like an increase in  
18 precipitation in -- I believe it was 2018 -- 2016, 2018 or  
19 2017 and 2019, one of those two, you know, you could be seeing  
20 factors that could influence the readings. Say if we had a  
21 below average precipitation year and many parties here are  
22 arguing that we are in a drought, then it would have been even  
23 clearer that the system is not in equilibrium because you  
24 wouldn't have had that recharge effect buffering the pumping  
25 impacts.

1           THE COURT: So let me ask a question. So, you know,  
2 you're talking about that even the Nevada State Engineer  
3 concedes the fact that this may not be the full extent of the  
4 information that he would need, he or she would need to decide  
5 whether or not equilibrium was reached. At what point would  
6 it be enough time, then, to say definitively, okay, this is  
7 where we've reached equilibrium? Because, you know, if the  
8 argument is there needs to be more time to decide that, any  
9 time you have any sort of test, you know, at the very  
10 inception of it you would say that's not enough data, right,  
11 because it's not the quality but the duration, this needs to  
12 go on longer.

13           So at what point would it be appropriate for the  
14 State Engineer to say okay, now, now, is enough time for me  
15 to say I'm going to put the cap at this amount and then, you  
16 know, maybe make a decision later on to adjust that cap?

17           MR. LAKE: Your Honor, think that would be a  
18 question to be addressed on remand. I don't think we're in  
19 a position here to answer that question because we're not  
20 hydrologists. These are the kind of questions we were dealing  
21 with at the hearing below and I believe need to be dealt with  
22 again because it was found that there was insufficient data.  
23 How much data is sufficient I think is a technical matter  
24 that, you know, I certainly can't address standing at this  
25 podium.

1 THE COURT: Well, I mean, I guess maybe I'm saying  
2 this incorrectly because I'm really talking about the attack,  
3 saying that it's not really substantial evidence because  
4 there's not enough time that's passed in order to say that  
5 equilibrium has been reached. At what point would it be  
6 substantial evidence?

7 MR. LAKE: Well, Your Honor, I think this goes  
8 more to the purpose of the Order 1303 hearing, and that was  
9 determining the impact. And here the State Engineer is saying  
10 something kind of curious. The State Engineer is saying we  
11 don't have enough data yet but the impact is acceptable, which  
12 is kind of an odd conclusion. I think, you know, the answer  
13 to your question probably -- you have to go back to why we  
14 had the hearing in the first place, and that was to protect  
15 senior water rights and to protect the Moapa dace. And what  
16 I'm arguing is that based on the evidence presented, it just  
17 simply can't be said that 8,000 acre feet protects the Moapa  
18 dace and protects senior water rights.

19 THE COURT: Right, because what you're saying is  
20 there wasn't enough information, so that way his saying that  
21 it was 8,000 acre foot or whatever the measurement is, is  
22 capricious.

23 MR. LAKE: Yes, because it's based on -- it's not  
24 based on data. So I'm going to skip ahead and address this.  
25 I was going to --

1 THE COURT: No, that's okay. You can go however --

2 MR. LAKE: Oh, it's okay. I'm just going to have  
3 to count slides.

4 THE COURT: Okay.

5 MR. LAKE: All right. I think this gets to the  
6 crux of the matter. This is Slide 30. I'm showing a quote  
7 from *Eureka County v. State Engineer*. And the quote is, "The  
8 State Engineer's decision must be made upon presently known  
9 substantial evidence, rather than information to be determined  
10 in the future."

11 Now, the State Engineer could have -- probably could  
12 have said there's a level at which pumping will not continue  
13 this draw down trend. It certainly wasn't 8,000 because the  
14 data reflected that 8,000 was still causing a decline. So  
15 hypothetically, the State Engineer could have said something  
16 like 8,000 is causing a decline; therefore, conservatively,  
17 you know, based on the analysis a number, you know, like  
18 Southern Nevada Water Authority suggested 4,000 to 6,000 is  
19 appropriate. Hypothetically. And I don't think it's  
20 appropriate for -- you know, on appellate review for a party  
21 to be saying this specific number is correct.

22 But what the State Engineer did here and what makes  
23 the State Engineer's decision capricious is that the State  
24 Engineer said -- you know, acknowledged that we're still  
25 seeing impacts, but we're going to wait and see and we're



1 going to -- we might take steps in the future to mitigate  
2 those impacts, and that's the basis for the 8,000.

3           And that's exactly what the Nevada Supreme Court  
4 said the State Engineer can't do in *Eureka County*. And in  
5 that case what happened was he had a bunch of groundwater  
6 applications in support of a mining project and it was  
7 demonstrated that these -- you know, extracting all this water  
8 for the mine was going to impact springs in the valley where  
9 the applications were. It was going to impact senior water  
10 rights. And the State Engineer granted the applications with  
11 the understanding that they were going to come up with a plan  
12 to address the impacts at a later date.

13           Now, one of the questions presented in that case  
14 was whether, you know, that procedurally was proper, and the  
15 Nevada Supreme Court didn't reach it because what they ended  
16 up saying is, well, you know, regardless of whether this is  
17 a proper procedure in the abstract, the idea that -- you  
18 know, a promise to adjust and mitigate in the future is not  
19 substantial evidence and that's what the standard requires.

20           So basically I would say that a non-capricious  
21 answer to the question would be a figure that actually  
22 protects senior water rights and the environment, that stops  
23 capture of Muddy River Decree rights and that maintains  
24 spring flows above 3.2 cfs. And based on the data that I just  
25 discussed with continuing drawn down with those water levels

1 hovering around 3.2, even though we're seeing decreases in  
2 pumping and increase in precipitation it's not a level that  
3 maintains 3.2 cfs.

4 THE COURT: So if you're saying that, you know,  
5 figuring out what an appropriate level is needs to take into  
6 account the senior water rights, is that a decision that would  
7 be better done after the conflicts analysis?

8 MR. LAKE: I believe you can find that capture is  
9 occurring without conducting a conflicts analysis.

10 THE COURT: Okay.

11 MR. LAKE: I'm just going to try to see if there's  
12 anything else that we need to cover. I'm backtracking slides  
13 now. We're on 31. The remaining slides, I don't think it's  
14 necessary to really spend a lot of time on these. Basically,  
15 I just wanted to address the fact that certain parties below  
16 did argue in favor of the system approaching a steady state,  
17 but even these parties acknowledge that the system may be in  
18 decline; acknowledge that there were declining trends evident  
19 in the hydrographs and that more data was necessary to draw  
20 that conclusion.

21 You know, I think, also, one thing to consider is  
22 that the State Engineer does not have to base his decision  
23 on impacts, on the idea that the system is in equilibrium.  
24 That's not the only thing. I mean, this is a pretty open-  
25 ended process. And here we have, you know, essentially every

1 party arguing in favor of equilibrium, saying, you know, it  
2 may be headed that way but we don't know, we need more time,  
3 more data is necessary. And this came through in the expert  
4 reports of the U.S. Fish and Wildlife Service, Nevada CoGen,  
5 Nevada Energy, Muddy Valley Water District and the City of  
6 North Las Vegas, all essentially restating the conclusion  
7 that was drawn in 1303 that the system may be stabilizing  
8 but saying, you know, the data gathered in this proceeding  
9 really doesn't give us the ability to decide that.

10           And following up on that, I'd just like to address  
11 some statements that the State Engineer made in his briefing  
12 to this Court. And this is Slide 30, so I backtracked one  
13 slide for this. And this is -- so the State Engineer admitted  
14 that data from some wells cut against the conclusion that  
15 the system is in equilibrium, noted a downward trend in those  
16 wells, and again said that continued monitoring is necessary  
17 to determine essentially whether that maximum amount is  
18 correct.

19           So that's the evidentiary portion of our objection  
20 to the 8,000 figure. And there's also -- I'd also like to  
21 address the public interest component of that.

22           THE COURT: Which slide is this?

23           MR. LAKE: This is Slide 32. And again, I think a  
24 lot of the legal argument underpinning this is probably more  
25 appropriate for the response argument. The reason is is that

1 the State Engineer in 1309 essentially acknowledged his  
2 ongoing public interest duty correctly and said that it's clear  
3 that the spring flows must be maintained at 3.2csf. That was  
4 acknowledged. That it's against the public interest to allow  
5 groundwater pumping levels in the Lower White River Flow  
6 System that would reduce spring flow to a level that would  
7 impair the survival of the dace and could result in a take of  
8 the species.

9           The State Engineer also expressly acknowledged that  
10 he has an ongoing duty to protect the public interest. I'm  
11 moving on to Slide 33. Available ground water supply that can  
12 -- is limited to the amount that would not impair the public  
13 interest in overseeing the rights of the Muddy River. It's  
14 against the public interest to allow groundwater pumping that  
15 would reduce spring flow. And this is essentially grounded  
16 in the public ownership of water. The State Engineer's --  
17 both the State Engineer's public trustee's and the State  
18 Engineer's statutory duty is to consider the public interest  
19 in administering water rights.

20           But after making these findings that the State  
21 Engineer does, in fact, have a duty to consider the public  
22 interest in this decision and that providing for the public  
23 -- that it's in the public interest to maintain those spring  
24 flows at 3.2, fails to make some pretty critical findings,  
25 and that also is grounds for this decision being arbitrary

1 and capricious.

2 This is Slide 34. Specifically, the State Engineer  
3 never actually makes a finding that pumping at 8,000 acre  
4 feet annually will maintain 3.2 cubic feet per second. And,  
5 indeed, acknowledging evidence that it might not and that we  
6 really don't know. And, you know, again, being unable to say  
7 this decision is going to do what the State Engineer just  
8 said the public interest requires. Also, you know, bases the  
9 decision on the conflicts analysis.

10 These being the two main pillars upholding the  
11 8,000 afa figure, really entirely failing to consider what's  
12 necessary to maintain spring flows at 3.2 cfs and to maintain,  
13 you know, the habitat needs for the dace that we discussed  
14 throughout this presentation, the specific temperature range,  
15 the habitat characteristics, and entirely failing to consider  
16 the fact that, you know, recovery of the species is going to  
17 require a lot more suitable habitat than currently exists.

18 And that is the end of my presentation. I'm happy  
19 to answer any additional questions. If not, I'll sit down.

20 THE COURT: Yeah, I don't think I have any more  
21 right now.

22 MR. LAKE: Okay.

23 THE COURT: And let me ask, are you --

24 MR. LAKE: Your Honor --

25 THE COURT: So let me ask, do you have a copy of

1 your PowerPoint that you'll be presenting? I mean, it doesn't  
2 have to be today, but if you have a copy.

3 MR. LAKE: I can provide a copy tomorrow and I'll  
4 provide it to all the parties as well.

5 THE COURT: Yes, that would be great. Thank you.

6 MR. DOTSON: Do you want us just to email it to  
7 the Court and put it in the record that way as a Notice of  
8 PowerPoint? This is Rob Dotson speaking, for the record.

9 THE CLERK: I'm still going to have to print it out,  
10 though.

11 MR. DOTSON: Okay, so we'll bring it. Just one copy  
12 or do you want it for --

13 THE CLERK: I just need one to put in the file.

14 MR. DOTSON: Your Honor, I think I go next, by the  
15 way, on behalf of Muddy Valley Irrigation Company. A few  
16 minutes to set up would be appreciated.

17 THE COURT: Sure.

18 MR. DOTSON: It's probably time for a break.

19 THE COURT: Yeah, that's fine. We can take a five  
20 minute break, or do you want a longer break? I don't know.  
21 I mean, I know it's like --

22 MR. DOTSON: Well, and not to presume anything or  
23 to make any promises, but I do suspect I'll be about an hour.

24 THE COURT: Okay.

25 MR. DOTSON: But we have all this time, so who knows,

1 I might just, you know, chat on, but I don't think so.

2 THE COURT: Okay. Would you all like to have a five  
3 minute break or a ten minute break?

4 UNIDENTIFIED SPEAKER: The rest of the day.

5 THE COURT: Why don't I split the baby in half and  
6 do fifteen minutes? How's that? Fifteen minutes. So we'll  
7 see you at ten 'til.

8 MR. FLAHERTY: Your Honor.

9 THE COURT: Yes.

10 MR. FLAHERTY: This is Frank Flaherty on behalf of  
11 Nevada Cogen.

12 THE COURT: Yes.

13 MR. FLAHERTY: I believe Nevada Cogen is up next  
14 after Mr. Dotson. I just wanted to alert you things are  
15 moving much more quickly than I anticipated. In about a half  
16 hour I'm going to leave for the airport --

17 THE COURT: Oh.

18 MR. FLAHERTY: -- and I'll be here tomorrow morning.  
19 But I won't be able to go right after Mr. Dotson if we have  
20 time left today.

21 MR. DOTSON: Yeah, and I'm done. I mean, I think --  
22 I'll conclude the day, I think is what he's saying.

23 THE COURT: Okay, that's fine. So, did you hear  
24 that?

25 MR. FLAHERTY: Yes. I just wanted to make sure you

1 weren't looking for me wondering where's Nevada Cogen. Nevada  
2 Cogen is on the airplane flying to Las Vegas shortly.

3 THE COURT: Okay. That's fine. So it looks like  
4 Muddy Valley will be going and closing out the day and then  
5 you can start the day tomorrow.

6 MR. FLAHERTY: Great. Thank you.

7 (Court recessed from 3:35 p.m. until 3:53 p.m.)

8 THE COURT: Whenever you're ready, let us know.

9 MR. DOTSON: Okay. If you are ready and everyone's  
10 here, I will -- let me make sure this is live, and it is.  
11 I'm on? All right. Well, it's in the nature of an appeal,  
12 so may it please the Court.

13 THE COURT: It's all yours.

14 **ARGUMENT BY MUDDY VALLEY IRRIGATION COMPANY**

15 MR. DOTSON: Your Honor, my name is Rob Dotson.  
16 Together with Steve King and Justin Vance, who had a large  
17 hand in the briefs and may be watching today, I represent or  
18 we represent the Muddy Valley Irrigation Company. This is  
19 not to be confused, as it is sometimes in brief with the  
20 Moapa Valley Water District or the probably non-existent Moapa  
21 Valley Irrigation Company. But, in fact, we believe that  
22 MVIC, the Muddy Valley Irrigation Company, is an incredibly  
23 important player and has a great deal at stake in this  
24 hearing.

25 Slide 2. What we are seeking on behalf of MVIC



1 is very easy. It's an easy ask for me. I'm asking you to  
2 enforce the law and protect the decreed rights that were  
3 decreed in this court. And that has been and continues to be  
4 our position. It is not MVIC's position that no pumping can  
5 occur in the Lower White River Flow System. It doesn't know  
6 that. It didn't think it had to present any expert reports  
7 or anything of that nature, and so that simply is not its  
8 position. But what is its position is that its decreed rights  
9 should be protected.

10 Slide 3. There's been some discussion but actually  
11 as I talk today I'm going to try to draw us back to the  
12 standard of review because I don't know if it really would be  
13 of assistance to the Court, but because we do oral arguments  
14 that's what we're supposed to do. And there are factual  
15 findings. There are, you'll see, I think somewhat of a dearth  
16 of factual findings here. And those, indeed, you know, they  
17 deserve a little more deference to the State Engineer, but  
18 they still are reviewed to determine if they are arbitrary,  
19 capricious or an abuse of discretion. And it's amazing how  
20 many of the parties, even if they have polarized views on the  
21 results, do agree to that.

22 And then, and this is particularly interesting, I  
23 think, for my argument on behalf of my client, and that is the  
24 legal questions. The legal questions are determined without  
25 deference. They are de novo. And I think that's the argument

1 that MVIC makes that is unique and it's particularly easy for  
2 this Court to find and reverse on that basis, on a legal and  
3 de novo basis.

4 Now, of course, during the hearing itself there  
5 has to be due process. There has to be a full opportunity  
6 to be heard. There has to be a description of the sufficient  
7 findings that support it, so that substantial evidence has  
8 to be described. And today, Your Honor, I'm going to try not  
9 to repeat a lot of the things that have already been said.  
10 That's why all of the arguments are going a little faster.  
11 But there's going to be some repeat, so I'm not going to make  
12 any illusion about that.

13 Moving on to Slide 4. For me, for my client, where  
14 this starts is it starts, and really frankly ends at the Muddy  
15 River Decree. The decreed rights, and you've heard this  
16 I think from almost every speaker today, they are the oldest  
17 and they are the most senior in the Lower White River -- what  
18 we now call the Lower White River Flow System. But maybe it  
19 doesn't matter; right?

20 You asked a question earlier about, well, the  
21 statute says area at -- what is it, 124. Well, the State  
22 Engineer eventually divided the state with the help of the  
23 federal government into basins. But you know what? At the  
24 time of the decree there were no designated basins. There was  
25 no artificially created or legally created construct in which

1 the administration was occurring. There was water that was  
2 being put to use and that's the water that is in the decree  
3 and that's the water that my client owns or has the right to  
4 use and which we ask you today to protect.

5           Importantly, that water didn't just represent a  
6 fraction of the water that was flowing down the Muddy River  
7 in 1905 and again still at the time when the decree was  
8 entered in 1920, it was all of the available flow. Now, in  
9 our briefs, which I'm not going to try to repeat here, we make  
10 a big deal, because we think it is a big deal, about the  
11 finding of the State Engineer, which is why we're not asking  
12 it all to be reversed. At the end, by the way, Your Honor,  
13 today I'm going to describe to you exactly what we're seeking,  
14 at least in bullet points. As others have said, we have  
15 already submitted a proposed order.

16           But the State Engineer recognizes and factually  
17 supports, largely through that same SNWA document which is  
18 found starting at the ROA at 41930. And, Your Honor, if you  
19 have not read it, I would encourage you to read that entire  
20 piece of the record. But the State Engineer made what we  
21 think is a correct and probably conservative, but we're  
22 willing to live with it, determination that the predevelopment  
23 flows were 33,900 acre feet annually, and that that was all  
24 of the water -- and this is important -- all of the water  
25 of the Muddy River, its head waters, sources of supply and

1 tributaries. This is out of the decree from this court. And  
2 it doesn't say sources of supply that came from Basin 210 or  
3 -- it doesn't name a basin because there weren't basins that  
4 were numbered there. It's wherever that water comes from,  
5 that's the water that's protected in the decree.

6 Through that decree, MVIC holds most of the decreed  
7 rights in the Muddy River, but they don't own all of them. We  
8 just happen to be the only party that is in this proceeding.  
9 So what are those rights? Well, they're the rights from the  
10 decree. They're grounded in the prior appropriation doctrine.  
11 In other words, and I think, again, every party who so far  
12 has talked today and I think everyone is going to agree that  
13 is the bedrock -- pun intended -- of water law in the west.  
14 The first person to use the right has the right to continue to  
15 use that right within limitations, so long as they don't stop  
16 using it and things like that, none of which, by the way, is  
17 in play here.

18 MVIC's rights, though, aren't just described in  
19 the decree. They're also specifically, and you've heard some  
20 of it and you're going to hear all of it from me, they're  
21 specifically protected in some of the statutes. And we have  
22 the right to divert a specific sum, which I'm going to talk  
23 about and I make a big deal about in my brief, as well as  
24 all the other water that doesn't happen to be used that year.

25 And lastly, and I think this really gets to the

1 heart of it and why this decision has to be remanded, 1309  
2 really is a modification of the decree, which is why, yes,  
3 I agree, this is the court to discuss this and reverse and  
4 remand back because the time to do so expired, well, 100 --  
5 like 99 years ago, I guess. In 2023 would be 100 years after  
6 the time to revisit it under the current statute.

7 Now, this comes right from the decree and these are  
8 the specific allotment of what we refer to as 36,000 -- or,  
9 excuse me, 36.2588 cubic feet per second. We've been talking  
10 about that a little bit already when we were talking about  
11 the particular springs; that particular spring which is the  
12 trigger spring for the MOU. And my client, even though  
13 I think there was some misstatement, my client is not a  
14 signatory to the MOU.

15 THE COURT: And this is slide number?

16 MR. DOTSON: This is Slide Number 5. Thank you,  
17 Your Honor. And this shows you both the summer and the winter  
18 allotments to MVIC. The summer is 36.25 cubic feet per second  
19 and the winter, 35.6. You can do the math, actually, with  
20 a calculator. But close to the same, but a slightly lower  
21 amount.

22 Switching now to Slide 7, this is more regarding  
23 the quantification of the rights. But this is again that  
24 section of all of the water that's coming from the river and  
25 its sources. And they have the right to put to beneficial

1 use upon their lands all waters of said Muddy River, its  
2 headwaters, sources of supply and tributaries. And that is  
3 at the Decree at page 20 and it's in your record at 33790,  
4 and that was on page 7.

5 This, Your Honor, should have been the starting  
6 point of the hearing for the State Engineer. This is what  
7 MVIC thought was the starting point for the State Engineer,  
8 that we were going to protect all of those sources of water  
9 that were decreed and were coming out of the river. What we  
10 know now is that was not what was actually the starting point.

11 And again, we note that it was all of the water that  
12 was decreed because we have this language in the decree, which  
13 is found -- it runs over from page 22 to 23 and you can find  
14 it in your record at 33792 to 33793. This is page 5 to my  
15 slide. And this is the "total available flow of the Muddy  
16 River and it consumes and exhausts" -- this is the quote --  
17 "all of the available flow of the said Muddy River, its  
18 headwaters, sources of supply and tributaries," using that  
19 same language again, Your Honor. So it wasn't just a mistake  
20 that Judge Orr made 100 years ago when he used this language  
21 of all of the sources of supply. This language is  
22 purposefully in here and it is in here multiple times. This  
23 means that the decreed water was all of the water.

24 Now, the protection for MVIC comes from the common  
25 law and the statutory law and it protects all of those decreed

1 rights. And because 1309 essentially is a curtailment, a  
2 reduction of those rights, as we're about to see and as you  
3 already know because you've read the briefs, it violates the  
4 decree and it violates the law.

5 First, it violates the prior appropriation doctrine;  
6 first in time, first in right. All water -- and counsel for  
7 every party, I think, that has spoken so far, including SNWA  
8 that's going to lose water, has acknowledged the fact that  
9 all these 40,000 paper rights or certificated rights that were  
10 granted afterwards contain the critical language that those  
11 rights are granted subject to the existing rights. Well,  
12 what were those existing rights? Those existing rights were  
13 the rights of MVIC. They were the decreed rights. Now, there  
14 might have been some other groundwater rights as well that  
15 are junior to them, but it at least was acknowledged and  
16 understood at the time that you've got to protect the decreed  
17 rights. The decreed rights come first.

18 The State Engineer acknowledges the duty to protect  
19 those existing rights. This is in their answering brief on  
20 page 35. And now, by the way, I'm on Slide Number 10, for  
21 the record. So the prior appropriation doctrine is the law  
22 in virtually every western state, every state where there is  
23 a lack or a value in water, especially in the driest state  
24 in the union, Nevada.

25 There should have been no limit to the extent to

1 which the State Engineer went to protect these rights. And,  
2 indeed, there's four statutes, and I'm going to go through  
3 each of these in particular, that set forth exactly why  
4 the State Engineer, if he's following the statute, if he's  
5 following the common law or if he's following the decree  
6 should not have entered the order that he did in 1309.

7           In 533.0245, this prohibits -- specifically  
8 prohibits the State Engineer from carrying out duties in a  
9 manner which conflicts with a decree. 533.210 prohibits  
10 MVIC's rights under the decree from being altered. 533.085  
11 protects against the reallocation of MVIC's decreed rights.  
12 And 533.3703 prohibits consumptive use analysis with respect  
13 to any decreed rights originating in the Muddy River. And  
14 this is, of course, the alfalfa determination, that  
15 consumptive use analysis that occurred, but we'll talk some  
16 more about that.

17           The next slide is Slide 12, and I want to look at,  
18 as I said, each of these statutes with some detail. In this  
19 instance I put up the whole statute on this slide, Your Honor,  
20 because it is just so patently clear that the State Engineer  
21 statutorily can't do anything that conflicts -- and I know  
22 we've got this word conflict multiple times in multiple ways  
23 in this case -- with decreed rights, orders, compacts or  
24 agreements. And in this case obviously I care about the  
25 decreed rights. "The State Engineer shall not carry out his



1 or her duties pursuant to this chapter in a manner that  
2 conflicts with any applicable provision of a decree or order  
3 issued by a state or federal court, an interstate compact or  
4 an agreement to which this State is a party for an interstate  
5 allocation of water pursuant to an act of Congress."

6           Based upon this statute alone, since this was the  
7 only thing that existed was this statute and the decree, MVIC  
8 shouldn't really have had to have shown up at all at this  
9 hearing; right? And yet, we have an order that we're here  
10 today about which curtails them 3,300 acre feet. They didn't  
11 think -- my client didn't believe and should have had to have  
12 thought that they had to do anything to protect their rights,  
13 or it, since it's a corporation. Rather, the order, 1309,  
14 says, "capture or potential capture of flows of the waters  
15 of a decreed system do not constitute a conflict." No, they  
16 do constitute a conflict. It has to be a conflict. If the  
17 amount of water that is decreed is no longer being received,  
18 how can the plain language not be that that is a conflict?

19           Turning now, Your Honor, to Slide 13 out of 29,  
20 and I want to look at 533.210. And this particular statute,  
21 Your Honor, is the finality. This kind of provides the  
22 statute of limitations, if you will, for the modification of  
23 the decree. It allows an interested party, allows the State  
24 Engineer if they realize, okay, there was an error, we need  
25 to go back and we need to modify the decree. Well, in the

1 case of this decree from this court, that period of time ended  
2 in 1923 under this statute, which I don't even think was in  
3 place yet. But no matter what, we are not within a period  
4 of time where this decree should be subject to modification.  
5 Yet, that is especially and particularly the effect of what  
6 1309 did. It modified the decree.

7           Turning to Slide 14, the non-impairment doctrine.  
8 In NRS 533.085, vested rights to water are not to be impaired.  
9 And again, this is just yet another example of a statute, in  
10 this case they picked 1913 because that's when we brought up  
11 the water law, that water -- there was some discussion about  
12 this or argument about this earlier today. Water right users  
13 that were in existence at the time were worried. Well, is  
14 there anything that's going to modify us? Oh, no, it's not.  
15 Now, these aren't necessarily decreed rights, it could just  
16 be vested rights because they're prior to 1913, but in this  
17 instance we have the decreed rights. But certainly here,  
18 again, MVIC understood and the statute requires that the  
19 State Engineer was obligated to protect its rights.

20           The inconvenient truth is that this statutory scheme  
21 and this decree makes it impossible for the State Engineer  
22 to do what he is trying to do in 1309. And I appreciate  
23 compromise. I'm a civil litigator. I live on compromise.  
24 But sometimes there is no compromise. Sometimes, whether you  
25 are a judge, whether you're the State Engineer, you have to

1 simply follow the law. And these statutes and this decree  
2 required that the State Engineer protect the decreed rights,  
3 and that was all of those waters that were in that river.  
4 The predevelopment flows are the decreed rights.

5           Lastly of these statutes that I wanted to discuss in  
6 detail is NRS 533.3703, and this simply should not have been  
7 applied. I think that Mr. Taggart may have talked about this  
8 as well, but this is the consideration of consumptive use of  
9 a water right and the proposed beneficial use of the water.  
10 And as you can see in Section 2(b) of the provision, they  
11 eliminate any question of this. Yeah, we can complain about  
12 the Legislature, but here they use -- we don't have to look  
13 at legislative history to know what they meant. They use this  
14 decree, this river by name. And so we know that this sort of  
15 an analysis was statutorily improper here.

16           I want to talk now about the role of the public  
17 trust doctrine.

18           THE COURT: What's the slide number?

19           MR. DOTSON: This is Slide Number 16. Thank you,  
20 Your Honor. Some might argue, well, wait a second, in the  
21 spirit of compromise and equity is this really fair? Is it  
22 really okay that these people have had this water for 100  
23 years? Yes. And that's in fact the finality and the  
24 importance that the decrees have, so we can know that this  
25 water is owned by this entity. This entity has the right

1 to use this much of that water and that entity, government,  
2 everyone can plan based upon it. Whereas, those who come  
3 separate or come later know that, well, I've got this water,  
4 but only if that water is really there, only if that water  
5 continues to flow, only if that water continues to be  
6 available to me.

7           And notably, and I'll say it again, MVIC is not  
8 saying that there is no water that can be pumped. That's not  
9 what they're saying. What we are saying is based upon the  
10 evidence that we saw at 1309, it seems like that 8,000 isn't  
11 right. It's not to say that there isn't a number, but it  
12 looks like from the evidence it's got to be less than that.  
13 And this public trust, this protects the public interest to  
14 allow the enforcement of decrees and the enforcement of the  
15 law.

16           Up to Slide 17, Your Honor. It's our position that  
17 1309 is illegal with respect to MVIC because of just what we  
18 were talking about just now. The determination that 8,000  
19 acre feet can be pumped in the Lower White River Flow System  
20 and the determination that the loss of 3,300 acre feet of  
21 water a year is not a conflict with the decree, those concepts  
22 don't seem to reconcile. And the determination of 8,000 acre  
23 feet, as the Center for Biological Diversity just pointed out,  
24 doesn't seem to be supported by substantial evidence. I'm  
25 going to review in particular the evidence that the State

1 Engineer does set forth, which is why to my client the order  
2 seems internally inconsistent.

3           And clearly, based on the evidence he does say in  
4 his order, the pumping of 8,000 acre feet will not protect the  
5 decreed rights. It might protect the decreed rights that are  
6 left, but it won't protect all of the decreed rights, and this  
7 is where we part ways with SNWA on that issue. We believe  
8 that the pumping should be less than 8,000 acre feet. It does  
9 not protect predevelopment flows of 33,900 acre feet annually  
10 and therefore it's a violation of MVIC's property rights when  
11 you take the water away.

12           Turning now to Slide 18. And this is a discussion  
13 -- I want to discuss now the substantial evidence. I have  
14 already talked about the de novo basis for a review and those  
15 multiple statutes and now I want to discuss the factual  
16 issues.

17           So there's an admission, and this is where I say  
18 there's an internal inconsistency in this language. There's  
19 an admission by the State Engineer here that 8,000 acre feet  
20 is the maximum amount that may be pumped without causing  
21 further declines, and that number may be less. In fact,  
22 8,000 acre feet a year, it is clear from the facts that are  
23 in the decree, does not allow the Muddy River to return to  
24 predevelopment flows. There's not even like a -- lip service  
25 I think is the term you use -- in the 1309 order that suggests

1 that that might happen some day in the future. It's  
2 apparently laughable. It's not laughable to my client.

3 Mitigation is not my client's first selection. My  
4 client's first selection is to have the water that they were  
5 decreed. It seems to be a universal agreement that additional  
6 study and observation is required even to figure out if the  
7 8,000 will hold us at steady state or equilibrium. So steady  
8 state and equilibrium, what that means -- and I'm not here  
9 testifying, I'm testifying to my understanding -- is that the  
10 water level generally stays about where it's at. It no longer  
11 keeps going down. It may not quite be there, but it generally  
12 stays where it's at. But nobody is saying, oh, yeah, and then  
13 we're going to go back up to a water level where the flow is  
14 going to increase back to 33,600 acre feet annually. That's  
15 not in the record. It's not in the order.

16 And how is it that it can be substantial evidence  
17 when what your suggesting doesn't even match the standard  
18 that you're proposing to measure it to? It just -- it seems  
19 internally inconsistent. And again, I know what I'm saying  
20 may not be popular to most of the humans in this room, okay.  
21 I get that. And as I say, I appreciate, generally, compromise.  
22 But sometimes the law is the law and you have to follow the  
23 law. And in this instance the State Engineer did not and  
24 that's why we have this review.

25 Let's look at the evidence that did exist. Now I'm

1 on page 19 or Slide 19. The State Engineer in his brief  
2 cites to pages 58 through 63 of the order in support of the  
3 8,000 afa. So let's look at those pages. But there's no  
4 analysis there that's adequate to meet the standard of review.  
5 It's the beginning of the analysis. If you look at what was  
6 determined, a sum was reasonably anticipated.

7           This goes to the scope of the hearing and, again,  
8 my client's expectations. And this will kind of -- we'll talk  
9 about this again when I get to due process, which will be a  
10 brief discussion. But this is frequently cited in the brief's  
11 language that told us what we thought was going to be decided.  
12 "The purpose of this hearing is not to resolve or address  
13 allegations of conflict between groundwater pumping within  
14 the Lower White River Flow System and the Muddy River decreed  
15 rights." Everybody seems to have agreed. Okay. Then we're  
16 not going to figure out which rights are doing what. That is  
17 not the purpose of the hearing. That's not what we are going  
18 to decide. "The purpose of this hearing is to determine what  
19 the sustainability is, what the impact is on the decreed  
20 rights, and then address resolving the allegations of conflict  
21 should that be a determination that will be addressed at a  
22 future time."

23           In other words, here we're trying to figure out the  
24 impact. Is pumping actually even affecting the flows of the  
25 Muddy River? You know, my client shows up thinking, well,

1 I guess it's possible that we find out that this is all due  
2 to climate change or something else; right? That wasn't the  
3 factual determination. In fact, the factual determination  
4 was that it wasn't due to climate change and it was due to  
5 pumping.

6 And so there was an impact. The answer to the  
7 second question was in the affirmative. There was an impact.  
8 And that impact was quantified; going back to that back slide  
9 for a second because these kind of flow together. This is 19  
10 again. It was, as my client understood, to determine what the  
11 sum of the impact was. Ironically, what the State Engineer  
12 here did is they did figure out the sum and then ignored it  
13 and found it not to be a conflict.

14 Moving to Slide 21. So this continues on. This is  
15 actually, I guess, a continuation, but on the record it will  
16 be Slide 21. The State Engineer argues three locations for  
17 its support for this evidence. One is the report submitted  
18 by NVE at 41876. One is the SNWA report at 41992-993. And  
19 lastly is the testimony of Rick Felling, which was the Nevada  
20 -- the NVE expert that the system is approaching equilibrium.

21 The thing is that this evidence does not address  
22 what is necessary to return the Muddy River to its decreed  
23 flows. Again, that seems to have been entirely ignored in  
24 1309. This evidence, to the extent it proves anything, proves  
25 that they're trying to figure out what the steady state is



1 or what will keep up at, or are we at a steady state, even.  
2 And I guess it's useful, this is what we're going to do now,  
3 to look at what that evidence actually shows. And certainly,  
4 though, what is clear is if we're not even sure it's at a  
5 steady state yet at 8,000, and I think Mr. Felling's testimony  
6 was actually 7,000 to 8,000, how is it possible that it could  
7 be more than 8,000 and still return the Muddy River to its  
8 flows? It doesn't. As I said in one of my briefs, I think,  
9 my high school physics class told me that wasn't going to  
10 happen, so I don't have to be an expert to know that.

11           So what really is happening? There is an  
12 acknowledgment in 1309 that there's a curtailment, which is  
13 just fancy water lawyer for you're taking our water. We're  
14 no longer getting the water we're supposed to get. And the  
15 decree was based on 33,900 acre feet annually. The State  
16 Engineer acknowledges in 1309 that the Muddy River after the  
17 pump test has not returned to those flows and that, in fact,  
18 since 2015 the flows have averaged 30,600 acre feet annually.  
19 And so that's where I just do the math and say, okay, well  
20 then my client is missing 3,300 acre feet and that's why we're  
21 here.

22           And the State Engineer makes the determination it's  
23 not due to drought, it's not due to climate change, it's due  
24 to pumping. And then, stunningly, we jump to but that's not  
25 a conflict and so we're going to allow pumping to continue

1 at 8,000 acre feet, even though there's no reference or  
2 suggestion that it's going to return to predevelopment flows.  
3 So the result being the loss of 3,300 acre feet. That was  
4 Slide 22.

5 Slide 23. Well, I guess this kind of already  
6 becomes pretty obvious but we'll go through this slide anyway.  
7 How does 1309 violate the decree? Well, we're supposed to  
8 have 33,900 acre fee. 1309 says the current flow is 30,600  
9 and the pumping is causing the reduction and at best we're  
10 getting equilibrium or steady state. 1309 then allows pumping  
11 levels to continue by saying that reduction of 3,300 does not  
12 conflict with the decree and has no suggestion as to how or if  
13 -- apparently abandoning the mere possibility that the river  
14 could ever return to 33,900.

15 So that's a violation and then in order to authorize  
16 it or circumvent this court's decree, there is an illegal  
17 application of a consumptive use analysis 100 years after the  
18 decree became final. It's improper and it's violative of  
19 Nevada law.

20 Not that you need -- to kind of answer a question  
21 you asked earlier, I think of Mr. Taggart, I don't think you  
22 need to necessarily get to the due process. What we're going  
23 to ask you to do, as you're going to see at the end of my  
24 PowerPoint here, is to remand with specific instructions to  
25 the State Engineer. Now, one of those instructions should

1 probably relate to due process because I think everybody  
2 agrees there was an issue there. But MVIC also feels that  
3 its due process rights were violated.

4           There's no question everyone in this room or  
5 everyone who has talked so far and I bet you everybody who  
6 is going to talk is going to agree that there are property  
7 rights. And there's no question that due process demands  
8 notice and a reasonable opportunity to be heard. Now, some  
9 have said, well, MVIC had notice. They were there. They  
10 presented a witness. Yes, we had notice that there was  
11 going to be a hearing and we were the only person holding  
12 or entity holding water on the Muddy River that showed up,  
13 to my knowledge.

14           But it should have been more of a curiosity than  
15 a need to actually participate because the notice that was  
16 received -- and that is indeed the importance of notice is  
17 what were you told -- was that the impacts on those water  
18 rights would be determined. In other words, there was already  
19 a recognition in the notice that this is your water right.  
20 Everybody knows what the water right is. It's in a decree.  
21 Everyone has known for 100 years. And we're going to figure  
22 out if it's being impacted by pumping, and if so, how much  
23 it was.

24           Turning to Slide 25, this is that same quote with  
25 a little bit different emphasis, though, but I think at this

1 point you've seen it enough. But the point is that -- and  
2 I've bolded in the second paragraph -- my client understood  
3 and it was reasonable notice for them to understand this  
4 because it was, you know, coming from the dais, that they  
5 were going to have a hearing to determine what the impact is.  
6 My client can therefore show up and sit in the back row if it  
7 wants and say, geez, I can't wait to see what my impact was  
8 and how much water I'm going to give back, or if it's for  
9 something else and I've got nobody to blame, and that should  
10 have been all they would need.

11           And had they known that, in fact, what was actually  
12 going to be determined was a consumptive use analysis, what  
13 was actually going to be determined was how much water they  
14 needed, then the case that we would have presented would have  
15 been entirely different because that would have been obviously  
16 wrong. It would have been wrong legally. So the briefs would  
17 have been different and probably the evidence would have been  
18 different, too. My client should never have to incur the  
19 expense -- should not have incurred the expense of hiring me.  
20 You should never have to incur the expense of hiring an expert  
21 to re-prove any rights or protect its rights. But at least  
22 if they had had appropriate notice that that's what the State  
23 Engineer was considering, then they could have made the  
24 decision as to whether to protect those valuable rights.

25           That was Slide 25. Slide 26 is probably a rehash

1 of what I just said. MVIC's due process rights were violated  
2 because the notice, it was very informed. They had a very  
3 informed notice because the State Engineer went out of his  
4 way to explain that this was going to be a bifurcated process.  
5 This was going to be a multi-phase process. And by the way,  
6 in this first phase we're going to start from the premise  
7 that we're protecting the decree. And that's simply not what  
8 happened. The Muddy Valley Irrigation company believed that  
9 the State Engineer was going to protect its rights and it  
10 did not.

11           The starting point in this next phase that they  
12 thought was going to occur, that it thought was going to occur  
13 was going to be to figure out, okay, if it is pumping, what  
14 pumping is it that is causing the interference and how do we  
15 get us back to as good as we can get at least. And if we're  
16 not that far, well, then what else do we do? Mitigation.  
17 But that conflict analysis should have been focused, in my  
18 client's mind, on what pumping is impacting the flow of the  
19 Muddy River, the most senior rights, and then returning those  
20 rights.

21           Turning to Slide 27. The State Engineer did, in  
22 fact, make a determination, unfortunately. The capture or  
23 potential capture of flows of the -- excuse me. Let me read  
24 it. It's in quotes, so I'm going to say this right for the  
25 record. "Capture or potential capture of flows of the waters

1 of a decreed system does not constitute a conflict." That's  
2 the order, 1309 on page 60, Record on Appeal 61. That's  
3 weird. Oh, page 60 of the order, okay. There must be a  
4 cover page.

5           That statement should have sent not just ripples  
6 but waves -- again, pun intended -- throughout the water law  
7 establishment of this state because what does this mean? It  
8 means that every decreed system in this state, my clients,  
9 my other clients that have waters on other decreed systems,  
10 they're all in jeopardy because none of those decrees are now  
11 necessarily solid. None of those water rights are necessarily  
12 solid.

13           Maybe they're all subject to an analysis of how much  
14 do you actually need because, remember, even though there's  
15 a statute that prohibits the consideration of consumptive use,  
16 this whole thing wasn't started because MVIC came in and  
17 said, hey, we're going to change a use or change a point of  
18 diversion or any change that was initiated by MVIC. That  
19 wasn't how this started. I mean, I guess, arguably, I'm not  
20 sure when it started. Maybe it started when Paul Taggart  
21 was born in 1966 and Eakin decided, hey, this water is all  
22 connected. Or maybe it started when Hugh Ricci decided to  
23 issue 1169 and said, hey, maybe we've got too much water  
24 permits out there. But the point is it wasn't started because  
25 of any analysis or request by my client. My client's rights

1 should have just been protected.

2           And this particular language in this particular  
3 order, if it became established law in this state, it does  
4 jeopardize the public trust doctrine because now you don't  
5 know that those decreed rights can be relied upon in the  
6 future. That's the impact of this. And so by using that  
7 language, which I'm not quite sure but I'm hoping to hear  
8 from the State Engineer's counsel tomorrow that they are  
9 stipulating to strike that language. But that was -- I saw  
10 something in their briefs that sounded like maybe that's it.

11           THE COURT: Well, they kind of suggested, like,  
12 if you think that this --

13           MR. DOTSON: Right.

14           THE COURT: Then, you know, strike that and affirm  
15 everything else; right?

16           MR. DOTSON: You know, it kind of reminds me when  
17 Justice Becker once stopped the argument, stopped the clock  
18 during an appellate argument for me and tried to get the other  
19 side to agree to something. Maybe it will happen tomorrow;  
20 just a little foreshadowing.

21           But no matter what, we know that the State Engineer  
22 failed to protect these decreed rights. In fact, they struck  
23 a portion of those rights by allowing that reduction. At  
24 least that's the view my client has. I know others disagree.  
25 And it resulted in the loss of 3,300 acre feet annually.

1 That was Slide 27.

2 All right. Slide 28. This is what we're asking  
3 you to do, Your Honor. We're asking you to affirm that there  
4 is indeed substantial evidence that supports Order 1309's  
5 determination that the predevelopment base flow of the river  
6 is approximately 33,900 acre feet annually. If you read that  
7 SNWA report and you look at the evidence in the record, there  
8 is a lot of evidence that it's higher than that. But, okay,  
9 this was in the order. Like I said, I'm a guy that's based  
10 on compromise. My client wants to be reasonable. That could  
11 be a determination that you could remand this with. That is  
12 your base flow. We'll support that.

13 We'll also support and you can direct that, yes,  
14 there is substantial evidence that the river has flowed  
15 approximately 30,600 acre feet since 2015. Thus, leading  
16 to the curtailment of 3,300 acre feet of my client's water.

17 And by the way, I should speak to that. If you  
18 looked at that chart way back on -- well, that early slide  
19 where it showed everybody's water rights, I'm going to go to  
20 it in a second. I'll just stay with what slide this is. I've  
21 got plenty of time. Slide 6. Let me just fly back to that  
22 quickly. So this shows everybody's -- this comes from the  
23 record at 33798 and this is -- you can tell from the type  
24 this is from the original decree documents. And I focused and  
25 highlighted in here on the Muddy Valley Irrigation Company's



1 rights, but you see the other right holders, which are much  
2 smaller, admittedly, in cubic feet per second. But -- and  
3 I don't have this map, but I think both Mr. Taggart and Mr.  
4 Lake have maps that show where the Muddy Valley Irrigation  
5 Company's rights are. And I think the Vidler brief mentions  
6 this as well.

7           The point of diversion for the Muddy Valley  
8 Irrigation Company is at the end of this stream system where  
9 the water is put to use, which is probably why the decree  
10 says, oh, and Muddy Valley Irrigation Company gets all the  
11 water that's left, in that second grant. In our view there's  
12 two specific grants. There's this specific grant and there's  
13 language here; right? Well, that's great and I guess it was  
14 probably great for my client for the last -- for the 100 years  
15 -- you know, it's the 100-year anniversary or a little less  
16 than that. But it's not great when the flow is not what it  
17 is supposed to be, when the flow is not the same as what the  
18 decree says because, then, you know who gets shorted? The  
19 guy who goes last.

20           And so in a very real sense, which is probably why  
21 you see MVIC up here, not only the fact that they have the  
22 largest quantity of rights, that's who has been impacted by  
23 this because they get the water at the end. Not only did  
24 they get -- not only because of the separate grants that they  
25 would have gotten any water that was left had that pumping

1 not occurred, but also because of their physical position at  
2 the end of the river and end of the flow system.

3 All right. So going back to my last slide. I'm  
4 sure there was a way for me to -- all right. So what else are  
5 we asking you to do? To reverse and remand 1309 with these  
6 instructions. And these are abbreviated versions of what we  
7 have in our proposed order.

8 THE COURT: Proposed findings.

9 MR. DOTSON: Let's make it clear, Your Honor, that  
10 the State Engineer -- it shouldn't have to be clear. I know  
11 the statute says so, the law says so, but let's make it clear  
12 on remand you don't have any authority to modify a decree;  
13 not after three years after the decree was entered. And you  
14 don't have any authority to modify the Muddy River Decree.

15 Let's remand with a specific instruction that this  
16 should be -- your starting point, your foundation point should  
17 have been, as it implied that it was, to return the Muddy  
18 River flows to 33,900. This goes back to, you know, this  
19 last page where I said let's start with 33,900 that you found.  
20 You found that, State Engineer. We agree. This Court agrees.  
21 At least that's what we hope the Court will do. Recognize  
22 that therefore approximately 3,300 acre feet of water is being  
23 unlawfully intercepted someplace, somehow, on an annual basis.  
24 And it's up to the State Engineer to do his job or her job if  
25 we have a female State Engineer at the time and determine the

1 sum of water that can be pumped and where it can be pumped,  
2 I guess -- that could probably be fine-tuned a little bit --  
3 while allowing the Muddy River to return to predevelopment  
4 flows.

5 Now, I acknowledge on behalf of my client it may be  
6 that the State Engineer determines, well, you've got to pump  
7 this much for awhile and then we can pump more after that.  
8 It may be that you have to have further study after you stop  
9 pumping. So instead of saying no more than 8,000, it has to  
10 be some lower number and then we see if we start to gain flow  
11 in the river. But you don't have to make that determination.  
12 I know you've asked from the bench a couple times today, well,  
13 wait a second, what if we do this or do that? And counsel  
14 has generally shied away from answering that.

15 THE COURT: Sure. Right.

16 MR. DOTSON: But I'm not going to be quite so shy,  
17 I guess. I'm not going to -- I don't know the specific number.  
18 I'm not that smart and I'm not a hydrologist. I don't even  
19 play one on TV. But others can figure it out and that's the  
20 State Engineer's job. And what you can do, you don't have to  
21 figure it out, either. That's the great thing about -- the  
22 answer to your question is you don't need to know because  
23 what you can do is you can order the State Engineer, because  
24 you're the Court, to make that determination. You make the  
25 determination, State Engineer. You're supposed to be the

1 expert. You've got hydrologists on staff and you can take  
2 all this evidence. So what is that sum? Where is that water  
3 that can be pumped that will return it to the predevelopment  
4 flows?

5           And lastly, Your Honor, we would ask that you make  
6 it very clear that a consumptive use analysis is improper. It  
7 cannot be applied to the Muddy River, not only statutorily but  
8 for all the other reasons that we've set forth as well in this  
9 argument. It just -- there should be no hypothetical alfalfa  
10 fields. It's not a question of how much water is needed.  
11 You know, it's not a question of, well, if we -- I think one  
12 of the briefs suggests something like, you know, 17-18,000  
13 acre feet annually. Well, there's no science to know that  
14 the river will even flow if you pump that much more water out  
15 of this.

16           And we don't have to make that decision. You don't  
17 have to -- you can just say, well, listen, you follow the  
18 decree. This is the decreed waters. And, by the way, it is  
19 improper to make any analysis that is an attempt to circumvent  
20 the holding of the decree, because that's simply what it was.  
21 And I'm sure it was an effort to compromise and be reasonable,  
22 but in that compromise it violated the decree.

23           And that's all I have for you today, Your Honor.  
24 Thank you.

25           THE COURT: All right, thank you.

1 MR. DOTSON: Do you have any questions?

2 THE COURT: I don't think I do right now.

3 MR. DOTSON: All right. Thank you.

4 THE COURT: Thank you.

5 All right. So with that, I guess we will see  
6 everyone tomorrow at 8:30. And then I think we're going to  
7 be starting with Nevada Cogeneration Associates 1 and 2, and  
8 then we'll go to Georgia Pacific and then Lincoln and Vidler,  
9 and then I think we go to the State Engineer. Correct?

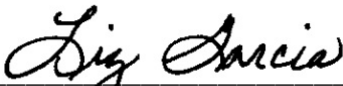
10 UNIDENTIFIED SPEAKER: Yes.

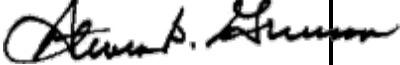
11 THE COURT: Okay. And then the subsequent. Are  
12 there any other housekeeping matters that need to be addressed  
13 today? No? All right, we'll see everyone tomorrow.

14 (Court recessed at 4:45 p.m. until the following day,  
15 Tuesday, February 15, 2022, at 8:30 a.m.)

16 \* \* \* \* \*

ATTEST: I do hereby certify that I have truly and correctly  
transcribed the audio/video proceedings in the above-entitled  
case to the best of my ability.

  
\_\_\_\_\_  
Liz Garcia, Transcriber  
LGM Transcription Service



TRAN

DISTRICT COURT  
CLARK COUNTY, NEVADA  
\* \* \* \* \*

SOUTHERN NEVADA WATER )  
AUTHORITY, )  
 )  
Plaintiff, )  
 )  
vs. )  
 )  
NEVADA STATE ENGINEER, )  
DIVISION OF WATER RESOURCES, )  
 )  
Defendant. )  
 )  
AND RELATED CASES & PARTIES )

CASE NO. A-20-816761-C  
DEPT NO. I

**TRANSCRIPT OF  
PROCEEDINGS**

BEFORE THE HONORABLE BITA YEAGER, DISTRICT COURT JUDGE

TUESDAY, FEBRUARY 15, 2022

**PETITION FOR JUDICIAL REVIEW - DAY 2**

SEE NEXT PAGE FOR APPEARANCES

RECORDED BY: LISA LIZOTTE, COURT RECORDER  
TRANSCRIBED BY: JD REPORTING, INC.

**A P P E A R A N C E S**

FOR LAS VEGAS VALLEY WATER DISTRICT, AND SOUTHERN NEVADA WATER AUTHORITY:	PAUL G. TAGGART, ESQ.
FOR NV STATE ENGINEER, DIVISION OF WATER RESOURCES:	JAMES N. BOLOTIN, ESQ. Sr. Deputy Attorney General MICHELINE N. FAIRBANK, ESQ.
FOR LINCOLN COUNTY WATER:	WAYNE O. KLOMP, ESQ.
FOR VIDLER WATER COMPANY:	KAREN A. PETERSON, ESQ.
FOR NV COGENERATION ASSOCIATES NOS. 1 AND 2:	FRANCIS C. FLAHERTY, ESQ.
FOR MUDDY VALLEY IRRIGATION:	ROBERT A. DOTSON, ESQ. STEVEN D. KING, ESQ. SCOTT MIDDLETON, ESQ.
FOR CENTER FOR BIOLOGICAL DIVERSITY:	SCOTT LAKE, ESQ. LISA T. BELENKY, ESQ.
FOR REPUBLIC ENVIRONMENTAL TECH., AND GEORGIA-PACIFIC GYPSUM:	LUCAS M. FOLETTA, ESQ. SYLVIA L. HARRISON, ESQ.
FOR DRY LAKE WATER, LLC, AND APEX HOLDING COMPANY:	CHRISTIAN T. BALDUCCI, ESQ.
FOR BEDROC LIMITED, LLC, WESTERN ELITE ENVIRONMENTAL, AND CITY OF NORTH LAS VEGAS:	NO APPEARANCES NOTED
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HANNAH E. WINSTON, ESQ.

FOR SIERRA PACIFIC POWER CO.,  
AND NEVADA POWER COMPANY:

JUSTINA A. CAVIGLIA, ESQ.

FOR THE CHURCH OF JESUS CHRIST  
OF LATTER-DAY SAINTS:

SEVERIN A. CARLSON, ESQ.

ALSO PRESENT:

JOHN LEE



**I N D E X**

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1 **LAS VEGAS, CLARK COUNTY, NEVADA, FEBRUARY 15, 2022, 8:29 A.M.**

2 \* \* \* \* \*

3 THE COURT: Southern Nevada Water Authority versus  
4 Nevada State Engineer and all of the other cases that it has  
5 been consolidated with.

6 Here on behalf of Las Vegas Valley Water District and  
7 Southern Nevada Water Authority?

8 MR. TAGGART: I'm here, Your Honor. Good morning.  
9 Paul Taggart.

10 THE COURT: All right. Thank you.

11 Here on behalf of the Nevada State Engineer?

12 MR. BOLOTIN: Good morning, Your Honor. James  
13 Bolotin. Once again I have Micheline Fairbanks, deputy  
14 administrator. And the State Engineer will be here once his  
15 flight lands.

16 THE COURT: Sometime in the afternoon hopefully.

17 MR. BOLOTIN: Yeah.

18 THE COURT: Okay. Let's see. Lincoln County Water  
19 District.

20 MR. KLOMP: Good morning, Your Honor. Wayne Klomp on  
21 behalf of Lincoln County Water District. And with me is the  
22 general manager, Wade Poulsen.

23 THE COURT: Okay. Great. Thank you.

24 Here on behalf of Vidler?

25 MS. PETERSON: Good morning, Your Honor. Karen

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1 Peterson. And also I have the Vidler representatives here,  
2 Ms. Palmer, Mr. Bushner, and Mr. Hartman.

3 THE COURT: Okay. Great. Thank you.

4 And here on behalf of Nevada Cogeneration Associates  
5 Nos. 1 and 2?

6 MR. FLAHERTY: Good morning, Your Honor. Frank  
7 Flaherty, Dyer Lawrence, LLP.

8 THE COURT: Okay. Thank you.

9 Here on behalf of Muddy Valley Irrigation Company.

10 MR. DOTSON: Good morning, Your Honor. Rob Dotson.  
11 I have with me Steve King and Scott Middleton and maybe members  
12 of the board who I think are BlueJeans. Thank you.

13 THE COURT: Okay. Great. Thank you.

14 Here on behalf of the Center for Biological  
15 Diversity?

16 MR. LAKE: Good morning, Your Honor. Scott Lake. I  
17 have John Lee (phonetic) and Ms. Belenky on BlueJeans.

18 THE COURT: All right. Thank you.

19 Here on behalf of Republic Environmental  
20 Technologies?

21 MR. FOLETTA: We're Lucas Foletta, and Ms. Sylvia  
22 Harrison is on BlueJeans.

23 THE COURT: Okay. Here on behalf of -- oh, and  
24 you're also here on behalf of Georgia-Pacific; is that correct?

25 MR. FOLETTA: That's correct.

1 THE COURT: All right. And then here on behalf of  
2 Dry Lake Water and Apex?

3 MR. BALDUCCI: Your Honor, Christian Balducci on  
4 behalf of Apex and Dry Lake. On BlueJeans I believe is Lisa  
5 Cole. She's a client representative and consultant.

6 THE COURT: Okay. Thank you.

7 Here on behalf of Bedroc Limited, LLC? I think she  
8 was on BlueJeans yesterday; right?

9 (Pause in the proceedings.)

10 THE COURT: All right. It looks like they're missing  
11 for today.

12 All right. Moapa Valley Water District? Is  
13 Mr. Morrison --

14 MR. TAGGART: I think Mr. Morrison is en route.

15 THE COURT: Okay. Coyote Springs.

16 MR. HERREMA: Good morning, Your Honor. Brad Herrema  
17 on behalf of Coyote Springs. I have Emilia Cargill with me.  
18 We have Kent Robison, Hannah Winston and Bill Coulthard on  
19 BlueJeans.

20 THE COURT: Okay. Great. Thank you.

21 Then here on behalf of Sierra Pacific Power and  
22 Nevada Power?

23 No one. Okay.

24 UNIDENTIFIED SPEAKER: I think she's also en route  
25 too.

1 THE COURT: En route.

2 Okay. And then here on behalf of the Church of Jesus  
3 Christ of Latter-day Saints?

4 MR. CARLSON: Good morning, Your Honor. Sev Carlson  
5 on behalf of the Church.

6 THE COURT: Okay. Thank you.

7 Have I missed anyone?

8 No. All right. So I guess I will just see.

9 Mr. Flaherty, are you able to -- is your tech  
10 working, or are you still trying to figure it out?

11 MR. FLAHERTY: It's not, Your Honor. I plugged it  
12 in, and it's just flashing light.

13 THE COURT: Oh, shoot. Okay. Can you call IT?

14 Have you already called IT?

15 UNIDENTIFIED SPEAKER: No, I need to.

16 THE COURT: Yeah. Can you call IT.

17 All right. I don't want to deprive you of your full  
18 presentation.

19 MS. CAVIGLIA: Your Honor, I apologize. This is  
20 Justina Caviglia from NV Energy.

21 THE COURT: Okay. Great.

22 MS. CAVIGLIA: I just got into Las Vegas.

23 THE COURT: Thank you, Ms. Caviglia. And you're also  
24 here on behalf of Sierra Pacific Power Company?

25 MS. CAVIGLIA: That is correct.

1 THE COURT: Thank you.

2 MR. ROBISON: Your Honor, I don't know. I just got  
3 on as well. This is Kent Robison for CSI on BlueJeans.

4 THE COURT: Oh, yes. Your colleague let us know that  
5 you were on BlueJeans. Thank you.

6 MR. ROBISON: Thank you, Your Honor.

7 (Pause in the proceedings.)

8 MR. MORRISON: Your Honor, also this is Greg  
9 Morrison. I just arrived in Las Vegas, and I should be in the  
10 courtroom shortly.

11 THE COURT: Okay. All right. Thank you. And you're  
12 on behalf of Moapa Valley Water District?

13 MR. MORRISON: That's correct, Your Honor.

14 THE COURT: Thank you.

15 (Pause in the proceedings.)

16 THE COURT: Are you ready?

17 MR. FLAHERTY: I am. Thank you, Your Honor, for your  
18 patience.

19 THE COURT: Oh, no worries.

20 Can you call IT and let them know we got it figured  
21 out. Thank you.

22 (Pause in the proceedings.)

23 THE COURT: Okay. Are we ready?

24 MR. FLAHERTY: Yes, Your Honor.

25 THE COURT: All right. You may proceed.

1 MR. FLAHERTY: Well, I said I was ready, Your Honor,  
2 but I --

3 THE COURT: That's okay.

4 (Pause in the proceedings.)

5 MR. FLAHERTY: Thank you.

6 THE COURT: All right.

7 ARGUMENT FOR NEVADA COGENERATION ASSOCIATES NOS. 1 AND 2

8 MR. FLAHERTY: Good morning, Your Honor. I'm Frank  
9 Flaherty. I'm here on behalf of Nevada Cogeneration Associates  
10 Nos. 1 and 2. I may refer to them as Nevada Cogen, and CA 1,  
11 and CA 2 or just NCA.

12 I want to start by just giving you some -- a little  
13 bit of background about NCA, and this could be found in the  
14 record of appeal Number 580 at page 39732.

15 NCA 1 and 2 commenced commercial operation about  
16 29 years ago, and they've been in continuous operation using  
17 the full amount of their fully certificated water right that  
18 entire time. NCA sells 100 percent of the 170 megawatts of  
19 electricity that it generates to NV Energy under a long-term  
20 power purchase agreement to supply electricity to folks right  
21 here in Nevada.

22 NCA is on environmentally efficient operation. The  
23 waste heat and waste water from the two generation plants are  
24 sent to other factories, facilities that manufacture sheet rock  
25 right there in the area.

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1 THE COURT: Hang on just a second.

2 Whoever is on BlueJeans, can you please mute  
3 yourselves. Thank you.

4 MR. FLAHERTY: And on wrapping up this point, NCA has  
5 been part of the economic engine of Southern Nevada for  
6 29 years, and if it's going to continue in that fashion, it's  
7 vital that it continue to be able to use its fully certificated  
8 water rights.

9 The State Engineer's decision was arbitrary and  
10 capricious because basically it's a fundamental property -- a  
11 fundamental proposition he lacked the authority to create what  
12 I'm calling a superbasin.

13 The State Engineer's authority is limited to that  
14 which the legislature explicitly or implicitly delegates to  
15 him.

16 Now, this isn't the first time you've heard this this  
17 week, Your Honor, probably not the last, but I think we want to  
18 talk a little bit about what that means. Because what we're  
19 talking about here is separation of powers; right? We all  
20 learned about that in middle school, high school, college.  
21 Hopefully we all know what it is by now, okay, but a case like  
22 this really brings separation of powers to life. Because in  
23 this case, the State Engineer has put himself in a box. He's  
24 created a situation where the irresistible force is colliding  
25 with the immovable object. And I'll explain that a little bit,



1 okay. A primary facet of Nevada water law is first in time,  
2 first in right. That's not the first time you've heard that  
3 either, okay.

4 And there can't be any serious dispute that for  
5 decades, for decades, the State Engineer has administered  
6 groundwater and surface water separately, okay. So on one silo  
7 or maybe bucket is a better analogy since we're dealing with  
8 water, in one bucket, he manages surface water rights. In  
9 another bucket he manages groundwater rights.

10 And actually, within those two big buckets there's  
11 lots of smaller buckets; right? So there's a bucket for the  
12 Muddy River system; right? There's a bucket for the Humboldt  
13 River; right? All these surface water systems have their own  
14 separate bucket.

15 Over in the groundwater bucket, you have 200 plus. I  
16 think it's 232 different buckets for the groundwater basins  
17 that the State Engineer has delineated over the years. So he's  
18 always managed these buckets separately.

19 THE COURT: Let me ask you a question. So in talking  
20 about, you know, managing these rights separately and now there  
21 is the conductive management. Is that what it's --

22 MR. FLAHERTY: Yes, that's what it's called.

23 THE COURT: Yeah. The managing them together, has  
24 there ever been a consideration of how the groundwater rights  
25 and surface water rights interact before?

1 MR. FLAHERTY: Well, that's all new, and I think  
2 you've been hearing some about that from the other parties,  
3 right. The other parties have talked about Order 1169, you  
4 know, because it's mysterious. This water just pops up, right,  
5 in -- in Arrow Canyon, right, and suddenly we have a river.  
6 And so that was a head scratcher for years, and then slowly, I  
7 guess scientists are still trying to put the pieces together.

8 But to my knowledge, Your Honor, you know, this is  
9 the first case where it's been presented squarely, okay. And  
10 we're going to talk about that a little, but I think you've  
11 already heard about that from some of the other parties, and  
12 I'm going to give you some legislative insight on that, I hope.

13 Now, going back to the separate nature of these two  
14 big buckets, right, relying on that, right, parties,  
15 individuals, companies like Nevada Cogeneration Associates,  
16 they've acquired senior groundwater rights, okay, in their  
17 hydrographic basins at significant expense, right. So Nevada  
18 Cogen, they acquired the most senior water rights in Black  
19 Mountains Area hydrographic basin. All right.

20 In relying on that, they spent hundreds of millions  
21 of dollars building these two power plants, operating for  
22 29 years, supplying -- excuse me, supplying electricity to  
23 Nevadans. So they've relied on that. Nevadans are relying on  
24 that. And those Nevadans they're the owners of the water  
25 ultimately, okay, and this is a good use of their water, right,

1 generating electricity.

2 But now the State Engineer, with the stroke of a pen  
3 alleges that he has the authority to just merge these two  
4 separate systems, okay. Oh, you know what, right here by the  
5 Muddy River and these surrounding basins, we're going to go  
6 ahead and just do conjunctive management. That is the  
7 irresistible force in the immovable object. One of them is  
8 senior groundwater rights, and the other one is senior surface  
9 water rights.

10 So we've got this collision now.

11 The State Engineer would have you believe that the  
12 legislature delegated to him, an unelected official, the  
13 authority to both first create this conflict. I think  
14 Mr. Robison called it a mega mess, right.

15 THE COURT: I think so.

16 MR. FLAHERTY: Right. And also, the authority to  
17 resolve it. And, Your Honor, if you think about that, if you  
18 think about what's at stake here, that's really a preposterous  
19 proposition, the idea that the legislature is just going to  
20 hand this time bomb or this bomb off to the State Engineer.

21 The administrative state in Nevada, like any other  
22 state here really in the United States, it's a fundamental  
23 political compromise between the legislative and executive  
24 branches.

25 The legislature delegates authority, sometimes

1 begrudgingly, to the administrative agency, and then, of  
2 course, the executive, the governor signs off.

3           So the State Engineer is asking you to believe that  
4 when the legislature passed and the Governor signed SB47 in  
5 2017, that's the bill that created 533.024, sub (1), sub (e).  
6 That's the part that says it's the policy of the State of  
7 Nevada to engage in conjunctive management, right. He's asking  
8 you to believe that when they passed that policy statement they  
9 gave him the authority to engage in conjunctive management and  
10 create this massive conflict that we're talking about.

11           But the reality is, Your Honor, even he knows better  
12 than that. And how do we know that? We know that from this  
13 first slide. This first slide is actually from my reply brief,  
14 but the block quote in the first slide is from minutes before a  
15 meeting of the assembly committee on natural resources,  
16 agriculture and mining, 2019, February. And this is the State  
17 Engineer talking. And he says,

18                       While the legislative declaration,  
19                       NRS 533.024 helpfully recognizes the  
20                       hydrological connection that often exists  
21                       between groundwater and surface water sources,  
22                       existing statute does not provide the framework  
23                       necessary to effectively implement the  
24                       legislature's policy direction.

25           He goes on and he says,

1                   Assembly Bill 51 seeks to incorporate  
2                   conjunctive management into Nevada law while  
3                   balancing the interest of these formerly  
4                   separately administered water sources in a  
5                   legally defensible manner.

6                   THE COURT: So let me ask you, Mr. Flaherty, because  
7 I know that a lot of your brief touched on this issue, the fact  
8 that they had brought forward this proposed Bill and that it  
9 was within that testimony that they acknowledge that they  
10 didn't actually have that authority.

11                   Is that something that this Court can consider when  
12 it's not actually in the record below on this case?

13                   MR. FLAHERTY: Well, it is, Your Honor. I mean, I  
14 think you can take judicial notice certainly of the minutes  
15 from the legislature's committee meetings. I think you're  
16 entitled to do that, certainly, and it's appropriate.

17                   And it speaks to -- it speaks to what the State  
18 Engineer's authority is.

19                   I mean, it's interesting. On the one hand, the State  
20 Engineer I think made an argument somewhere in their brief that  
21 you want to defer to my own interpretation of my own authority,  
22 which I think is a pretty slippery slope, but if you're  
23 inclined to go there, go ahead and defer to this interpretation  
24 right here, where he says he doesn't have the authority,  
25 respectfully, Your Honor. Okay.

1           And this quote illustrates a couple of things. The  
2 first one, the little one I wanted to point out, you see there  
3 at the very last -- the second-to-last line, the State Engineer  
4 himself has acknowledged that historically these sources have  
5 been administered separately, okay. So again, in his own  
6 words, he's acknowledge this, okay. This is the way it's been.

7           And what he's talking about existing statute up here  
8 starting on line 3, he's talking about 533.024, and he says  
9 that's not enough. He says it's a policy direction that's  
10 helpful, but I don't have the tools I need to move forward with  
11 conjunctive management, okay.

12           And that was Slide 1 by the way if I didn't state  
13 that for the record, Your Honor.

14           THE COURT: Oh, yes. Please do, yes, thank you.

15           MR. FLAHERTY: So it was plain to the State Engineer  
16 in 2019 that 533.024 did not confer authority upon him to move  
17 forward with conjunctive management, and that lack of authority  
18 is even more acute in this situation where he's supposedly  
19 forming this super basin. He's not just putting together one  
20 groundwater basin in the surface source. He's putting together  
21 six plus seven groundwater basins in the Muddy River streams.

22           THE COURT: So it's really conjunctive management and  
23 then joint management of the separate basins?

24           MR. FLAHERTY: Yes. Yes. I guess really, Your  
25 Honor, if we're going to try to get scientific about it, I

1 guess it would all be considered an exercise in conjunctive  
2 management, but I guess my point is that he didn't have the  
3 authority to engage in conjunctive management, and I think this  
4 situation is even more egregious because it expanded to several  
5 different hydrographic basins simultaneously.

6 THE COURT: Right. Well, so, yeah, and I'm sure that  
7 you've seen that there are other petitioners that have argued  
8 the other point that he doesn't have the -- he or she, the  
9 Nevada State Engineer doesn't have the authority to jointly  
10 manage those basins either.

11 So I think were talking about two separate things.  
12 Is that --

13 MR. FLAHERTY: Your Honor, I think you're right.  
14 That's two, and I'm not sure if that -- well, I guess if other  
15 parties have raised that second issue, the joint management of  
16 the basins, that is before you as well.

17 And I keep on referring to him as him.

18 THE COURT: I guess at that time it was a him. So  
19 I --

20 MR. FLAHERTY: Because it's been him for a while now,  
21 and it still is him, whoever him is; right?

22 THE COURT: Okay. Yes.

23 MR. FLAHERTY: So that's why I am doing that, Your  
24 Honor.

25 THE COURT: Sure.

1 MR. FLAHERTY: So in his briefing, the State Engineer  
2 has not provided any persuasive explanation to you or to me at  
3 least of what has changed since he made this statement to the  
4 legislature in early 2019. What has changed that somehow gives  
5 him the authority he told the legislature he lacked?

6 In fact, in an order he issued just a little over  
7 two months ago, Order Number 1329, the State Engineer again  
8 acknowledges lack of authority.

9 And I'm going to go ahead and go to Slide 2, Your  
10 Honor. And this is just the cover page or the first page  
11 rather of Order 1329. And I've highlighted the title there  
12 with my Crayon. And I'll go ahead and read that to you. Just  
13 the title is Establishing Interim Procedures for Managing  
14 Groundwater Appropriations to Prevent the Increase and Capture  
15 and Conflict with Rights Decreed Pursuant to the Humboldt River  
16 Adjudication.

17 So as the title of this order indicates, the State  
18 Engineer is confronting the same issues he confronted in  
19 Order 1309, the potential capture of senior surface water  
20 rights by pumping junior groundwater rights -- and for the  
21 record, I put air quotes around the word "junior" --

22 THE COURT: So are you going to be objecting as to  
23 something --

24 MR. BOLOTIN: On behalf of the State Engineer, I'm  
25 going to object to the introduction of orders that came out



1 after the issuance of Order 1309. That's not part of the  
2 record on appeal.

3 THE COURT: Okay. So I will -- I will actually grant  
4 that objection.

5 So since it's not part of the record on appeal,  
6 then -- I understand that you're --

7 Yes, Ms. Peterson.

8 MR. FLAHERTY: I've got friends, Your Honor.

9 THE COURT: I know. Everyone's got their own  
10 cliques. Yes.

11 MS. PETERSON: Would it be appropriate just to --

12 THE COURT: Sure. Sure.

13 MS. PETERSON: Just for the record.

14 THE COURT: So why don't we -- I know that you have  
15 the objection that it's not part of the record of the appeal.  
16 Why don't I ask -- I should do this the proper way. What is  
17 your response?

18 UNIDENTIFIED SPEAKER: Do I --

19 THE COURT: What was that? Oh, yes, stop the clock.

20 MS. PETERSON: I guess for the record, Your Honor, on  
21 behalf of Vidler and Lincoln, what I would like to say is that  
22 when the State Engineer -- legal argument and legal reasoning  
23 doesn't have to be in the record before the State Engineer, the  
24 factual record before the State Engineer. The issue was  
25 brought up in front of the State Engineer at the hearing that

1 he didn't have authority. Then the State Engineer issued  
2 Order 1309 when he said he had the authority, and so now I  
3 think the argument is, it's legal argument. We don't have to  
4 cite and put in the record all the cases below that we are  
5 relying on for our --

6 THE COURT: So I guess the question is, is the  
7 introduction of the order itself proper or improper?

8 MS. PETERSON: The Court can take judicial notice of  
9 that document. It's a public document.

10 THE COURT: Okay.

11 MR. FLAHERTY: Yeah, Your Honor, I'd echo what she  
12 said. Me too.

13 THE COURT: Okay. So let me just ask, what is the  
14 response regarding the judicial notice of a public document?  
15 Because I --

16 MR. BOLOTIN: Your Honor, this is a subsequent order  
17 that deals with a very different water system in Northern  
18 Nevada related to the Humboldt River, which has its own  
19 problems related to completely different situations than  
20 carbonate aquifer that underlaid multiple basins like we're  
21 dealing with here.

22 And I understand parties are able to make legal  
23 arguments, but this is putting a document dealing with a  
24 different system that's also subject to a petition for judicial  
25 review right now that we haven't even filed the record with

1 yet, and it just seems inappropriate to be introducing yet  
2 another order that's come out I think years after 1309 to make  
3 a point after the fact.

4 THE COURT: Okay. So I know that you're saying that  
5 I can just take judicial notice. I know under the *Mack v. Mack*  
6 case it's that I'm pretty limited as far as what I can take  
7 judicial notice of.

8 For the purposes of this hearing, I am going to grant  
9 the objection and not have you argue regarding 1309 since it  
10 was subsequent -- actually, not introduce the order 1309.

11 MR. FLAHERTY: Do you mean 1329, Your Honor?

12 THE COURT: Sorry, 1329, yes. Since it was  
13 subsequent. Since it is an order that is subsequent to the  
14 proceedings at hand; however, as far as any argument regarding  
15 the lack of authority, I think you can still -- let me think  
16 about this. I think you can still make the argument that there  
17 have been subsequent situations where the authority has been  
18 challenged.

19 MR. FLAHERTY: And, Your Honor, I don't want to --

20 THE COURT: Just on the purely legal part.

21 MR. FLAHERTY: And I don't want to belabor it too  
22 much regarding the response, the last response from the State  
23 Engineer, but the facts don't really matter, okay. This is  
24 about do I, the State Engineer, have authority to engage in  
25 conjunctive management. I don't care if the Humboldt River

1 flows backwards. It doesn't matter. The question is  
2 authority.

3           And what I'll tell you is I won't read this, okay. I  
4 mean, I'm a little unclear on how I can talk about the law  
5 without really getting into it too much, but essentially in  
6 this order the State Engineer came right out and said, I can't  
7 engage in conjunctive management. He describes how he went  
8 through this three-year process. He put together a working  
9 group, stakeholders. They came up with a set of draft  
10 regulations, okay, on what would conjunctive management look  
11 like. How would we balance senior water rights with existing  
12 groundwater uses? Hard work, this working group, three years.

13           They come up with this set of draft regulations. He  
14 shows up in front of the legislature, as I already described,  
15 okay, and he says, hey, I need AB51. He's got his Humboldt  
16 River plan, so to speak, sitting in the wings, and then it  
17 never makes out of committee, okay. So he doesn't have the  
18 authority.

19           And here in Order 1329, maybe even apologetically to  
20 the working group, he explains everything I laid out. And then  
21 he says, but, you know.

22           MR. BOLOTIN: Your Honor, objection. He's going into  
23 the language of Order 1329, which by the way it doesn't say  
24 that the State Engineer doesn't have authority. It says  
25 they're waiting for the model to be finished to reach the next

1 step of managing the Humboldt River.

2 MR. FLAHERTY: Well, now that the State Engineer has  
3 stated on the record what the order says and doesn't say, Your  
4 Honor, I think it's appropriate we just take a look at the  
5 slide, and you can decide for yourself.

6 THE COURT: You know, I'm not going to consider 1329  
7 as part of the argument.

8 MR. FLAHERTY: All right.

9 THE COURT: And then it looks like we've got --  
10 Do you have an objection, sir?

11 MR. HERREMA: No. I -- Brad Herrema on behalf of  
12 CSI.

13 Just noting for the record, Mr. Flaherty included  
14 1329 in his reply brief. He also said the Court could take  
15 judicial notice. The State Engineer didn't file an objection  
16 to that or oppose that as far as I know, and that was filed  
17 January 11, I believe.

18 MR. FLAHERTY: That's correct.

19 THE COURT: Okay.

20 MR. FLAHERTY: Well, Your Honor, I think --

21 MR. BOLOTIN: Your Honor, respectfully --

22 MR. FLAHERTY: Well, I'm not --

23 Excuse me, sir.

24 Just, I mean, me think he doth protest too much,  
25 okay. I mean, they really want to keep this out because it's

1 just a blunt acknowledgment of his lack of authority.

2 THE COURT: I think you can still make those  
3 arguments based on what -- I mean, I understand that you're  
4 looking to buttress your argument with this, but I think that  
5 there's enough there without even going into 1329 that you can  
6 make those arguments.

7 Yes. Oh, I've got lots of objections. So, yes,  
8 Mr. Taggart.

9 MR. TAGGART: Paul Taggart for the District and the  
10 authority, and I would just say that judicial notice is a  
11 slippery slope.

12 THE COURT: It is.

13 MR. TAGGART: I've been on both sides of arguing for  
14 Courts to consider things that aren't technically in the  
15 record.

16 Ms. Peterson is I think correct in saying that if  
17 it's a fact question, clearly you have to rely on the record.  
18 You can't let new things into the record. If it's legal  
19 argument, then that's a little -- that's different, but that  
20 still isn't a wide open door to let everything in because that  
21 would kind of defeat the rule.

22 So I think the fact that 1329 exists is one thing,  
23 but if we're going to get into detailed argument about what it  
24 did, what it -- and now we're in a whole different world of  
25 debating that.

1           So I think it's a slippery slope, and it's just, I  
2 think sometimes they come in, sometimes they don't. As legal  
3 authority, arguably it can make it in, but then other -- you  
4 know, the more we argue about it, the more it doesn't look like  
5 it's just there for that.

6           THE COURT: Well, and I'd like to really just keep a  
7 clean record, and I think that you have enough with everything  
8 else without having to argue the details of 1329.

9           So I'm just not going to allow you to argue the facts  
10 and details within 1329, but certainly you can argue the fact  
11 that it exists, like, you know, Mr. Taggart says, that that  
12 shows that there is a conflict as far as whether or not the  
13 Nevada State Engineer has the authority to conjunctively  
14 manage.

15           MR. BOLOTIN: And --

16           THE COURT: Yes.

17           MR. BOLOTIN: Can I just respond to something  
18 Mr. Herrema said?

19           THE COURT: Sure.

20           MR. BOLOTIN: Just respectfully, Your Honor, there  
21 hasn't been any other filing due dates since the reply briefs.  
22 There's 12 plus parties in this case. I think it's appropriate  
23 to preserve the objection now since it's being introduced.  
24 It's put in front of Your Honor, and that's about it, Your  
25 Honor.

1 THE COURT: Okay. Thank you, Mr. Bolotin.

2 Go ahead.

3 MR. FLAHERTY: Last word on this, Your Honor.

4 THE COURT: Sure.

5 MR. FLAHERTY: It just seems --

6 THE COURT: I understand that it's -- it kind of puts  
7 you in a weird spot.

8 MR. FLAHERTY: No -- right. It's strange that you  
9 can acknowledge the existence of Order 1329 -- excuse me, yeah,  
10 yeah, 1329.

11 THE COURT: Within the legal argument.

12 MR. FLAHERTY: Right, but that you can't -- you can't  
13 take judicial notice of what the State Engineer said. So I'll  
14 just state that for the record.

15 THE COURT: Well, so, I mean, here's the thing. You  
16 know, under the *Mack* case, it says I have to really look at  
17 things that are closely related. I don't know if the Humboldt  
18 order is really closely related enough that I can take judicial  
19 notice of the actual document. So that's the reason why I  
20 hesitate in allowing that in as part of the argument, the  
21 details regarding -- sorry, the details contained within the  
22 order.

23 MR. FLAHERTY: Okay. So despite all that, right,  
24 despite whatever it was he said in 1329, it doesn't help his  
25 case, Your Honor.



1           Despite what he told the legislature in 2019, that I  
2 don't have the authority to engage in conjunctive management,  
3 lo and behold, in Order 1309, the State Engineer purports to  
4 rule that seven separate hydrographic basins are now just one  
5 single superbasin lumped in with Muddy River surface rights.

6           And I have a slide here, Your Honor. I'll --

7           Okay. This is Slide 6, I believe -- excuse me, it's  
8 Slide 10. Or hold on. This is the first page of 1309.

9           Okay. So I know this is Slide 10 from my notes.

10           And what he says here, despite this lack of  
11 authority, he says,

12                       The maximum quantity of groundwater that  
13                       may be pumped from the Lower White River Flow  
14                       System Hydrographic Basin on an average annual  
15                       basis without causing further declines in Warm  
16                       Springs area spring flow and flow in the Muddy  
17                       River cannot exceed 8,000 acre-feet annually and  
18                       may be less.

19           Okay. "May be less."

20           Now, in his answering brief, the State Engineer  
21 alleges numerous items in Order 1309 that he supposedly didn't  
22 do. He says he didn't reprioritize any water rights. He  
23 didn't change any priority dates. He didn't curtail  
24 groundwater pumping, but the State Engineer's attempts at  
25 reassurance ring hollow, okay, because nowhere does the State

1 Engineer explain how Nevada Cogen is not severely prejudiced  
2 and damaged when its senior groundwater rights in the Black  
3 Mountains Area Hydrographic Basin are suddenly bumped down the  
4 line to some yet to be determined junior position. He's now --  
5 they are now in the same basin with the surface water rights in  
6 the Muddy River.

7           Okay. Order 1309 is a per se exercise of conjunctive  
8 management. I mean, I've used, you know, this term bomb. You  
9 know, that's the real dynamite, so to speak, in Order 1309.  
10 That statement right there about the maximum groundwater that  
11 can be pumped, 8,000 acre-feet or maybe less. That's  
12 conjunctive management.

13           Now, assuming arguendo that the State Engineer even  
14 had the authority to engage in conjunctive management in  
15 Order 1309, his decision to include NCA's production wells in  
16 the new superbasin was arbitrary, capricious and not supported  
17 by substantial evidence.

18           And I'll start again with a little quote regarding  
19 the standard of review from *Pahrump Fair Water*. And the  
20 Supreme Court said the State Engineer's decision must be  
21 supported by substantial record evidence. Okay. But as  
22 acknowledged by the State Engineer in Order 1309 and previously  
23 in Interim Order Numer 1303, 533.024(1)(c) actually requires  
24 something more.

25           And I'd like to show you a couple of slides here,

1 Your Honor. This is Slide 12. This is just the cover page  
2 from 1303. And here's slide 13, Your Honor. And what he says  
3 here, you can see, is he says that NRS 533.024(1)(c) directs  
4 him, okay. It doesn't say it encourages him. It says it  
5 directs him to consider the best available science in rendering  
6 decisions concerning available surface and underground sources  
7 in Nevada, okay.

8 THE COURT: So let me ask a really dumb question. An  
9 interim order, is an interim order not appealable, directly  
10 appealable?

11 MR. FLAHERTY: You know, can I give you a dumb  
12 answer? No. I think it is not.

13 THE COURT: I mean, it seems to me like if the  
14 writing is on the wall, that's something that you would have  
15 had appealed if you have the ability to, but, you know --

16 MR. FLAHERTY: No. I've actually been on the wrong  
17 end of that, not in the case involving the State Engineer.  
18 It's I don't think it was a final order. I don't know if  
19 anybody tried to appeal it, but it's an interim order.

20 THE COURT: Okay. So --

21 MR. FLAHERTY: It's not a final agency action.

22 THE COURT: So an interim order is not a final  
23 appealable order. I understand that.

24 MR. FLAHERTY: Right. Right.

25 THE COURT: Okay.

1 MR. FLAHERTY: So he says here, Your Honor, that it  
2 directs him. And I know you had a question about this, I  
3 believe yesterday when I was listening on BlueJeans, okay. I  
4 mean, so it's -- you know, so it would be one thing for the  
5 legislature to encourage the governor to do something or to  
6 encourage the Nevada Supreme Court to do something. I mean,  
7 those are coequal branches of government, right.

8 Well, when the legislature quote, unquote, encourages  
9 the State Engineer to do something, it means a lot more. And  
10 certainly you can see here from this slide, Your Honor, this is  
11 the way he interpreted it. He interpreted it as a direction,  
12 okay.

13 THE COURT: Right. Well, I mean, I guess, yeah. I  
14 mean, to me there's a difference in encouraging someone to do  
15 something and directing someone to do something.

16 MR. FLAHERTY: There is.

17 THE COURT: And I understand that you're saying that  
18 he took this as direction.

19 MR. FLAHERTY: There is, and it's context.

20 THE COURT: But the word actually says encourage.

21 MR. FLAHERTY: So, you know, the legislature  
22 encourages you to do something. You know, the State Engineer,  
23 you show up every other year, you know, asking for money for  
24 your budget, right, and they say, what about that thing we  
25 encouraged you to do? Oh, I didn't feel like it, right.

1 That's not going to happen. So that's why it's a direction.  
2 At least he perceives it as a direction.

3 And you've already heard some complaints about  
4 surprises in Order 1309. This is something the parties were  
5 expecting, right. If you read 1303, the State Engineer is  
6 saying, oh, I have to use the best available science in the  
7 record, okay. So I think it's important, Your Honor. And I  
8 just want to show you a couple other slides. This is Slide 15.  
9 This was an addendum to Interim Order 1303. You see here he  
10 says the same thing again.

11 And now I'm going to scroll back up to 1309. I'm  
12 going to go up to Slides 6 and 7. So there's 6.

13 So that was 6, and now here's 7. Your Honor, here it  
14 is again right in -- right in 1309, okay. So taken together  
15 the standard review announced by the Nevada Supreme Court in  
16 *Pahrump Fair Water*, all right, substantial record evidence, and  
17 533.024, requires the State Engineer's decision to be supported  
18 by a substantial evidence comprised of the best available  
19 science in the record, okay. I mean, that's fair. That's what  
20 the parties were expecting after they read Interim Order 1303.

21 Now, the State Engineer has argued peak deference,  
22 that this is a situation where your deference to him should be  
23 at its peak. There was no citation provided for that, Your  
24 Honor. And, you know, take that argument to its logical  
25 extreme. As applied to NCA's arguments, okay, and the State

1 Engineer's answering brief at page 23, lines 12 to 13, he makes  
2 the statement, that was an adequate basis to find that Nevada  
3 Cogeneration's well should be included. "Adequate"?  
4 "Adequate"? That doesn't sound like the best available science  
5 in the record. I mean, so as applied by the State Engineer,  
6 peak deference means any scrap of evidence in the record that  
7 supports a convenient, easy or desired conclusion on my part.  
8 That's not what the legislature expects when they tell him to  
9 use the best available science in the record, Your Honor.

10 Now, in determining the boundaries of the Lower White  
11 River Flow System, the State Engineer indicated that he  
12 considered six criteria. I have a slide or two for this, Your  
13 Honor. Okay. So this is Slide 8, and you see here he says  
14 that he considered the evidence and testimony and the basis of  
15 a common set of six criteria that are consistent with the  
16 original characteristics considered critical and demonstrating  
17 a close hydrological connection requiring joint management in  
18 Rulings 6254 through 6261.

19 And I just want to put in a pin in it right here,  
20 Your Honor. NCA was a party to Ruling 6260, okay. So it was  
21 within this group of rulings. They're a party to that one.  
22 And then you can see the first criterion is highlighted there  
23 on that page. I'm not going to go over every criterion, Your  
24 Honor.

25 And then continuing down to slide 9, you see the rest

1 of the criterion, and I have highlighted criteria 5 and 6, and  
2 I want to talk about those a little bit in a little bit. But  
3 before we do that, I already pointed out that NCA was a party  
4 to Ruling 6260, and that's actually Record on Appeal Number 85.

5 But nowhere in Ruling 6260, nowhere in Interim  
6 Order 1303 or in the addendum that I showed you, some excerpts  
7 from a minute ago, nowhere in that did the State Engineer  
8 provide notice to NCA or any other party as far as I can tell,  
9 that he was going to utilize these six criteria, okay.

10 Now, we were just talking a minute ago about what  
11 deference does the Court pay to the State Engineer's decision.  
12 They have this peak deference argument. But any deference any  
13 Court might afford to a decision of the State Engineer, open  
14 quotes,

15 Presupposes the fullest and fairness of the  
16 administrative proceedings. All interested  
17 parties must have had a full opportunity to be  
18 heard.

19 So that's the Nevada Supreme Court in the *Revert*  
20 case, right. And the Court continued and said that,

21 When procedures grounded in basic notions  
22 of fairness and due process are not followed,  
23 and the resulting administrative decision is  
24 arbitrary, oppressive or accompanied by a  
25 manifest abuse of discretion, this Court will

1 not hesitate to intervene.

2 The procedure leading to Order Number 1309 was not  
3 grounded in basic notions of fairness and due process. NCA was  
4 not afforded a full and fair opportunity to be heard because it  
5 was unaware of these six criteria. It didn't learn about these  
6 six criteria until order Number 1309 came out.

7 The approach the State Engineer took in this case is  
8 akin to a card game, right. Cards are dealt out by the State  
9 Engineer. All the cards are dealt out, and the State Engineer  
10 says, okay, everybody show me your cards. And the State  
11 Engineer looks at everybody's cards, takes a good look, and he  
12 says, okay, well, I think these are going to be the rules,  
13 okay. Then he goes ahead and applies the rules to everybody's  
14 cards, and then he announces winners and losers. That is not  
15 administrative due process. That is not what the Nevada  
16 Supreme Court said in *Revert versus Ray*.

17 And for that reason, we'd ask you to correct, if  
18 you've gotten by the authority to engage in this conjunctive  
19 management to begin with, if you got by that, Your Honor, we  
20 would ask you to remand it to the State Engineer on that basis.

21 So returning to Criteria 5 and 6. The State Engineer  
22 didn't even apply those criteria in the manner he announced in  
23 Order 1309 when it came to NCA. And that failure to do so was  
24 arbitrary and capricious.

25 At the hearing before the State Engineer, one of



1 NCA's experts Jay Dixon (phonetic) testified regarding mapped  
2 geology in the area of NCA's production wells near the  
3 southeast boundary of this new superbasin. Now, that testimony  
4 fits squarely within the rubric of Criteria 5 and 6 up here,  
5 Your Honor. Now, Mr. Dixon didn't know what the criteria were.  
6 But you can see in Number 5, the State Engineer is talking  
7 about geologic structures that have caused a juxtaposition of  
8 bedrock and the carbonate-rock aquifer, and he says that's  
9 consistent with the boundary.

10 And I'm trying not to turn my head too much, because  
11 I think when I do I turn away from the microphone.

12 But then in Number 6 he says basically when it's  
13 unclear, when it's unclear, you're not sure based on Criteria 1  
14 through 5 above, they're going to go to the nearest mapped  
15 feature, okay. Or if I don't have a mapped feature, I'll go  
16 out to a hydrographic basin boundary, okay.

17 And so he uses the term mapped feature. Mr. Dixon  
18 testified about mapped geology. And what he was testifying  
19 about really were mapped geological features, okay.

20 So NCA presented and explained slides to the State  
21 Engineer that demonstrated the presence of the Dry Lake  
22 Regional Thrust Fault, and a strike-slip fault emanating from  
23 the Dry Lake regional thrust fault just west of NCA's  
24 production wells, and you'll see that it's almost right on top  
25 of -- the well is right on top of this strike-slip fault.

1           And I have a slide, Your Honor. I'm going to go to  
2 Slide 17. Okay. So this is Record on Appeal Number 973,  
3 page 52605, and you'll see right there below the ROA and Bates  
4 Number it says Rowley 2017. Rowley is the individual who  
5 mapped the features, who mapped to the geology.

6           And now it's a little bit confusing. You can see  
7 here on the left there's a little box that says Dry Lake  
8 Regional Thrust Fault, and that arrow is actually pointing to a  
9 dotted black line that trends southwest to northeast.

10           Can you see that?

11           THE COURT: So are you talking right under the S and  
12 slip, that dotted line or the one above it that's kind of  
13 intersecting the arrow?

14           MR. FLAHERTY: So I'm looking at the Dry Lake  
15 Regional Thrust Fault box and the arrow coming from that.

16           THE COURT: Oh, sorry. Oh, yes. I see that.

17           MR. FLAHERTY: Okay. Do you see that dotted black  
18 line?

19           THE COURT: Yes.

20           MR. FLAHERTY: Okay. And that was a good warm-up,  
21 Your Honor, because the next one is trickier.

22           The strike-slip fault, it looks like it's pointing at  
23 that horizontal red line, the arrow, but that horizontal red  
24 line and all those squiggly red lines, those are actually the  
25 existing or conventional hydrographic -- those are actually the

1 existing or conventional hydrographic basin boundaries.

2 But as you may know now from the record, Your Honor,  
3 if not, I'll tell you, the State Engineer didn't include the  
4 entire Black Mountains Area Hydrographic Basin in the new  
5 superbasin. He only included the northwest portion of the  
6 basin, and that's why you have this kind of very artificial  
7 straight red line.

8 THE COURT: The EBM-5, that, is that what you're  
9 referring to?

10 MR. FLAHERTY: Yes. That EBM-5 is a well, I believe,  
11 but that red line goes right across that text, okay. So that's  
12 sort of this -- this working boundary, I guess, okay.

13 So now that red arrow isn't pointing to that line.  
14 But it's actually pointing to a dotted blue line that again  
15 angles from southwest to northeast.

16 THE COURT: Okay. I see that.

17 MR. FLAHERTY: Okay. So and then while we're looking  
18 at that slide, Your Honor, you see over to the right further  
19 there's a reference to the Muddy Mountain Regional Thrust Fault  
20 as well.

21 And Mr. Dixon briefly touched upon that, but he spent  
22 his time talking about this strike-slip fault emanating from  
23 that Dry Lake Regional Thrust Fault.

24 Now, the strike-slip fault identified by NCA is  
25 between NCA's production wells and the LWRFS superbasin. And

1 therefore, it is the nearest map geologic feature that engages  
2 in this -- or accomplishes this juxtaposition of bedrock and  
3 carbonate-rock aquifer.

4 THE COURT: So let me ask this: So can you tell me  
5 exactly what the significance of a fault or a slip fault or a  
6 thrust fault is. What does that actually mean?

7 MR. FLAHERTY: They can form -- I'm not a  
8 hydrologist, Your Honor, but I've read them in transcripts.

9 THE COURT: Right.

10 MR. FLAHERTY: Those form -- they can form barriers.

11 THE COURT: I see.

12 MR. FLAHERTY: Right. So, I mean, you've heard a lot  
13 of analogies --

14 THE COURT: I mean, that's what I assumed, but I, you  
15 know --

16 MR. FLAHERTY: Yeah. You've heard a lot of bathtub  
17 analogies I believe. A strike-slip fault or a fault could  
18 be --

19 THE COURT: The edge of the bathtub --

20 MR. FLAHERTY: It could be, yeah, it could be the  
21 wall of the tub, right.

22 So stated differently, this identified thrust fault,  
23 the one identified by NCA, it's a barrier, or it's between  
24 NCA's production wells and this new superbasin.

25 So Mr. Dixon explained to the State Engineer that

1 NCA's production wells had actually been deliberately sited by  
2 NCA's consultant when they were looking for water for these  
3 plants, right in the middle of those slip-strike faults or  
4 strike-slip faults. He walked the State Engineer through --

5 THE COURT: Sited, s-i-t-e-d?

6 MR. FLAHERTY: Strike, like when you're bowling,  
7 strike.

8 THE COURT: No, no. You said that they were sited in  
9 the -- do you mean that they were like situated there  
10 purposefully?

11 MR. FLAHERTY: Yes. Right. Not cited like a legal  
12 document. Yeah.

13 THE COURT: Right. Okay.

14 MR. FLAHERTY: Yeah. So he walked to the State  
15 Engineer through this geologic data that was obtained when they  
16 were drilling in the area. So he provided, you know, the well  
17 drills to keep track of this information they encounter when  
18 they're drilling, even for the failed wells. They kept all  
19 this geologic data they obtained.

20 And Mr. Dixon shared that with the State Engineer.  
21 He highlighted features that were terms of art for hydro  
22 geologists or hydrologists. He talked about high angle faults,  
23 a series of high angle fractures, collapsing blocks, large open  
24 solution structures, abundant limestone fractures, and he  
25 presented evidence confirming that NCA's production wells are

1 in the fault itself, okay. He also showed the State Engineer  
2 pictures from the actual well boreholes showing that NCA had  
3 drilled through large caverns right in that strike-slip fault  
4 area.

5 And I'm going to go to Slide 18 and just show you the  
6 pictures. So you can see them here, Your Honor. You can see  
7 them here on Slide 18. They put a camera down the well, and  
8 they took some pictures. This information was shared with the  
9 State Engineer as well.

10 After the hearing, in its posthearing brief, NCA  
11 supplied the State Engineer with additional analysis with  
12 another visual aid to assist him in a proper placement of the  
13 southeastern boundary of the Lower White River Flow System.  
14 And I'm going to go to Slide 19 and then Slide 20.

15 Slide 19 is just the cover page of NCA's argument.  
16 And then here is Slide 20, yes. Okay. And Slide 20 is from  
17 record on appeal Number 990, page 52-909. It's not a complete  
18 reproduction of that particular slide. It's one of the slides,  
19 Your Honor, where they show a map, and then it's got a little  
20 square --

21 THE COURT: And then there's a little, yeah.

22 MR. FLAHERTY: And then they blow up the square.

23 THE COURT: It's just a square. Okay.

24 MR. FLAHERTY: This is the blown-up square. And so  
25 again here you can see -- you can see that dotted blue line

1 better now. Right? You can see it better now?

2 THE COURT: Yep.

3 MR. FLAHERTY: And that little purple text box is a  
4 reference to Rowley. Mr. Dixon didn't map this geologic  
5 feature. This individual Rowley mapped it, okay. So in other  
6 words, you know, when something's been mapped, apparently  
7 engineers feel comfortable relying on it, okay.

8 So again, the dotted blue line is the mapped feature,  
9 the strike-slip fault, and that little red blob on top of it is  
10 NCA's well field. And so you can see it's sitting right in on  
11 the fault, right.

12 And then the purple dotted line was basically a  
13 proposed administrative adjustment to the boundary, right. So  
14 in other words, NCA is saying here, look, the strike-slip fault  
15 is the boundary, but you need to take, you know, your paper  
16 map. And you need to take it just a little bit to the west it  
17 looks like because our wells aren't properly included in this  
18 superbasin, okay.

19 Now, in Order 1309, the State Engineer says, hey, I  
20 find logic in NCA's argument to exclude these production wells,  
21 but he ignored all that testimony I just described to you, the  
22 slides, the pictures, and he instead utilized the Muddy  
23 Mountain Thrust fault to the east of NCA's production wells to  
24 establish the southeastern boundary of this new superbasin.  
25 And when he did that, he said, open quotes, "a more inclusive

1 approach was required," close quote.

2 Your Honor, NCA had zero notice that the State  
3 Engineer intended to utilize this vaguely stated more inclusive  
4 approach. Like the six criteria, it was first announced in  
5 Order Number 1309, apparently as the seventh criteria after the  
6 State Engineer looked at everyone's cards, right, after he had  
7 seen the evidence, okay.

8 Again, he's announcing the rules after the game is  
9 over. This is another instance of the State Engineer depriving  
10 NCA of administrative due process.

11 An additional deprivation of due process was that  
12 despite reassurances from the State Engineer, at the outset of  
13 the Order Number 1309 hearing, that the (indiscernible) to the  
14 hearing would not be an exercise in conjunctive management as  
15 discussed already it was.

16 And I'll go to my final slide, which is Slide 21.  
17 And again, this is from my reply brief, but the quote is lifted  
18 from the transcript, and there's a record on appeal number  
19 citation there if you want it, Your Honor.

20 And this is the State Engineer's hearing officer  
21 speaking at the very beginning of the hearing, and she tells  
22 everybody that she wants to reiterate, and she says they've  
23 been trying to make this clear, that this is not a contested or  
24 adversarial proceeding. Oh, what a relief. Nothing bad can  
25 happen to me here. This is a good place. This is a safe



1 place; right? That's the announcement at the beginning of the  
2 hearing.

3 She says the scope of this proceeding is for the  
4 limited purpose of addressing those four issues, plus the  
5 fifth, and she's talking about the four issues identified, the  
6 four issues the party were on notice about, as enumerated in  
7 Order 1303. But apparently she's concerned about the fifth  
8 because the fifth is sort of a catchall, and I think sometimes  
9 catchalls have a tendency to just blow the door wide open. So  
10 she says, while we're talking about the fifth, she says it's  
11 not intended to expand the scope of this hearing, into making a  
12 policy determination with respect to management of the Lower  
13 White River Flow System basins individual water rights. So  
14 she's saying we're not going to do conjunctive management,  
15 okay.

16 And so again, by stating that 8,000 acre-feet or  
17 maybe less is the maximum amount of water that the groundwater  
18 rights holders in this new superbasin can pump without  
19 declining spring flow or river flow, that is conjunctive  
20 management.

21 THE COURT: Let me ask a question. Because, you  
22 know, there is a little bit of the writing on the wall with --  
23 was it -- with the interim order as far as maybe that the  
24 Nevada State Engineer was potentially considering the joint  
25 management of the basins.

1           But when there was that interim order, what was your  
2 understanding of what it meant when they're talking about the  
3 management of the Lower White River -- well, the policy  
4 determinations of the Lower White River Flow System? I mean,  
5 not the policy determinations, the -- let's see, what is it  
6 that I'm talking about. Not the policy determinations, but why  
7 they needed that information for the Lower White River Flow  
8 System as a whole? You know, was it your understanding that  
9 that would then dictate how within each basin it would be, you  
10 know, that there would be decisions made versus all of the  
11 joint or all of the basins being managed as a joint system?  
12 Maybe -- I'm not being very clear. I --

13           MR. FLAHERTY: I can try to see if I can help.

14           THE COURT: Yes.

15           MR. FLAHERTY: Kind of picking up where you left off,  
16 well, when SNWA was at the podium here yesterday, I believe  
17 Mr. Taggart made a reference to Phase 1 and Phase 2.

18           THE COURT: Yeah, Phase 2. Right.

19           MR. FLAHERTY: And I think it sounded like some of  
20 the things you were articulating, Your Honor, were Phase 2.

21           THE COURT: They might be. But, I mean, I guess my  
22 question is, you know, there are a number of parties that are  
23 arguing that joint management has never been done, making a  
24 mega basin or a superbasin, that kind of thing.

25           When we had the testing and the interim orders and

1 all that kind of thing, what was the perception of your client  
2 as far as how that would impact any future decisions as to  
3 policy? Did they think that it would just be within their own  
4 basin as it relates to the other basins, or was there some  
5 understanding that the Nevada State Engineer was looking to do  
6 some sort of joint basin conjunctive management?

7 MR. FLAHERTY: Yeah, I'm sorry. I don't think I can  
8 answer your question.

9 THE COURT: Okay.

10 MR. FLAHERTY: I kind of came late to the game. I  
11 substituted in for Mr. Flangas.

12 THE COURT: Okay.

13 MR. FLAHERTY: And I'd be willing to, you know,  
14 without waiving attorney-client privilege, you know, share what  
15 was going on in my client's head, but I just wasn't privy to  
16 those conversations.

17 I think, I think that looking at Interim Order 1303,  
18 you'd understand that the State Engineer was perhaps going to  
19 go to the brink of conjunctive management. He was going to try  
20 to get science, right. I mean, I think when the hearing  
21 officer said this is not an adversarial proceeding, I think  
22 that gave everybody the impression that this is just going to  
23 be a place where --

24 THE COURT: We just get information.

25 MR. FLAHERTY: -- we just get information. And you

1 can actually kind of see that in the transcript, the  
2 hydrologists, the geologists, the hydrogeologist, all the  
3 experts. I mean, bless their hearts, Your Honor, they're  
4 wonderful people, but it was, at times, it kind of reads like  
5 an academic conference as opposed to the lawyers being charged  
6 with keeping people strictly on task because there is something  
7 big at stake --

8 THE COURT: Right.

9 MR. FLAHERTY: -- everybody is just talking science,  
10 right. Everybody is just showing everybody else their cards.

11 And then, boom, Order 1309 comes out after that.

12 THE COURT: Okay.

13 MR. FLAHERTY: Now, so had NCA known the outcome  
14 could be a severe impairment of its water rights in the Black  
15 Mountain's area hydrographic basin, its senior water rights,  
16 right, there's a reason they bought the most senior rights in  
17 the basin. It would have taken a radically different approach  
18 at the hearing. I suspect it would have been a contested and  
19 adversarial proceeding at that point.

20 Now, the State Engineer, he seeks to evade  
21 accountability for the shortcomings in Order 1309, as they  
22 relate to NCA, by claiming that NCA conceded in its brief that  
23 multiple experts -- those are the words the State Engineer  
24 uses, multiple experts -- testified regarding inaccuracies in  
25 the multiple linear regression model utilized by SNWA, the MLR

1 model.

2 NCA did, in fact, cite that model -- c-i-t-e this  
3 time -- they cite that model with approval. Because that  
4 model, that MLR demonstrated that there was a very low  
5 correlation between NCA's production wells and the water levels  
6 in the bathtub, okay. They basically -- this MLR analysis  
7 demonstrated that this bucket is outside the tub, okay.

8 But NCA didn't make that kind of concession. As we  
9 already pointed out in our reply brief, there were just two  
10 experts who criticized SNWA's MLR analysis. And more  
11 importantly, the criticism was limited to the MLR analysis  
12 conducted by SNWA in the California Wash Hydrographic Basin and  
13 in the Garnet Valley Hydrographic Basin, not in the Black  
14 Mountain's Area Hydrographic Basin.

15 So therefore that meant MLR analysis, it constitutes  
16 substantial evidence comprised of the best available science in  
17 the record that NCA's production wells did not belong in a  
18 bathtub. Okay. They should have been outside this basin.

19 I'm going to go ahead and wrap up now, Your Honor.

20 Order Number 1309, it's arbitrary and capricious, and  
21 key elements of the order are not supported by substantial  
22 evidence comprised of the best available science in the record.

23 As an initial matter, the State Engineer is simply  
24 without authority to engage in conjunctive management in any  
25 basin, let alone create a superbasin and impose conjunctive

1 management thereon.

2           Despite the legislature's expression of a policy  
3 preference for conjunctive management, not superbasins in  
4 533.024, the State Engineer himself understood that he was  
5 lacking authority to actually move forward with conjunctive  
6 management in the absence of a grant of express additional  
7 authority from the legislature. For that reason, he went to  
8 the State legislature in 2019, seeking authority in assembly  
9 Bill 51, but his efforts were unsuccessful. The bill never  
10 made it out of committee.

11           The State Engineer acknowledged that a failure in a  
12 later order, Your Honor, which he issued just a little over  
13 two months ago. Yet by designating the Lower White River Flow  
14 System a superbasin and stating that only 8,000 acre-feet or  
15 maybe less can be withdrawn from those groundwater sources  
16 within that superbasin, without impairing spring flow or flow  
17 in the Muddy River, the State Engineer did in Order 1309, what  
18 he conceded he was without authority to do in front of the  
19 State Engineer and in a later order. That is plainly and  
20 simply arbitrary and capricious.

21           With regard to substantial evidence specifically for  
22 Nevada Cogen, that portion of the order that establishes the  
23 Muddy Mountain Thrust Fault as the southeast boundary of the  
24 Lower White River Flow System Basin is not supported by  
25 substantial evidence comprised of the best available science in

1 the record.

2 The Muddy Mountain Thrust Fault is not the nearest  
3 map feature establishing a boundary for the superbasin. And  
4 that was one of the criteria enunciated by the State Engineer  
5 in Order Number 1309.

6 To the contrary, it was the strike slip fault  
7 emanating from the Dry Lake Regional Thrust Fault that was the  
8 nearest map feature, and NCA presented ample evidence to the  
9 State Engineer through the testimony of Jay Dixon to that  
10 effect.

11 So for all the reasons stated today and in NCA's  
12 petition for judicial review and in our briefs in this matter,  
13 we urge you to reverse the decision of the State Engineer in  
14 its entirety. He had no authority to engage in conjunctive  
15 management.

16 Barring that, Your Honor, if you're not ready to go  
17 there, in the alternative, we'd ask you to remand this matter  
18 to the State Engineer to conduct a hearing where he's going to  
19 render a decision supported by substantial evidence comprised  
20 of the best available science in the record after affording NCA  
21 administrative due process, including a full and fair  
22 opportunity to be heard. And that will concern the inclusion  
23 or not of NCA's production wells in the new superbasin,  
24 allowing NCA to fully address the contention that the Muddy  
25 Mountain Thrust Fault is the appropriate boundary rather than

1 the strike-slip fault identified by NCA.

2 Your Honor, thank you very much for your attention.

3 Unless you have some additional questions, that  
4 concludes my presentation.

5 THE COURT: All right. I don't think I have any  
6 additional questions. Thank you.

7 MR. FLAHERTY: Thank you.

8 (Pause in the proceedings.)

9 THE COURT: All right. We've been going for an hour.  
10 Is everyone okay with just moving through to Georgia-Pacific?

11 (No audible response.)

12 THE COURT: Okay.

13 UNIDENTIFIED SPEAKER: I'm ready, Your Honor.

14 THE COURT: All right. Great.

15 So and then let me ask -- just make sure.

16 Do we have a copy of your PowerPoint, Mr. Flaherty, a  
17 paper copy that we can --

18 MR. FLAHERTY: Your Honor, I promised the clerk I  
19 would e-mail her one.

20 THE COURT: All right. Great. Thank you.

21 MR. TAGGART: Your Honor.

22 THE COURT: Yes.

23 MR. TAGGART: Can -- just as a housekeeping matter --  
24 Paul Taggart for the District -- can we just make sure that  
25 everybody just distributes their PowerPoints to everyone.



1 THE COURT: Yes.

2 MR. TAGGART: And I know it's hard to have a copy  
3 here today and everything, but I think we'd all like to get  
4 each others', a copy of each others' PowerPoints too.

5 THE COURT: That's fair. Okay. Thank you.

6 Okay. Whenever you're ready.

7 **ARGUMENT FOR GEORGIA-PACIFIC AND REPUBLIC ENVIRONMENTAL**

8 MR. FOLETTA: All right. Thanks, Your Honor. Lucas  
9 Foletta for Georgia-Pacific and Republic.

10 I do not have a PowerPoint, and a lot of my remarks  
11 are consistent with what you've heard other people say. I'm  
12 going to try not to be overly repetitive, but I do think some  
13 of the things, and particularly what Mr. Flaherty just said,  
14 bears some repeating and some emphasis.

15 I do want to pick up with a question or start with a  
16 question you asked Mr. Flaherty kind of early on in his  
17 argument, which was something to the effect of, you know, has  
18 the -- has the connection between groundwater and surface water  
19 ever been considered in the past?

20 THE COURT: Hang on just a second.

21 (Pause in the proceedings.)

22 THE COURT: My apologies.

23 MR. FOLETTA: It's okay.

24 So, yeah, I think you asked Mr. Flaherty that  
25 question, and I think the reason has stuck with me and what I

1 want to say about it is right off the bat, you know, there is a  
2 fundamental disagreement in this case about a lot of things,  
3 right, and but one of them is the extent of the hydrologic  
4 connection between the basins. So it is not a foregone  
5 conclusion or an accepted fact that, you know, we agree, and I  
6 don't think other people on our side of the argument agree with  
7 the State Engineer's findings about the extent of the  
8 hydrologic connection or even that one exists. I mean, really  
9 whether one exists or not is not the most relevant point.

10 The basic question is whether substantial evidence to  
11 support the State Engineer's conclusion, that it exists to the  
12 extent they say it existed and thus whether it supports the  
13 approach they took and the findings they made and the  
14 conclusions they drew in connection with 1309.

15 And so, you know, the basic kind of analogy people  
16 have been using is a bathtub. Is it a bathtub? Is it not a  
17 bathtub? It's not don't take it for granted that it's a  
18 bathtub, because we don't agree, right. It's an incredibly  
19 complicated subsurface geology, right. The last speaker  
20 pointed out there are faults. Some faults impede water. Some  
21 faults advance them to (indiscernible) water. But faults  
22 don't -- they're not, you know, in the shape of a bathtub, and  
23 all these basins don't sit right in them.

24 And so, you know, there was a lot of testimony given  
25 at the hearing about the extent of that connection, and that's,

1 as I say, still very much in dispute.

2 THE COURT: But traditionally they've been managed  
3 completely separately because there was a theory, I guess, that  
4 they were not connected; is that correct?

5 MR. FOLETTA: I think that -- I think that over the  
6 history of water law it's true to say that surface water and  
7 groundwater have been managed independently pursuant to  
8 principles of water management that are reflected in our laws.  
9 That's right.

10 But I don't know that it's necessarily fair to say  
11 that the State Engineer has always been oblivious to the  
12 connection between groundwater and surface water. I mean, the  
13 history of this case shows that the State Engineer and multiple  
14 State Engineers over a period of decades has been concerned  
15 about the relationship between groundwater and surface water or  
16 at least the underlying geology and the surface water in this  
17 system. And so again, that's in dispute, as I said.

18 But the other thing I want to say is that we are also  
19 not saying that the State Engineer should be oblivious to the  
20 connection between groundwater and surface water.

21 What we are saying is that to the extent that water  
22 rights in these basins are going to be managed, they need to be  
23 managed in a way that's consistent with the existing regulatory  
24 scheme. And the basic component, the fundamental component of  
25 the regulatory scheme is administering water rights on the

1 basis of legal administrative units, which are independent  
2 water basins, which in this case, as we talked about yesterday,  
3 have already been established. That's fundamentally where we  
4 are, where we are coming from.

5 We are also not saying that there may be no need --  
6 that there is no need to take particular actions to manage the  
7 water in these basins. We talked about the total number of  
8 water rights that have been permitted here.

9 But what we are saying in connection with that issue  
10 is that the decision to subject the LWRFES to joint  
11 management -- or conjunctive management and joint  
12 administration, one, was a management decision in and of  
13 itself, but two, is inappropriate for a number of reasons, not  
14 the least of which is there are other tools that the State  
15 Engineer has to address concerns that he might have about any  
16 of these individual basins being over appropriated.

17 THE COURT: Such as what?

18 MR. FOLETTA: Such as the law provides the State  
19 Engineer the ability to curtail water rights. The law provides  
20 the State Engineer under drastic circumstances to seek  
21 forfeitures of water rights. The law provides under  
22 circumstances under I believe it's -- I had it in my notes. I  
23 was going to get to it in a minute. I think it's Chapter 524,  
24 the ability to designate a critical management area and  
25 establish a water management plan for a particular basin.

1 These are all tools that the State Engineer has to address  
2 perceived shortages of water or competition for water in  
3 particular basins on a basin by basin area.

4 I think it's, you know, you'd probably have debates  
5 about which one is the right fit for this situation. Well, we  
6 just haven't got there yet, right? And that's the whole point  
7 of where a lot of the petitioners are coming from.

8 But that is -- but those tools do exist.

9 That being said, I think what I really want to start  
10 by talking about is kind of where I think things kind of went  
11 off the rails here. And it's easy to say in retrospect, but I  
12 think if you go back, again as other speakers have done, and  
13 you talk about the notice of that -- that preceded the hearings  
14 in this case, you know, that really is the seeds of a lot of at  
15 least the legal problems in the case.

16 As other people have shown you, the notice in this  
17 case said, quote, the hearing was to provide the participants  
18 an opportunity to explain the positions and conclusions  
19 expressed in the reports -- talking about the 1303 reports  
20 and/or rebuttal reports submitted in response to the order 1303  
21 solicitation.

22 And then it went on to say the order 1303 reports was  
23 the first step in determining to what extent, if any, and in  
24 what manner, the State Engineer would address future management  
25 decisions, including policy decisions relating to the Lower

1 White River Flow System Basins.

2 I think you asked the last speaker, you know, what  
3 did you have in mind in terms of what the policy decisions  
4 would be.

5 THE COURT: Right.

6 MR. FOLETTA: And I think that what people had in  
7 mind is how the basins would be managed, meaning how would  
8 water rights holders' right be treated in connection with this  
9 generalized concern that the basins are over appropriated,  
10 right. And --

11 THE COURT: Basically within the basin you think  
12 these other tools that the water engineer has to manage within  
13 that basin.

14 MR. FOLETTA: Right. Right.

15 THE COURT: Even though they may be connected  
16 somehow?

17 MR. FOLETTA: Right. You know, over appropriated  
18 basins in Nevada is not unusual.

19 THE COURT: Sure.

20 MR. FOLETTA: Right. They exist.

21 The tools that the State Engineer has, the authority  
22 the State Engineer has to deal with that situation are known to  
23 people who hold water rights and (indiscernible) in the states  
24 and all sorts of people. And so it wasn't as if people were,  
25 like, surprised that there would be a conversation about what

1 to do because it's a type of conversation that happens  
2 frequently.

3 I think what was a surprise is that, as other people  
4 have suggested, again, that the State Engineer went beyond a  
5 factual inquiry that could be used to inform a subsequent  
6 proceeding or discussion about how to manage folks' rights and  
7 jumped, at least in part, in our view, to management of the  
8 basins by subjecting them unequivocally to conjunctive  
9 management and joint administration. So in our view, that was  
10 an active concrete management step that, as I just indicated,  
11 was not reflected in the notes and was contrary to the other  
12 signals on the statements that the presiding officer was given.

13 The reason that it was a concrete step, as other  
14 people have described, is because it scrambled the priority in  
15 these basins; right? We've all got that figured out, but, you  
16 know, people with rights in one basin were not subject to  
17 rights from other basins, and that's where the rubber meets the  
18 road in terms of, you know, people's expectations, the harm and  
19 so on and so forth. So we've had a sort of settled regulatory  
20 principles and a process that people understood. They had  
21 rights in connection with, and all of a sudden, that didn't  
22 exist anymore.

23 And so I don't think anyone is going to sit here and  
24 tell you that, you know, it's fair to say that anyone who holds  
25 a water right in any basin in Nevada is entitled to get that

1 water out of that basin. Everyone knows there's some risk, you  
2 know, of not being able to do that depending on where they are  
3 on the list and what the nature of the basin is and so on and  
4 so forth. But there is a certain level of certainty associated  
5 with the process that overlays the existence of those rights.  
6 So you know how to game it out; right? You know where you are  
7 on the list. People study this stuff. They understand what  
8 the basins are like that they're in. They get rights from  
9 places they want rights, and they're making the best decisions  
10 they can about securing their water future.

11 This was a regulatory action that upended all of  
12 that, right, and that's why there's so much consternation about  
13 it.

14 The question of authority is an interesting one, and  
15 that's where I want to go next.

16 So our position obviously is pretty straightforward.  
17 The State Engineer is a creature of statute. He's got to have  
18 a statutory basis upon which to act, and in this case, there  
19 isn't a clear -- there isn't a statutory basis to act.

20 The State Engineer in Order 1309 identified a number  
21 of statutory bases that he says justify the action. The one on  
22 its face that is the most, I guess, logical in terms of the  
23 text is 533.024(1) (e), which states that it is the policy of  
24 the State to, dot, dot, dot, manage conjunctively the  
25 appropriation, use and administration of all waters in this



1 state, regardless of the source of water.

2 So our brief is pretty clear about this. The Nevada  
3 Supreme Court has articulated a number of times, particularly  
4 in connection with how to understand legislative history, what  
5 you do with policy statements made by the legislature.

6 Because the Nevada Revised Statutes are full of them,  
7 right. Almost every chapter has a legislative declaration  
8 somewhere. Sometimes they're factual in nature. Sometimes  
9 they're like this where it's kind of a broadly stated policy.  
10 Sometimes they apply to people generally, like citizens of  
11 Nevada. Sometimes they apply to government actors.

12 But what's common about all of them is that none of  
13 them are operative; right? No one, and other people have said  
14 this, but no government actor can look at a statement of  
15 policy, even that applies directly to them and say, well, that  
16 is a source of authority. Because it sits outside the  
17 regulatory system, it's an introduction to it. And so the  
18 Nevada Supreme Court has said in the cases that we've decided  
19 that you can use -- you know, you interpret statutes consistent  
20 with their policy.

21 The reason the legislature articulates the policy is  
22 to help courts interpret statutes if it's necessary, right. If  
23 a statute is compliant on its face, you don't bother with it.  
24 If it becomes ambiguous, you have tools. One of them is  
25 legislative history, and an articulation of what the policy is.

1           The problem here is that while the legislature  
2 articulated the policy, there is no specific authority that you  
3 can relate it to that supported the State Engineer's decision,  
4 and that was cited by the State Engineer. I mean, and that's  
5 the key thing. He's got to come up with the reason he's doing  
6 what he's doing, and this in and of itself doesn't do it.

7           Order 1309 also includes the citation to another  
8 provision in 533. 24, which is this policy, slash, dictate that  
9 the State Engineer consider the best available science. I  
10 think the argument goes well, the science told us there's a  
11 hydrologic connection. We now need to manage the basins and  
12 make decisions, you know, consistent with the connection that  
13 we perceive.

14           That's just a -- that's overreaching.

15           On its face, what that statute says is you follow the  
16 best -- or we are encouraged to follow the best available  
17 evidence. Okay. It's a process consideration. I don't know  
18 that the Nevada legislature needed to articulate it, but they  
19 did, and so the State Engineer should, in all cases follow the  
20 best available science.

21           It doesn't mean that the State Engineer has authority  
22 to do whatever he wants to do or whatever he believes the best  
23 available science tells him he has to do, right. It's not a  
24 source of independent authority. So if the best available  
25 science says these are hydrologically connected, and he

1 believes that, that doesn't mean he has the authority to  
2 consolidate a basin, subject it to conductive management,  
3 subject it to joint administration. Those are concrete steps  
4 that have to be rooted in the case law -- or excuse me, in the  
5 statute.

6           The other statute that's cited is the one Your Honor  
7 asked about yesterday. I think it's 534.120 -- or is it  
8 533.120?

9           534.120. I think you asked Mr. Robison about it.

10          THE COURT: I did, about the area versus --

11          MR. FOLETTA: Right. Yeah.

12          THE COURT: Yeah.

13          MR. FOLETTA: And again, what I would say about that  
14 is a couple things. One, on its face, it applies on a basin by  
15 basin basis, which reflects the Nevada statutory scheme and  
16 regulatory scheme, and so it doesn't -- it doesn't work on its  
17 face to justify all of these things. You know, acting outside  
18 of the basins.

19           The other thing I would just point out is it was  
20 enacted in 1955. The conjunctive management policy that's  
21 reflected in the statutes wasn't enacted until 2017. You know,  
22 it's -- this is not a substantial evidence type analysis where  
23 we can search --

24          THE COURT: Well, I guess, you know, I guess I was  
25 thinking the area part really talks to me if it was -- if it

1 indicated anything outside a basin would be more in the joint  
2 management as opposed to the conjunctive management.

3 MR. BOLOTIN: Okay. What I would say is that in  
4 Nevada water law, if you look at it, geographic units have  
5 always corresponded -- the legal administrative unit has been  
6 basins. Basins are geographic units.

7 THE COURT: Right.

8 MR. FOLETTA: So area corresponds to --

9 THE COURT: To fit in with in the geographic --

10 MR. FOLETTA: Two consistent with is what I would  
11 say.

12 THE COURT: Right.

13 MR. FOLETTA: So it's not -- I think you would be  
14 reading it too broadly to think that it gives the State  
15 Engineer authority to take actions that are beyond the basin  
16 because an area is of concern that's larger than a basin, which  
17 is what I understand you to be saying.

18 But again, I do think it's important to note that the  
19 statute itself is very old. That particular -- not very old  
20 but that particular language has been around for decades. It  
21 certainly preceded all this discussion about what we're doing  
22 here today, and I think it would be and was a stretch at the  
23 least for the State Engineer to cite it in support of what he  
24 did here.

25 Now, at the same time, that statute is one of the

1 statutes that you can look at as reflecting the availability of  
2 tools that the State Engineer does have on a basin by basin  
3 basis, right. That's what I would understand -- I would  
4 suggest that you -- how you understand that statute, as one of  
5 the available tools that the State Engineer has to deal with  
6 situations where they feel that there is concern.

7           The -- the importance of there being an actual  
8 statutory basis for this action cannot be overstated. The  
9 reason why administrative laws like this, why there has to be a  
10 clear statutory basis is because without one, decisions of  
11 regulators become ad hoc, right. They become untethered.  
12 There's no statutory support for them. They, generally  
13 speaking when this happens, they become very facts driven, very  
14 specific.

15           You end up with -- you end up with decisions that are  
16 not consistent, like here, with an overall regulatory  
17 framework, and like here, decisions like that disrupt the --  
18 what I'll call the regulatory expectations of people, and this  
19 is what I talked about earlier, the idea that people who have  
20 got water rights don't have, you know, a right, you know, under  
21 all circumstances to pump that water, but they've got a right  
22 that means something in connection with the regulatory system.

23           And when you make decisions that aren't rooted in  
24 that system, in the legal basis of that system, it destroys  
25 their reasonable expectations about it. It undermines the

1 value of the right, and it creates chaos. I think it was  
2 Mr. Balducci yesterday who talked about, you know, this case  
3 setting a terrible precedent. That is true. Right. It sets a  
4 terrible precedent because it undermines the reasonable  
5 expectations people have in the consistency of this system over  
6 time.

7 Other people have talked about how this decision  
8 affected their clients, and so I'm going to do that too, but  
9 I'll try to do it briefly because we've already talked about  
10 how priority works. You understand that.

11 My clients have rights in the Garnet Valley Basin.  
12 They have rights. A couple of them have rights that are dated  
13 different times, but their rights primarily are dated in the  
14 '80s. So Georgia-Pacific has a priority date of October  
15 28th, 1986. Republic has rights that post date 1983, and  
16 they've got nine permits in 1988.

17 The order that -- the scrambling of priority, as I'll  
18 call it, in conjunction with the pumping limit essentially  
19 subjects everything after 1983 to question, right. If you're  
20 looking at like a point in time, at least in our case where  
21 things start to get really different in terms of where you are  
22 on the list and what you can expect, that's where things get  
23 difficult, okay.

24 Keeping that in mind, the -- between 1981 and 1986,  
25 and this is the record at 355556 through -58. The State

1 Engineer issued permits for appropriations totaling 17,000  
2 acre-feet, primarily to Coyote Springs and the Water Authority,  
3 from points of diversion in Coyote Springs Hydrographic Basin.

4 Okay. So where the cumulative duty from the combined  
5 Lower White River Flow System Basins in 1981 was 7,300  
6 acre-feet. By 1986, it was more than 24,500 acre-feet. So  
7 there is the effect of the order concretely on my clients is  
8 that there is now 17,000 acre-feet in front of them that wasn't  
9 there before, right.

10 So this is not a situation where nothing really  
11 happened. Something really happened, right. This is real.  
12 Like 17,000 acre-feet in front of you that weren't there  
13 before, you're in a bad way, and these are -- obviously I don't  
14 need to go into too much detail, but people are running  
15 businesses and so fourth. It has a very dramatic effect on  
16 their decision-making and their prospects.

17 I do want to say one other thing about that, you  
18 know, and I can address this more in reply, but there's this  
19 idea that, well, the State Engineer didn't change the dates on  
20 anybody's rights, and so we didn't really do anything. That's  
21 not the case. I mean, when you subjected these basins to  
22 conjunctive management and joint administration, it changed  
23 everything. Because what matters is the priority. It's not  
24 really the date, right, like in the grand scheme of things.  
25 It's where are you on the list.

1           With that I'd like to move on to the notice, and the  
2 last counsel talked about this, and I want to talk about it  
3 too. Notice is a problem in this case in multiple respects,  
4 right, and it rears its head in different places. The most  
5 conspicuous one is in connection with the decision to subject  
6 the basins to conjunctive management and joint administration.  
7 Because as I talked about at the outset, the specific notice  
8 said that, you know, we would be discussing future management  
9 decisions, including policy decisions relating to the Lower  
10 White River Flow Basins in the future, right. And that is a  
11 statement that was reiterated by the presiding officer at the  
12 outset -- at the outset of the hearings.

13           The Nevada Supreme Court said,

14                   Administrative agencies in particular must  
15                   follow their procedural guidelines and give  
16                   notice to the defending party of the issues on  
17                   which the decision will turn and the factual  
18                   material on which the agency relies for decision  
19                   so that he may rebut it.

20           The Supreme Court has gone on to say -- that's, by  
21 the way, that's *Dutchess*, which is cited in our briefs. The  
22 Supreme Court has also said with respect to notice,

23                   Inherent in any notice and herein  
24                   requirement are the propositions that the notice  
25                   will accurately reflect the subject matter to be



1                   addressed, and the hearing will be -- will allow  
2                   full consideration of it.

3                   The language of *Dutchess* on notice is like could not  
4 be more squarely on point, okay. The notice said what I just  
5 said it said, and I won't walk through all of these, but the  
6 order 1303 reports are referenced in the notice, right. It  
7 says we're going to talk about the things that the 1303 reports  
8 are about, and they were about five things, and those five  
9 things were articulated: Geographic boundary of the  
10 hydrologically connected groundwater and surface water systems  
11 comprising, in this case, the Lower White River Flow System,  
12 information obtained from the order 1169 tests -- I'm  
13 paraphrasing to kind of move it along -- the long-term annual  
14 quality -- quantity of groundwater that can be pumped  
15 (indiscernible), the effect of movement of water between  
16 alluvial wells and the carbonate wells on the delivery of  
17 senior decreed rights.

18                   Okay. So that kind of goes to the bathtub. Water is  
19 moving around. How is it moving? What is the effect of the  
20 movement on other people?

21                   And then the fifth was this catchall, any other  
22 matter believed to be relevant to the State Engineer's  
23 analysis.

24                   The first four of those are clearly fact-based  
25 inquiries, right. There's nothing about how to manage rights,

1 nothing like that. It's all about what's the underlying  
2 geology look like, what's the geography of the system, what did  
3 the pump test show us, how much water can we get out of there?

4 The fifth is broader, but at the outset of the  
5 hearing, the presiding officer said the fifth is not what you  
6 might think it is, right. The statement was at the August  
7 8th, 2019, prehearing conference:

8 I'm going to talk about this, and we've  
9 spoken about this before, is that really this is  
10 a threshold reporting aspect, that this is part  
11 of a multitiered process in terms of determining  
12 the appropriate management strategy to the Lower  
13 White River Flow System. This larger  
14 substantive policy determination is not part of  
15 the particular proceeding.

16 That's part of later proceedings. That's what the  
17 record at 522. So the message there was let's talk about the  
18 facts; we're going to deal with management later.

19 At the September 23rd hearing is where I think she  
20 talked about this fifth catchall issue, and she said,

21 While the fifth issue is not intended to  
22 expand the scope of this hearing in to making  
23 policy determinations with respect to the  
24 management of the Lower White River Flow System  
25 basins, on individual water rights, those

1 different types of things, because those are  
2 going to be decisions that would have to be made  
3 in subsequent proceedings should they be  
4 necessary.

5 That's the record of at 52962. So, you know, that is  
6 saying basically is, you know, the fifth catchall from 1303 is  
7 not a justification for getting into areas that we don't want  
8 to get into, which is how are these -- how are individual water  
9 rights going to be impacted when we manage the basins, which  
10 we're going to talk about later.

11 The fact of the matter is, as I've said, the decision  
12 to subject the management -- the basins to joint administration  
13 and conjunctive management did affect individual water rights.  
14 It is a management step that was not noticed in connection with  
15 which the presiding officer actively prohibited people from  
16 talking about. And so in that respect, the order is not the  
17 product of a properly noticed proceeding and therefore must be  
18 vacated.

19 The -- there is some discussion now about -- not now,  
20 there has been some discussion about the criteria that the  
21 State Engineer used.

22 THE COURT: Six?

23 MR. FOLETTA: Six criteria is correct. And I'm going  
24 to talk about it too. I'm going to talk about it in two ways.  
25 One is in connection with due process, which I could do pretty

1 fast, and the other way is in connection with substantial  
2 evidence, and that goes to bathtub, not a bathtub, okay.

3 So in connection with due process, other people have  
4 said it, I'm going to say it: The criteria wasn't announced  
5 until the order. It was -- so the rubric essentially that the  
6 State Engineer used to determine or the -- I should just say  
7 criteria, the criteria that the State Engineer used to  
8 determine the existence and extent of a hydrological connection  
9 between the basins was not articulated until after the hearing,  
10 after people put in their evidence. You know, the entire  
11 process had already taken place.

12 So and going back to *Dutchess*, what *Dutchess* says is  
13 that you've got to have notice of the factual -- what do they  
14 have to say -- basically the factual issues on which the  
15 proceeding will turn, right, on which the decision will turn.  
16 Again, it's squarely on point.

17 The parties did not have proper notice -- oh, excuse  
18 me, here it is. The quote is the factual material on which the  
19 agency relies for a decision so that he may rebut it, right.  
20 The factual material on which the agency relies for a decision,  
21 these are the criteria, and no one knew about it until after  
22 the case was basically over.

23 So it's, again, it fails due process in that respect.

24 The other thing I want to talk about the criteria is  
25 in connection with the substantial evidence standard. So

1 substantial evidence, people have talked about what it means.  
2 I think Mr. Taggart articulated it pretty well. It's got to  
3 be -- if it's arbitrary and capricious, it does not equal  
4 substantial evidence, right, then it cannot be substantial  
5 evidence. Substantial evidence is evidence on what you can  
6 reasonably rely, right.

7           This case, this hearing, was about the hydrological  
8 connection, among other things, of the Lower White River Flow  
9 System. The criteria -- or that was at least -- that was one  
10 of the key inquiries.

11           The criteria in this case, and I am going to go  
12 through them because how they're articulated is one of the  
13 reasons why there isn't substantial evidence in the case. The  
14 criteria are these:

15           The first is water level observations whose spatial  
16 distribution indicates relatively uniform or flat  
17 potentiometric surface are consistent with a close hydrologic  
18 connection;

19           The second one is water level hydrographs that in a  
20 well-to-well comparison demonstrate a similar temporal pattern  
21 irrespective of whether the pattern is caused by climate,  
22 pumping or other dynamic is consistent with a close hydrologic  
23 connection;

24           Water level hydrographs that demonstrate an  
25 observable increase in drawdown that corresponds to an increase

1 in pumping and observable decrease in drawdown or recovery that  
2 corresponds to a decrease in drawdown or recovery that  
3 corresponds to a decrease in pumping are consistent with a  
4 direct hydrological -- a hydraulic, excuse me, connection and  
5 close hydraulic connection to the pumping;

6 The fourth is water level observations that  
7 demonstrate a relatively steep hydraulic gradient are  
8 consistent with a poor hydraulic connection and a potential  
9 boundary; and

10 Five is geologic structures that have caused a  
11 juxtaposition of the carbonate rock aquifer with low  
12 permeability bedrock are consistent with a boundary.

13 And there's a sixth. The reason I'm not going to  
14 read the sixth is because the first five, it would be a little  
15 different than the first five. The first five are all trying  
16 to identify a correlation between the factors and the facts  
17 that they articulate and the existence of a close hydrologic  
18 connection. So they're all saying if you show us this or if we  
19 see fact A, that fact is consistent with the existence of a  
20 close hydraulic connection.

21 The fundamental analytical problem with that is that  
22 correlation is not causation. To identify factors that are  
23 consistent with the existence of a close hydraulic connection  
24 is not to determine the existence of a close hydraulic  
25 connection. It's to determine, at most, the existence of facts

1 that are consistent with that connection based on the State  
2 Engineer's view.

3 THE COURT: Okay. Say that one more time.

4 MR. FOLETTA: You're right. Turning this into a  
5 philosophy class based on logic.

6 So the -- if all you're doing is determining whether  
7 something is consistent with something else --

8 THE COURT: You're not determining that that thing --

9 MR. FOLETTA: That that thing is something else.

10 THE COURT: -- that something else actually exists.

11 MR. FOLETTA: Right.

12 THE COURT: I see. Okay.

13 MR. FOLETTA: If you're to determine that -- if your  
14 tests for determining the existence of a tiger is that it has  
15 stripes and four legs, and you find something with stripes and  
16 four legs, it doesn't make it a tiger.

17 THE COURT: That doesn't make it a tiger. Right.

18 MR. FOLETTA: It could be a zebra or whatever.

19 THE COURT: Okay.

20 MR. FOLETTA: So I don't -- this isn't meant to be  
21 sort of flip and casual, like, this is -- this was an  
22 incredibly complicated scientific -- set of scientific  
23 determinations and an inquiry that gave rise to the  
24 determinations, but the test used to determine and to find the  
25 ultimate fact in this case, which is that there was a close

1 hydrologic connection, right, that was the outcome of the case  
2 was not credible.

3           It didn't get at the actual question. It only did  
4 what it could do, which is to determine that there are some  
5 facts out there that are consistent with what we think a close  
6 hydraulic connection would, and therefore that -- and then they  
7 took a jump and said therefore there is a close hydraulic  
8 connection.

9           Okay. That is a fundamental issue we have with the  
10 case.

11           How does that relate to the actual evidence? It  
12 was -- there was lots of evidence put in by parties in the case  
13 about why there wasn't a hydraulic connection or why the  
14 hydraulic connection wasn't as substantial as some other people  
15 thought. There was also evidence. I think SNWA put a report  
16 in about -- that got into substantive issue. Is there a  
17 hydraulic connection? I think the conclusion they reached was  
18 that there was, right.

19           So the point is the -- the reason the substantial  
20 evidence was not satisfied in this case, among other things, is  
21 because the State Engineer didn't evaluate it in connection  
22 with a standard that would have even allowed them to make the  
23 determination about the actual existence of a hydraulic  
24 connection. It never got that far because all they looked for  
25 was consistency with their criteria, not -- they didn't say,



1 you know, we believe -- we think the one report that shows a  
2 hydraulic connection is right. They said it satisfies our  
3 criteria, and therefore there is a hydraulic connection, right.

4 So they disregarded in effect all the evidence that  
5 other people put in about the absence of a hydraulic connection  
6 or the limited nature of a hydraulic connection.

7 Also, the way that criteria is worded, it -- it kind  
8 of doesn't allow for the possibility that the evidence wasn't  
9 good enough at that time to reach the real answer, right,  
10 because it's sort of like they short-circuited the inquiry.  
11 They stopped when they found consistency. They didn't get to  
12 the final question.

13 So one of the things that my client said at the  
14 hearing was this is really premature. We need other evidence,  
15 and other people have said that too, like the extent of a  
16 hydraulic connection just isn't well enough established, right.  
17 And now we're phrasing it in terms of substantial evidence.  
18 But at the time it was it's not there. The science isn't there  
19 yet.

20 The way that the -- because the standard was the  
21 standard that that argument got basically thrown out. And, in  
22 fact, that's what happened. So the State Engineer referenced  
23 our argument at the end, and I'll read you the quote, but the  
24 idea was, you know, they said essentially, well, we agree more  
25 information would be good over time, as we learn more, the

1 boundaries of the Lower White River System may change. We can  
2 look at pumping limits again, but for now, we're going with  
3 8,000 feet a year. The system is where the system is.  
4 Conjunctive management, joint administration, that's that.

5 That's -- and so that's really kind of our primary  
6 issue there.

7 Just to put a little bit of a finer point on what  
8 type of evidence that there was, Mr. Flaherty talked about it.  
9 I mean, there's all sorts of evidence about the geologic under  
10 surface. That essentially was ignored.

11 There were all sorts of -- there was all sorts of  
12 evidence about groundwater flows, connectivity, service  
13 geology, impact of climate, location of well drilling versus  
14 where flows were seen reduced. None of that -- none of the  
15 nuance of any of that evidence got captured in the decision  
16 because it wasn't consistent with the standard.

17 There is one particular kind of set of facts which  
18 might illustrate this point a little better, which is that the  
19 State Engineer's consideration of the Lower Meadow Valley Wash.  
20 So there is a portion of the order where the State Engineer  
21 considers the fish and wildlife services position on how to  
22 treat the Lower Meadow Valley Wash.

23 The ultimately the Lower Meadow Valley Wash was not  
24 included in the Lower White River Flow System. The reason why  
25 it's significant to us is because the evidence was that the

1 Meadow Valley Wash could contribute flows to the system. In  
2 other words, there was a lot of discussion about there not  
3 being enough water. The Lower Meadow Valley Wash has water to  
4 give, right, and so the evidence at the hearing was that the  
5 Lower Meadow Valley Wash could contribute water to the Big  
6 Muddy Spring, which contributes about 30 percent of water to  
7 the Muddy River itself.

8 The analysis that the fish and wildlife service did  
9 to put this evidence forward was based essentially on  
10 temperature and some chemistry associated with this, I don't  
11 know, I'll call it a flow analysis they did. But what the  
12 State Engineer ended up saying is like, well, there's not  
13 really data consistent with our criteria to include that within  
14 the system, and so we're not going to do that.

15 What our position is with respect to that is that  
16 essentially what they're saying is that, well, like all this  
17 chemistry and temperature data that you showed us that you say  
18 supports an inclusion of this unit or this Lower Meadow Valley  
19 Wash in the unit was not consistent with the criteria that we  
20 had set fourth, and therefore we are not putting it in the  
21 Lower White River Flow System.

22 THE COURT: So when you're talking about chemistry,  
23 you're talking about the unique water chemistry between the  
24 waters to show that it would potentially be flowing from --

25 MR. FOLETTA: Where it's going and (indiscernible),

1 right.

2           So the point here is that this is again the criteria  
3 that the State Engineer is using dictating a particular result,  
4 which criteria is dictated results. There's no doubt about  
5 that, but the point is that the criteria in this case dictated  
6 the exclusion, not only of this resource but really of  
7 consideration of it because the State Engineer said it's not  
8 the kind of data we want to see, like we're looking for  
9 something else.

10           But again, the things that they were looking for was  
11 all based on consistency.

12           So the criteria itself was really developed kind of  
13 outcome oriented. It drove the outcome. And because it was  
14 announced after the fact, did not satisfy due process.

15           The last real substantive area I want to talk about  
16 is the -- is the pump limit. So the -- our critique of the  
17 decision as it relates to the pump limit is based on the  
18 substantial evidence standard. So there's a couple reasons why  
19 the establishment of the pump limit is not consistent with  
20 substantial evidence.

21           First of all, as the order itself acknowledges, there  
22 was no consensus among experts at the hearing about, quote, the  
23 long-term annual quantity of groundwater that can be pumped.  
24 Recommendations range from zero to 30,000 acre-feet. Okay.  
25 That's the record at page 58.

1 The order also says the, quote,

2 There is near consensus that the exact  
3 amount of water -- or, excuse me, the exact  
4 amount that can be continually pumped from the  
5 long term -- for the long term cannot be  
6 absolutely determined with the data available  
7 and that to make that determination will require  
8 monitoring of spring flow water levels and  
9 pumping over time.

10 Okay. People are all over the place. There's some  
11 huge numbers. There are some small numbers. There is some no  
12 numbers. You know, no consensus, right. No answer is emerging  
13 from the process itself. No weight of kind of authority is  
14 moving in the direction of a number. But what there is  
15 consensus about is that we can't -- we don't really know the  
16 real number. Like it's going to take us a while to figure it  
17 out. Experience is going to show us over time now that we're  
18 kind of paying attention. The order goes on to say, quote,

19 There is almost unanimous agreement among  
20 experts that data collection is needed to  
21 further refine the certainty, the extent of the  
22 groundwater development that can continually be  
23 pumped over the long term.

24 That's at the record at 58. Again, we need more  
25 data.

1           Notwithstanding those determinations, those findings  
2 up front, the State Engineer concluded, again, at page 58 of  
3 the record, quote,

4                   The current data are adequate to establish  
5 an approximately -- and approximately limit to  
6 the amount of pumping that can occur within the  
7 system, but -- and I'm adding some words further  
8 data. It's my insert -- essential to refine and  
9 validate this limit.

10           So and other people talked about this. It's like the  
11 numbers are all over the place. We know it's going to take  
12 more time to really figure this out. We need more data, but  
13 right now we're going to pick a number, and the data is  
14 adequate to do that, okay, but there's nothing in the order  
15 that substantiates the adequacy of the number. It's just  
16 there. It's picked at 8,000 acre-feet.

17           Now, other people have said, well, we had a study  
18 that says 4- to 6,000, and there are some studies in there that  
19 are kind of close to 8,000, but there's no -- if you read the  
20 order -- I'm sure you've read it -- you should read it again  
21 because it's the best way to understand the case, there's no  
22 rigorous analysis of how they get to the 8,000. It just shows  
23 up in the context of statements about how the numbers are all  
24 over the place; there's no consensus, and we need more data,  
25 right. So it's a Band-Aid.

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1           They can't be a Band-Aid.

2           The process is not a Band-Aid process. It was a  
3 noticed hearing. The purpose was -- of it was to determine  
4 hydrologic connection, sustainable yield pumping, so on and so  
5 forth. They have to figure it out. And if they can't figure  
6 it out, they can't pick a number because substantial evidence  
7 says you got to have a -- you know, in this context you've got  
8 to have a number. It's got to be a reasonable number. It  
9 can't be arbitrary and capricious. It's arbitrary to pick a  
10 number when you know it's not the right number, and it's not  
11 going to be the right number until you learn more about it.

12           The -- another reason I think the number is there,  
13 because this discussion is there around the 8,000 acre-feet is  
14 because of the dace. All right. So well, same topic, but kind  
15 of subtopic, a lot of discussion about how to handle the dace.

16           We raised the Endangered Species Act in our brief,  
17 and we had a kind of back and forth going with the State  
18 Engineer about that. Here's what we're saying. We're not  
19 saying the dace is a dumb fish and we don't like it, and they  
20 can all go away, right.

21           What we're saying is we agree. The State Engineer  
22 considers environmental factors, including the prospects of the  
23 dace. Totally legitimate, okay.

24           But what we are saying is that the Endangered Species  
25 Act, totally wrong context to consider the dace. The

1 Endangered Species Act is a federal law. It's governed by the  
2 federal government, enforced by the federal government. Fish  
3 and Wildlife Service determine when a take occurs. If a take  
4 occurs of endangered species, big deal, right, like this isn't  
5 like -- you don't determine whether a take occurs or that it's  
6 going to occur after a weeklong hearing at the State Engineer's  
7 office. It's like, you know, there's a whole rubric framework  
8 around how to determine that, and liability on the Endangered  
9 Species Act is a very serious thing.

10 THE COURT: So then is it your position that it  
11 shouldn't be under the Endangered Species Act that the Nevada  
12 State Engineer considers that, but under the public interest?

13 MR. FOLETTA: Right. Can't do it that way.

14 And the problem with the decision, the reason why  
15 it's -- you know, you can't, like -- because (indiscernible),  
16 oh, what if I just construe it as a consideration of the public  
17 interest. You can't do that because the State Engineer  
18 considered it how he considered it. He considered it in the  
19 context of liability under the Endangered Species Act.

20 Liability under the Endangered Species Act is not an  
21 environmental consideration. It is a legal consideration about  
22 jeopardy that the State or water rights users could be subject  
23 to if they make a different decision in this case, right, that  
24 was kind of how they articulated it.

25 It's all about we're avoiding -- we're avoiding that.



1 We're avoiding jeopardy, legal jeopardy. That's not the proper  
2 way to consider the impact of whatever decisions they were  
3 going to make on the dace, and we can't reconstrue it in a way  
4 that is appropriate for them because they didn't do it that  
5 way.

6 If they want to consider the dace, I mean, unless  
7 everything else in the case, you throw out all arguments and  
8 you buy this one, what you would have to do is remand it for  
9 reconsideration on that particular issue in light of the  
10 appropriate statutory factors.

11 The last point I was going to make about this is  
12 that, and this kind of gives you a feel for our view of the  
13 case, but also kind of how textured the decision really should  
14 have been, right. So the decision was all these basins in the  
15 Lower White River Flow System, 8,000 acre-feet, whole system,  
16 right, that's the limit on everything.

17 One of the problems is that -- and kind of like the  
18 underlying basis, factual basis of the decision was bathtub,  
19 right. So bathtub, big basin, here's a limit. Slap it on top.  
20 We're done for now, right. We'll come back and talk about  
21 management later. Maybe these things change, and maybe they  
22 don't, but that's where we're at.

23 Totally overbroad decision, right. There was a lot  
24 of evidence about, among other things, the location of where  
25 pumping was taking place in the pump test, and what the results

1 were showing people. And so I talked a little bit about it,  
2 but, I mean, the point is our view is that even putting aside  
3 the number, the 8,000 acre-feet, the application of the 8,000  
4 acre-feet to the system as a whole was arbitrary and capricious  
5 because not -- not all the evidence demonstrated that 8,000  
6 acre-feet was necessary to preserve the integrity of the entire  
7 system. Because, I mean, water is not -- it's not a uniform  
8 system, right. Like it's not one bathtub with an equal amount  
9 of bathtub. It's, at least as the State Engineer has  
10 conceptualized it and ordered it, it's a large geographic area,  
11 and there's like, you know, the availability of water, the  
12 existence of water is not consistent at every square foot.

13 And so the point is, there was no consideration of  
14 the appropriate, even putting aside basin specific approach,  
15 there's no consideration of the appropriate geographically  
16 centered approach within the Lower White River Flow System as  
17 it relates to the pumping volume, right. So the point is you  
18 can do more pumping in other places than you can in other  
19 places.

20 The -- I'll read a statement from the order to try to  
21 wrap this up. It said -- the order says -- this is the record  
22 at page 60:

23 The State Engineer finds that the data  
24 support the conclusion that pumping from  
25 locations within the Lower White River Flow

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1 System that are distal from the Warm Springs  
2 area can have a lesser impact on spring flow  
3 than pumping from locations more proximal to the  
4 Springs. The Lower White River Flow System has  
5 structural complexity and heterogeneity, and  
6 some areas have more immediate and more complete  
7 connections than others.

8 Goes to the point I'm trying to make.

9 There remains some uncertainty as to the  
10 extent that distance and location relative to  
11 other capturable sources of discharge, either  
12 delay, attenuate or reduce capture from the  
13 Springs.

14 Okay. I think they're saying what I'm trying to say.  
15 They're saying it better, right. This is the Lower White River  
16 Flow System is not the same corner to corner. It's different,  
17 right. Flows are different. Geography matters within the  
18 system. We don't -- we know it matters, right. They're  
19 finding that it matters, and notwithstanding the finding,  
20 they're saying 8,000 acre-feet is the limit across a thousand  
21 square miles at the Lower White River Flow System.

22 It is arbitrary and capricious to acknowledge on the  
23 one hand uncertainty about -- about the relationship of the  
24 Lower White River Flow System to itself and then choose a  
25 solution that is unequivocal and generally applicable.

1           To conclude, I'll go back to kind of where I started,  
2 which was I talked about this idea that we had raised at the  
3 hearing about this preceding being in some ways ahead of itself  
4 in that it ultimately there was a decision about policy and  
5 management that wasn't preceded by a full-throated discussion  
6 of how to do that in relationship to the data, the scientific  
7 data.

8           And so our view is that you really cannot disconnect  
9 the two very well, right. The policy discussion informs your  
10 understanding of the data. It doesn't change it, right, but it  
11 tells you what's relevant about it in some cases and what's  
12 not, and it's the only way that you get a solution that's not  
13 overbroad, right. Because if you do -- if you do one but not  
14 the other, you're not getting something that is, among other  
15 things, based on substantial evidence and lawful, but that's  
16 just not -- it's just not very good.

17           So we raised this at the hearing.

18           In the Order 1309 at page 54, the State Engineer  
19 addresses our point, and this is the quote:

20                   Georgia-Pacific and Republic asserted that  
21                   boundaries are premature without additional data  
22                   and without legally defensible policy and  
23                   management tools in place. They expressed  
24                   concern that creating an administrative unit at  
25                   this time inherently directs policy without

1 providing for due process.

2 That's what we're saying today.

3 The State Engineer has considered these concerns and  
4 agrees that additional data and improved understanding of the  
5 hydrologic system is critical to the process.

6 He also believes that the data currently  
7 available provide enough information to  
8 delineate the Lower White River Flow System  
9 boundaries and an effective management scheme  
10 will provide for the flexibility to adjust  
11 boundaries on additional information, retain the  
12 ability to address unique management issues on a  
13 subbasin scale and maintain partnership with  
14 water users who may be affected by management  
15 actions throughout the LWRFS.

16 I think that this actually, the way they addressed  
17 our concerns in the order reflects what our concerns remain,  
18 and I think it really reflects a misjudgment about the effect  
19 of what they were doing, right. They were kind of  
20 encapsulating everything that I've been trying to talk about,  
21 which is that they're acknowledging more data. This isn't  
22 right yet, but for now we're going to try to get it right. But  
23 don't worry because we're going to manage it later in a way  
24 that is, you know, (indiscernible) okay for you, but there will  
25 be a process. You will -- we'll work in partnership with water

1 users. You know, all of that.

2 I think it reflects kind of an obliviousness to the  
3 concrete impact of what they did in scrambling people's  
4 priorities, and I think it's -- it's also naïve to think that  
5 the regulator in this case could make a kind of -- another kind  
6 of quasi interim order that is definitive entirely impactful,  
7 incredibly harmful to some people, acknowledge that it's  
8 interim nature, not just because in time it's interim, but  
9 because they need more information to make the real decision,  
10 and then to say don't worry about it. We're going to come back  
11 later and figure this all out, and it'll be okay. It's not  
12 okay.

13 So for these reasons, Your Honor, we have asked that  
14 in our prayer that the order be vacated. If -- and, you know,  
15 you're going to have to walk through probably a checklist here  
16 and figure out what you're going to do, but obviously legal  
17 errors demand that it be vacated.

18 So lack of authority gets vacated, not remanded,  
19 vacated. You know, if the State Engineer wants to notice  
20 another hearing, wants to take a second crack at this, if they  
21 don't have authority to do conjunctive management, joint  
22 administration, they can do that. They would follow all the  
23 rules as set forth, but that would be their choice, but legal  
24 error is -- it goes away.

25 Due process, if it is due process on the notice

1 overall, then it should be remanded. It should be vacated.  
2 You have the option to remand it in that case if you want, but  
3 the State Engineer maybe would have the option to renotece it  
4 or not. They don't have to reconsider the case, right. But  
5 notice is -- failure of properly noticing the proceeding is  
6 death to the order because nothing -- nothing that comes out of  
7 it can be managed at that point.

8 THE COURT: So is it your position that if I find  
9 that there was not the due process necessary that it -- I would  
10 have to vacate it as opposed to remand it to then have a  
11 proceeding that's consistent with due process?

12 MR. FOLETTA: Right. You -- because an order that is  
13 not a product of due process and doesn't satisfy it cannot  
14 stand. So the order must be vacated, but vacating and remand  
15 are not necessarily related, right.

16 THE COURT: Right.

17 MR. FOLETTA: So your decision on remand is -- I  
18 think there's actually some debate on what you can remand and  
19 when you can remand, but my view is you must vacate the order.  
20 Whether you remand it or not is not totally relevant to me  
21 because I don't think you can force the State Engineer to have  
22 this proceeding again, right. I think you can't tell them you  
23 failed to do the notice right. Do the notice and redo the  
24 hearing. So I think if it was a failure of the notice that  
25 affected the entire case, so if the notice itself was found

1 deficient, you should probably just vacate it.

2           When it comes to notice as it relates to the  
3 criteria, I would say you have to -- in my view, that failure  
4 taints the whole order because I don't think you can pull out  
5 the pieces that flow from the criteria itself, and so I think  
6 you vacate the order in that instance. You could try to carve  
7 the order up and take out everything related to the hydraulic  
8 connection, but I don't -- you wouldn't end up with anything  
9 that makes sense, right.

10           So it could be in that situation that you vacate and  
11 remand for the State Engineer to kind of conform things, but I  
12 don't think that's possible. It's really I think a poison  
13 pill.

14           While the substantial evidence portion again I think  
15 it's the same answer there. It's very hard to pull this order  
16 apart and try to say, well, there was substantial evidence on  
17 this, but not on this. You know, pumping limit versus LWRF as  
18 a basin as a whole, and if you were to do that, it wouldn't  
19 work, right. Like if you let the pump limit stand, but you say  
20 there wasn't substantial evidence for the hydraulic connection,  
21 the pump limit has no application. So I think it gets vacated  
22 in that case as well. And again, the State Engineer can decide  
23 where to go from there.

24           Thank you, Your Honor.

25           THE COURT: All right. Thank you.



1 All right. So I think at this point it would  
2 probably be a good time to take a break.

3 Why don't we do a 10-minute break.

4 So let me ask, Ms. Peterson, so, you know, I said  
5 yesterday that I do need to break at 12:30 and go from 12:30 to  
6 1:30. That will give you a little less than two hours. Do you  
7 think that that's something you would be able to do?

8 MS. PETERSON: I think that would work.

9 THE COURT: Okay. All right.

10 UNIDENTIFIED SPEAKER: We're going to split time.

11 THE COURT: Okay. Okay. So why don't we take a  
12 10-minute break, but I'll --

13 MR. LAKE: Your Honor --

14 THE COURT: Yes.

15 MR. LAKE: I just want to let you know that I have  
16 paper copies of my presentation from yesterday.

17 THE COURT: Oh. Great.

18 MR. LAKE: Just to let you know. When would be a  
19 good time to distribute those?

20 THE COURT: If you want to stand at the door and  
21 distribute it to people as they go on their way out, that would  
22 probably be a good time.

23 All right. We'll see everyone in a bit.

24 (Proceedings recessed at 10:31 a.m., until 10:42 a.m.)

25 (Pause in the proceedings.)

1 THE COURT: Okay. You may proceed.

2 MR. KLOMP: Thank you, Your Honor. Good morning.

3 Wayne Klomp on behalf of Lincoln County Water District. And as  
4 we are joint petitioners with Vidler, we'll be splitting time  
5 and also changing attorneys during our presentation.

6 THE COURT: Okay.

7 **ARGUMENT FOR LINCOLN COUNTY WATER DISTRICT**

8 MR. KLOMP: Lincoln County Water District is a  
9 political subdivision that was created by the Nevada  
10 Legislature to develop and -- develop water rights and hold  
11 water rights for the purposes of economic development within  
12 the borders of Lincoln County. And so that is our role in the  
13 water process.

14 First I'm going to talk a little bit about the  
15 timeline as it pertains to Lincoln and Vidler and then go into  
16 the comprehensive statutory scheme, how 1309 deviates from that  
17 comprehensive statutory scheme.

18 And then I'll talk a little bit about how it violates  
19 the due process rights of Lincoln and Vidler and also violates  
20 the separation of powers doctrine.

21 And starting with the case *Mineral County versus Lyon*  
22 *County*, the Supreme Court said,

23 Certainty of rights is particularly  
24 important with respect to water rights in the  
25 Western United States and the doctrine of prior

1           appropriation is itself largely a product of  
2           compelling need for certainty in the holding and  
3           use of water rights.

4           THE COURT: And this is Slide 1?

5           MR. KLUMP: This is Slide 1, thank you. And I'll try  
6 to refer to those, but reminders are certainly welcome.

7           So it's under that backdrop that we challenge 1309  
8 because 1309 has really thrown into a tailspin the parties  
9 understanding of what water rights are and how they're  
10 administered by the State Engineer and what the statutory --  
11 comprehensive statutory scheme means. And the backdrop of that  
12 also is this statement that the legislative act is the charter  
13 of the administrative agency, and the administrative action  
14 beyond the authority conferred by the statute as *ultra vires*.  
15 And so it's with those two concepts in mind that I'd like to  
16 continue the presentation.

17           I want to first dispel the notion that 1309 is a new  
18 idea that groundwater and surface water are connected or that  
19 these hydrographic basins that were hydrographic basins for  
20 separate administration purposes were also not connected.

21           In 1966, the Department of Conservation and Natural  
22 Resources, which is the umbrella for the State Engineer's  
23 office, together with the USGS, issued Bulletin 33. This is a  
24 map of the White River Flow System. And as you can see from  
25 the map of --

1 THE COURT: This is Slide 3, or is it Slide 2 -- or  
2 part of --

3 MR. KLOMP: Slide 3. So this is Slide 3, and there's  
4 some graphics in the Slide 3.

5 THE COURT: Okay.

6 MR. KLOMP: So you asked earlier whether there's been  
7 consideration of whether there's an interaction between  
8 groundwater and surface water before, has it been considered.  
9 This is an emphatic, yes. Of course, it's been considered. So  
10 in 1966, the department -- the Nevada Department of  
11 Conservation and Natural Resources issued Bulletin 33 and  
12 released this map showing that the lower -- or not the Lower  
13 White River Flow, but the White River Flow System extends just  
14 beyond the border of White Pine County into Elko County, right,  
15 and this extends all the way down into Clark County.

16 From the abstract, these are the principal findings  
17 of that 1966 report:

18 One, Paleozoic carbonated rocks are the principal  
19 means of transmitting groundwater in the intrabasin regional  
20 system.

21 Two, estimates of recharge and discharge show wide  
22 discrepancies in individual valleys. And then it goes into a  
23 discussion of the recharge.

24 And the critical one is three.

25 The discharge of the Muddy River Springs, the lowest

1 of the three principal spring groups is shown to be highly  
2 uniform, which is consistent with their being supplied from a  
3 large regional groundwater system.

4           So, yes. The answer is yes. There has been a  
5 recognition since at least 1966 that there's an interaction  
6 between groundwater and surface water.

7           Despite that knowledge, the State released and  
8 developed the 232 distinct hydrographic basins.

9           Now, why it didn't -- why it drew those lines, that's  
10 not for me to say, but the fact is they drew those lines for  
11 administration purposes. So the --

12           THE COURT: So let me just ask you a question because  
13 I know that you cited to the 233 basins or geographic areas  
14 that were designated as basins. Is that what it's called?

15           MR. KLOMP: Yes.

16           THE COURT: Okay. So 232 hydrographic areas which  
17 are the basins, what are the 14 major hydrographic regions for  
18 basins?

19           MR. KLOMP: Brad, is it okay if I use your --

20           MR. HERREMA: Certainly.

21           MR. KLOMP: Okay.

22           THE COURT: Okay. So, I mean, because it seems to  
23 use the same terminology for basins.

24           MR. KLOMP: So this is the map that the State  
25 released.

1 THE COURT: Okay.

2 MR. KLUMP: And just so you guys know, this shows the  
3 230 two distinct hydrographic basins.

4 THE COURT: Right.

5 MR. KLUMP: And then down here, they're divided into  
6 14 different units, right. So the Lower White River Flow  
7 System -- not the Lower, the White River Flow is one of those I  
8 believe. Let me look at 206. Sorry. It's defined as the  
9 Colorado River Basin.

10 THE COURT: Okay.

11 MR. KLUMP: So that includes what we're talking about  
12 today as the Lower White River Flow as well as other basins.

13 THE COURT: Okay. So explain to me the difference  
14 between those 14 basins and the 233 basins.

15 MR. KLUMP: So my understanding is that the 232 were  
16 separated for administration purposes.

17 THE COURT: Okay.

18 MR. KLUMP: And I don't -- I can't pretend to know  
19 what the 14 are, but I believe that they were for -- those were  
20 the connected ones. So the basins within these 14 units are  
21 connected.

22 THE COURT: Is there anything in the statutes that  
23 regulates the 14 areas?

24 MR. KLUMP: Not that I know of.

25 THE COURT: So only -- the only regulatory scheme

1 within the statutes has to do with the 233 separate basins  
2 within as opposed to the 14 larger areas -- or larger basins or  
3 whatever -- it says hydrographic regions or basins. It says 14  
4 major hydrographic regions or basins, according to the water  
5 words dictionary on the State Engineer's website.

6 MR. KLOMP: So I think to understand the answer to  
7 that question, we have to understand how these basins came  
8 about, and I think that they were drawn by the State as  
9 joint -- or separate administrative units.

10 THE COURT: Right. And I think that this started out  
11 like if you wanted to use water you had to do a petition, and  
12 then that kind of thing; is that right?

13 MR. KLOMP: Yes. So you have to do an application.

14 THE COURT: Right.

15 MR. KLOMP: And you have to identify the source where  
16 that water is going to be drawn from. Then you have to  
17 identify the location that you're going to use that water.

18 And then the statutes grew up around this separate  
19 administration of these 232 distinct basins.

20 THE COURT: Sorry. I didn't mean to throw you off,  
21 but I just wanted to have a better understanding because I  
22 think there are different interpretations I guess of the word  
23 basin depending on what your position is. So I just wanted to  
24 make sure.

25 MR. KLOMP: No. And I totally appreciate that

1 because I did a ton of research trying to figure out how these  
2 basins were drawn, and it doesn't seem like that information is  
3 readily available.

4 But if you look at this map, the basins do not yet  
5 exist as they do on this map.

6 THE COURT: Okay.

7 MR. KLUMP: And I would have thought that since they  
8 were doing an analysis of the White River Flow System, they  
9 would have included the distinct hydrographic basins had they  
10 existed. And I think there was test -- or comment yesterday  
11 that they were developed starting in 1968. That was a comment  
12 from Mr. Robison.

13 THE COURT: Okay.

14 MR. KLUMP: But further to your point, Your Honor, I  
15 wanted to talk a little bit about the timeline as it pertains  
16 to Lincoln and Vidler and then use that --

17 THE COURT: What is the slide?

18 MR. KLUMP: This is Slide 4. And to use that  
19 timeline as a method to talk about the -- what you just  
20 mentioned, which was the application process and the  
21 appropriation process.

22 So this proceeding really started in 2002, and the  
23 State Engineer issued Order 1169. Lincoln and Vidler did  
24 not -- we didn't know they had participated until 2018 or so,  
25 but critical to I think these proceedings, in 2005, Lincoln and



1 Vidler filed for appropriation of water in Kane Springs. So  
2 they filed an application. And I'm going to maybe come back to  
3 this, but as we talk about the timeline, I'm going to go  
4 through some of those documents that are issued during this  
5 time frame.

6 So starting with Order 1169, it mentions six of the  
7 hydrographic basins by name and number. Kane Springs is not in  
8 there.

9 So in 2005, Lincoln and Vidler apply, file an  
10 application for appropriation of water, which in 2007 resulted  
11 in the issuance of Ruling 5712, which granted an appropriation  
12 of a thousand acre-feet. So between 2005 and 2007, the State  
13 Engineer would have held hearings. He would've heard protests  
14 and then come out with this ruling. There were several  
15 protestants during those proceedings; National Park Service was  
16 one. The U.S. Fish and Wildlife Service was another. And  
17 those two entities specifically requested that Kane Springs be  
18 included in the Order 1169 study area.

19 The State Engineer in issuing Ruling 5712 by statute,  
20 NRS 533.370, and this is Slide 6, the State Engineer has to  
21 make by law certain findings, and those are listed here in the  
22 ruling. He asks that -- there cannot be any unappropriated  
23 water at the proposed source. The proposed use or change  
24 cannot conflict with existing rights. The proposed use or  
25 change cannot conflict with protectable interest in existing

1 domestic wells, and the proposed use or change cannot threaten  
2 to prove detrimental to the public interest. So those are  
3 express findings that he has to make in order to grant an  
4 appropriation of water.

5 Further to that in slide 7, it shows what findings,  
6 some of the findings from Ruling 5712, specifically the State  
7 Engineer in the first -- in the top quote is still able to  
8 manage the groundwater basins as they have been historically  
9 managed administratively. That is as separate administrative  
10 units, but also take into consideration the concerns that arise  
11 for groundwater basins that are hydrologically connected.

12 So the fact that these basins are hydrologically  
13 connected is not new, and it was known at the time that  
14 Ruling 5712 was granted.

15 And then the third one, the State Engineer finds that  
16 there is not substantial evidence that the appropriation of  
17 limited quantity being granted under this ruling will likely  
18 impair the flow of the Mighty River Springs.

19 So in making those rulings, he overruled the --

20 THE COURT: In making 1309 rulings?

21 MR. KLUMP: In Ruling 5712 --

22 THE COURT: Right.

23 MR. KLUMP: -- he overruled the protestant from the  
24 National Park Service, who wanted Kane Springs to be included  
25 in the 1169 study area and the pump test. Lincoln and Vidler

1 settled their dispute or the protest of the U.S. Fish and  
2 Wildlife Service by entering into a stipulation to protect the  
3 dace.

4 And I bring that up, Your Honor, because in ruling  
5 1309, it is specifically the National Park Service that he  
6 relies on to include Kane Springs, right. So that's one of our  
7 contentions is that --

8 THE COURT: Already --

9 MR. KLOMP: You've already, yeah. You've made this  
10 decision already.

11 THE COURT: Okay.

12 MR. KLOMP: And it's a ruling. It's not like a  
13 policy or it's an adjudication of an appropriation of water.

14 THE COURT: Okay. Let me ask you a question because  
15 there was a position in the briefing that the -- a subsequent  
16 Nevada State Engineer can't overrule a previous Nevada State  
17 Engineer's decision. Is that really your position that, you  
18 know, as science or conditions change, that, you know, the more  
19 recent Nevada State Engineer can't then look back to change a  
20 prior State Engineer's order or, you know, I guess in effect  
21 change the order?

22 MR. KLOMP: So, no, he cannot. And for many reasons.

23 THE COURT: Okay.

24 MR. KLOMP: But that is not without saying that he  
25 doesn't have resources to administer the rights that have been

1 appropriated. And the way that that happens is through the  
2 comprehensive statutory scheme. There is the designation of a  
3 basin as a basin in need of further administration. There is  
4 the designation of a basin as a critical management area.

5 And so there are other tools, and I'm going to go  
6 into those.

7 THE COURT: Sure.

8 MR. KLUMP: And we can even skip forward if --

9 THE COURT: No, that's okay. I won't throw you off  
10 your argument. That's just a question that I had, but if  
11 you're going to be addressing it, just (indiscernible).

12 MR. KLUMP: Yeah, no. Specifically that question,  
13 because when you overrule prior rulings, that implicates severe  
14 due process violations.

15 Now, we're not saying that he can't administer the  
16 water rights from those hydrographic units. Even as  
17 Ruling 5712 states inside the ruling, as stated inside 7.

18 Moving to Slide 8, Ruling 5712 also recognized in  
19 line 1 a strong hydrologic connection between Kane Springs  
20 Valley and Coyote Springs. So again, not new information.  
21 Order 1309 did not expressly for the first time come out with  
22 that information. It just joined those basins for joint  
23 administration.

24 This section of the ruling also talks about the  
25 change in elevation. You know, the State Engineer found that

1 there was a distinct change in elevation of the water table  
2 between Kane Springs and Coyote Springs, which is significant  
3 in the development of the six criteria. It's significant to  
4 our arguments about substantial evidence. And then again, the  
5 bottom of slide 8 finds there is not substantial evidence that  
6 the appropriation of a limited quantity of water in Kane  
7 Springs is going to disturb the --

8 THE COURT: Impact on the --

9 MR. KLUMP: Impact on the Muddy Springs, and it  
10 doesn't warrant the inclusion of Kane Springs in Order 1169,  
11 critically.

12 THE COURT: So I have a question. Because I know  
13 that there was -- that you had made some points, and maybe I  
14 don't -- I didn't understand the significance of the points you  
15 were trying to make as far as the Muddy Valley Irrigation  
16 Company not being listed as an appropriate or of the Muddy  
17 River Decree with tributary sources. Can you tell me how that  
18 makes an impact or, you know, that I know that there was the  
19 headwaters and tributary sources. I'm not sure I understand  
20 the true distinction and how that makes a difference for you.

21 MR. KLUMP: So I wish I could answer your question  
22 really well.

23 THE COURT: Okay.

24 MR. KLUMP: But Ms. Peterson.

25 THE COURT: Okay. Will answer that question for me?

1 MR. KLOMP: She could answer right now, yeah.

2 MS. PETERSON: Do you want me to do it now?

3 THE COURT: Oh, sure.

4 MR. KLOMP: And thank you, Your Honor. Karen  
5 Peterson representing Lincoln and Vidler for purposes of the  
6 oral argument.

7 So the Muddy River Decree sets fourth, if you read  
8 the decree, and I think Mr. Dotson asked you to read the  
9 decree.

10 THE COURT: Right.

11 MS. PETERSON: It sets forth -- here's a table, and  
12 we cited it in the record on appeal with it attached to our  
13 brief, and it delineates -- the Court delineated in the decree  
14 all the tributaries that it considered to be the tributaries  
15 and headwaters to the Muddy River.

16 THE COURT: Right.

17 MS. PETERSON: And the specific claim is that then  
18 there weren't that many. It notes right in that chart what the  
19 tributary was or what the I think -- I don't know. I don't  
20 have it right in front of me, but it notes what the --

21 THE COURT: It has like tributaries are Bloedel  
22 Springs, Big Springs, Jones Spring, High Springs, Rock Cabin  
23 Springs, Cox Springs, and Baldwin Spring.

24 MS. PETERSON: Right.

25 THE COURT: But then there was a distinction between

1 what -- who was listed as an appropriator of the tributary as  
2 opposed to -- is it headwaters? Maybe I'm making mixing things  
3 up. I don't know.

4 MS. PETERSON: No. The decree notes specifically in  
5 the decree what waters the claimant is getting. They can be  
6 waters from the Muddy River directly. They can be waters from  
7 a tributary source to the Muddy River, which are those named  
8 sources.

9 THE COURT: Okay.

10 MS. PETERSON: There's no appropriations from  
11 anything that's described as a headwater in the decree.

12 THE COURT: And explain to me what the difference is  
13 between what a headwater is and a tributary.

14 MS. PETERSON: Oh, boy, how to begin. I'm not the  
15 hydrologist. So the tributary, I would say, and I can ask  
16 someone to clean this -- I can clean it up if I need to when I  
17 come back.

18 THE COURT: Sure.

19 MS. PETERSON: But the tributary, I would say, is  
20 that it's a named source that may come down further in the  
21 system that that contributes. The headwaters, I would say, and  
22 I don't know all the gauges. I can't remember all of the  
23 gauges off the top of my head, but the headwaters would be up  
24 towards I believe where the springs are and where the springs  
25 start. And those would be the headwaters to the Springs.

1 THE COURT: Okay. So then --

2 MS. PETERSON: And then you've got the Muddy River  
3 coming down, and it goes all the way down to Lake Mead.

4 THE COURT: So then headwaters in relation to  
5 tributaries would be a larger water source than the  
6 tributaries, or is that completely --

7 MS. PETERSON: It just depends on what decree you're  
8 talking about and what the, you know, what the whole system is.

9 THE COURT: Right. But what is the significance then  
10 that Muddy River Irrigation Company doesn't have tributary  
11 rights.

12 MS. PETERSON: Right. So when you -- when the Court  
13 was -- and it came from the State Engineer first. And then  
14 went to the Court for confirmation, but everybody has to prove  
15 up their claim to the water rights. And so they claim a  
16 source. Like let's say it was a tributary to Baldwin Springs,  
17 and that's probably not the right name, but let's say it's one  
18 of those, or it's the Muddy River. And they show that they  
19 beneficially use that water, and there's a quantity of water  
20 set, let's say 1 CFS, and it at that time is tied to land,  
21 irrigated land, that the Court found that that 1 CFS was, you  
22 know, irrigated that particular land.

23 And so one of the basis of Nevada law, even  
24 prestatutory law is that you're only entitled to the water that  
25 you beneficially use. And so when the Court set the decree,



1 the Court recognized what the beneficial use of the waters was  
2 and the quantity and where it was used. And then it went  
3 through, and it had this chart at the end that summarized what  
4 everybody proved up. And so the rights that the Muddy Valley  
5 Irrigation Company has are not -- they're from the Muddy River.  
6 They're not associated with any of those tributaries, if you  
7 look right at where it says the source of their rights are. So  
8 that was the point of that, that it says right in the decree.

9 So if Claimant Number 1 was taking from Baldwin  
10 Springs, it'll say the source is Baldwin Springs right in that  
11 chart.

12 THE COURT: Okay.

13 MS. PETERSON: And it's part of the Muddy River  
14 Decree.

15 For Muddy Valley Irrigation Company, it just says --  
16 it just says Muddy River. It doesn't say any tributaries.

17 THE COURT: And then how does that affect your  
18 position or claims in this litigation? Because it seems like  
19 you made a big point of that, but I wasn't sure what the  
20 significance of that was as it related to your position.

21 MS. PETERSON: Well, because there is a big concern  
22 here, and you heard it yesterday, and that we were going to  
23 respond to it in our answering portion of the argument, but  
24 there is a concern that the Muddy Valley Irrigation Company is  
25 not just claiming the, you know, 36 CFS or whatever the number

1 was that was delineated in the decree, the specific amount set  
2 in the decree, but they're also contending that they're  
3 entitled to all the tributaries and all the headwaters.

4 THE COURT: Okay.

5 MS. PETERSON: And so if I understand their position  
6 correctly, they're contending that Kane Springs, which is  
7 22 miles away, groundwater --

8 THE COURT: Is affecting their -- I see.

9 MS. PETERSON: -- is headwaters or tributary.

10 THE COURT: I got it. Okay. Now, I understand.  
11 Thank you.

12 MR. KLUMP: Now, I understand better too. Thank  
13 heavens for smarter people than me.

14 The other thing that Ruling 5712 did is it overruled  
15 the protestant in National Park Service who requested that this  
16 application for appropriation of water be held in abeyance  
17 along with the 102 other applications in the six remaining  
18 Lower White River Flow System Basins. And so the State  
19 Engineer found that he did not need to hold this one in  
20 abeyance but proceeded even though 1169 had already been  
21 issued, and they were aware of what they were, you know, the  
22 pump testing, and then the results of that. This proceeded  
23 despite those proceedings.

24 So fast forward. Order 1303 comes out, and it  
25 recognizes again those same six basins. But what it also

1 recognizes is that each of these basins has been designated  
2 pursuant to Statute 534.030. And I'll go into that a little  
3 bit in a little bit, but that is a specific designation that  
4 allows the State Engineer to recognize that that basin needs  
5 additional administration, right. So those six basins have  
6 been designated pursuant to that statutory provision. Nowhere  
7 in Order 1403 again is Vidler -- Vidler or Lincoln mentioned.  
8 Nowhere does it recognize Kane Springs might be considered as a  
9 part of the Lower White River Flow System.

10           Again, this just talks about Order 1303, and  
11 mentioning the groundwater pumpage.

12           THE COURT: Which slide?

13           MR. KLUMP: This is Slide 10.

14           The last one mentioning the designation was Slide 9.

15           And now, moving to Slide 11.

16           So Order 1303, what it did was it took those six  
17 distinct hydrographic basins, and it said we're going to  
18 consider them for joint administration for purposes of  
19 administration of water rights. Again, no mention of Kane  
20 Springs. No mention of Ruling 5712 or Lincoln, Vidler's water  
21 rights.

22           And then for the first time in Order 13 --

23           So somewhere in there, Lincoln and Vidler started to  
24 participate in the 1303 proceedings. There was never any  
25 notice from the State Engineer's office to us that I'm aware

1 of. We just recognized, hey, look, wow, there's -- something  
2 is happening here. Maybe we should give our information as  
3 well.

4 During the 1169 pump test, no pumping took place in  
5 Kane Springs. I think there was maybe one monitoring well,  
6 right across the border from Coyote Springs Valley, which  
7 Ms. Peterson will go into.

8 THE COURT: Within Kane Springs?

9 MR. KLOMP: One in Kane Springs.

10 Oh, the other thing that this Slide 13 -- or 12  
11 demonstrates is that the State Engineer now is relying on the  
12 expert from the National Park Service, a witness or an entity  
13 that protested initially Ruling 5712 but was overruled.

14 And then in 1309, he finds that Kane Springs is  
15 hydrologically connected and includes them within the Lower  
16 White River Flow System. That's in Slide 13.

17 So again, there's a limit on the State Engineer's  
18 authority, and this was also a quote from Mineral County:

19 The legislature has established a  
20 comprehensive statutory scheme regulating the  
21 procedures for acquiring, changing and losing  
22 water rights in Nevada, and it's our contention  
23 that this comprehensive statutory scheme was not  
24 followed in the issuance of ruling -- or of  
25 Order 1309.

1 THE COURT: And that's on Slide 14?

2 MR. KLUMP: This is Slide 14. Also states that,

3 The State Engineer's powers thereunder are  
4 limited to only those which the legislature  
5 expressly or implicitly delegates. And noting  
6 that the State Engineer cannot act beyond his or  
7 her statutory authority.

8 And again, this is authority that the State Engineer  
9 recognized he did not have during the 2019 legislative session,  
10 as reflected on Slide 15. The State Engineer stated in  
11 hearings that, Existing statute does not provide the framework  
12 necessary to effectively implement the legislature's policy  
13 direction. That's speaking about the conjunctive management  
14 policy.

15 And then the director of the Department of  
16 Conservation of Natural Resources said, We have been managing  
17 groundwater and surface water separately for over a hundred  
18 years. The proposed bill, Assembly Bill 51, is designed to get  
19 some direction from the legislature as to how best to manage  
20 conflict among existing rights holders.

21 So with that backdrop, I just wanted to talk a little  
22 bit about the basic designations and recall that six of those  
23 basins in the Lower White River Flow System were designated,  
24 and this is the section that talks about the designation. And  
25 again, it's any particular basin or portion thereof.

1 This is Slide 16, referencing NRS 534.030.

2 There are two different ways that the basin can be  
3 designated. The first is by petition of 40 percent of  
4 appropriators of record in the office of the State Engineer, in  
5 any particular basin or portion therein.

6 And again, this is speaking specifically to the  
7 distinct hydrographic units, the 232 numbered basins. In slide  
8 17, this is the statute where the State Engineer can designate  
9 a basin without a petition from the water rights holders.

10 So in the absence of a petition, there has to be a  
11 hearing, and it has to be held in the county where the basin  
12 lies. There's no disputing the fact that Kane Springs has  
13 never been designated pursuant to either of these portions of  
14 the statute.

15 This also, and I have a slide on this, but this is  
16 the context under which the 534.120 has to be read when it's  
17 talking about an area that's been designated under this  
18 chapter. And it's referring back to these two designations by  
19 basin.

20 So what does designation of a basin do? Well, it  
21 allows the State Engineer additional tools to manage those  
22 administrative units. Under 534.035, he can establish a  
23 groundwater board made up of various individuals in that basin.  
24 Under 534.050, a new permit is required before new wells can be  
25 drilled. Other -- you can drill wells in some basins without a

1 permit if it's like for domestic purposes.

2 THE COURT: Okay. And that's slide --

3 MR. KLUMP: This is Slide 18.

4 And under 534.1108, he can restrict dwelling -- or  
5 drilling of wells in the designated basin or portion thereof.

6 Again, it's referring to those hydrographic basins.

7 And then Slide 19 is that reference that has been  
8 discussed several times about within an area -- this is  
9 534.120, within an area that has been designated by the State  
10 Engineer as provided for in this chapter. So that's talking  
11 about a designated basin or portion thereof. Where the  
12 judgment of the State Engineer the groundwater basin is being  
13 depleted, the State Engineer in his or her administrative  
14 capacity may make such rules and regulations or orders as are  
15 deemed essential for the welfare.

16 So these are the tools that this legislature has  
17 deemed to give to the State Engineer. Anything beyond those is  
18 *ultra vires*.

19 Moving to Slide 20, there are additional tools that  
20 the State Engineer has, and that's including he can designate a  
21 critical management area. That's under 534.110 sub 7, and  
22 that's -- he can designate that where the groundwater  
23 withdrawals consistently exceed the perennial yield of the  
24 basin.

25 Again, once designated as a critical management area,

1 there are additional tools that are available to the State  
2 Engineer. Some of those are included in 534.037, as reflected  
3 on Slide 21, but that process involves the groundwater users in  
4 that basin. So they can get together and say, hey, we've got a  
5 big problem here. Let's propose a solution to the State  
6 Engineer, and that's what 534.037 talks about. The petition  
7 must be signed by a majority of the holders of permits or  
8 certificates to appropriate water in the basin that are on file  
9 in the office of the State Engineer.

10 And then finally, the harshest of remedies in  
11 Slide 22 reflects that curtailment could ensue once a basin has  
12 been designated as a critical management area, and that's under  
13 534.110, sub 7.

14 But those are not all the duties of a State Engineer,  
15 as enacted by the legislature to administer on a basin by basin  
16 basis. In 2017, as reflected in Slide 23, the legislature  
17 assigned or delegated to the State Engineer the duty to create  
18 a water budget and an inventory.

19 Recall -- I believe this is the same year that the  
20 conjunctive management statute was adopted. And then in  
21 2019 --

22 Boy, now we're going to test my PowerPoint skills. I  
23 might have to get Robert Dotson up here to help me.

24 THE COURT: And what slide is this?

25 MR. KLUMP: Okay. This is 24. And in 2019, the



1 legislature again adopted this statute, that the State Engineer  
2 was to reserve a certain amount of groundwater in each basin up  
3 to 10 percent of the unallocated water.

4           So there's one other element of Ruling 5712 that I  
5 failed to mention. That was the one where they appropriated  
6 water to Lincoln and Vidler.

7           When they made that application, the place of  
8 diversion was Kane Springs, right. So they were going to take  
9 the water out of Kane Springs.

10           THE COURT: Right.

11           MR. KLUMP: But they were going to use that water in  
12 a different basin, and that was --

13           THE COURT: Is this the -- I know that there's a  
14 process for transferring basin between -- I mean transferring  
15 water between basins; right?

16           MR. KLUMP: Yes. That is an interbasin transfer of  
17 groundwater.

18           But this -- the reason I raise this is because it  
19 again reflects the intent of the legislature, whether or not it  
20 was based on the hydrographic units, to require that when  
21 you're using water at a distance from the source, you have to  
22 get approval from the State Engineer.

23           And so as part of Ruling 5712, Lincoln and Vidler  
24 went through that process of an interbasin transfer, and that  
25 was approved. So we could draw the water out of Kane Springs

1 using Coyote Springs. But again, just to show that those were  
2 considered distinct basins under the statutory scheme, and that  
3 was Slide 25.

4 26 just shows what additional criteria the State  
5 Engineer has to consider when ruling on an interbasin transfer  
6 of water. So I just wanted to put that up there to show that  
7 it's not just the same criteria that are used to appropriate  
8 water. There are additional criteria that have to be  
9 determined. Those were determined in Ruling 5712 and the  
10 interbasin transfer was granted.

11 So where the legislature leaves a statutory scheme in  
12 place, the supreme -- the Nevada Supreme Court has stated that  
13 the Nevada Legislature has demonstrated through its silence  
14 that Nevada's water laws statute should remain as they have  
15 been for over 45 years. This was in 1996. So now add an  
16 additional -- I'm no good at math, but 26 years, and that's  
17 Slide 27.

18 So in addition to violating this comprehensive  
19 statutory scheme and going beyond what authority the State  
20 Engineer was granted by the legislature, Lincoln and Vidler  
21 contend that Order 1309 violated their due process rights.

22 Slide 28 is from the *Eureka County versus State*  
23 *Engineer*:

24 Due process clause forbids an agency to use  
25 evidence in a way that forecloses an opportunity

1 to offer a contrary presentation.

2 And in 29,

3 A party is entitled, of course, to know the  
4 issues on which a decision will turn and to be  
5 apprised of the factual material on which the  
6 agency relies for a decision so that he may  
7 rebut it.

8 THE COURT: And which slide is this?

9 MR. KLOMP: This is 29.

10 So in the process leading up to the hearing under  
11 Order 1303, Lincoln and Vidler were never given notice of the  
12 fact that Kane Springs was being considered for inclusion in  
13 the Lower White River Flow System. In fact, we had contrary  
14 rulings from the State Engineer that said we're not going to  
15 put it in the Lower White River Flow System. Not only that,  
16 but the six criteria -- it's been discussed before, and I'll  
17 just mention it briefly, the six criteria, as reflected in  
18 Slides 30 and 31, and I'm not going to read those criteria,  
19 those were developed and released only after the hearing and in  
20 Order 1309.

21 It's our contention that the development of those,  
22 not only was an *ultra vires* act beyond the scope of the  
23 comprehensive statutory scheme, but it violated due process by  
24 not allowing us to know the issues on which a decision would  
25 turn or to be apprised of the factual material on which the

1 agency would base its decision.

2           So just to summarize, the issues that we claimed  
3 violated the due process rights of Lincoln and Vidler, Slide 32  
4 summarizes though Kane Springs is not mentioned in Order 1169  
5 or in order 1303, Ruling 5712 granted a thousand acre-feet  
6 despite protests from the National Park Service, U.S. Fish and  
7 Wildlife Service to include Kane Springs specifically in  
8 Order 1169. And I duplicate that there because I don't have an  
9 editor.

10           The fourth bullet point is Lincoln and Vidler  
11 specifically excluded from the pump test, and no pumping  
12 occurred in Kane Springs.

13           Ruling 5712 is not mentioned in Order 1169 or Order  
14 11 1303. The reason is that is critical is because that is an  
15 adjudication which was appealed on a petition for judicial  
16 review and settled after that petition was filed. So that is  
17 an adjudication of an appropriation of water rights.

18           The State Engineer didn't say, hey, we're going to  
19 reconsider the things that we found in that. We're going to  
20 reconsider whether or not we should jointly administer Kane  
21 Springs with other hydrographic units. We're going to  
22 reconsider whether or not you are the -- we were the only  
23 people that had an appropriation of groundwater in Kane Springs  
24 at that time. And I think that's still true today. That  
25 thousand waters is the only groundwater that can be pumped in

1 Kane Springs, but there was no mention that, hey, we're going  
2 to reconsider your priority, and we're going to lump you in  
3 with all these other hydrographic basins. And those were  
4 specific findings that Ruling 5712 made that were never put on  
5 notice that they were in jeopardy.

6 And as discussed, nor could the State Engineer  
7 overrule those things. He can administer the appropriation.

8 And I just put this kind of as a bookend to the due  
9 process argument. The legislature in Slide 33, has established  
10 a comprehensive statutory scheme regulating the procedures for  
11 acquiring, changing and losing water rights. And it's our  
12 contention that Order 1309 significantly and fundamentally  
13 changed the nature of the water rights that were appropriated  
14 in Ruling 5712, which raises the next quote there. The  
15 statutory water scheme in Nevada expressly prohibits  
16 reallocation -- reallocating adjudicated water rights that have  
17 not been abandoned, forfeited or otherwise lost pursuant to an  
18 express statutory provision.

19 And I don't think it's disputed that there was no  
20 express statutory provision that provided for the loss of those  
21 rights or the changing, the altering of those rights in ruling  
22 5712.

23 THE COURT: Wait. Oh, changing the rights from 5712  
24 in 1309?

25 MR. KLUMP: Yes. Correct.

1           We also contend that ruling or Order 1309 violated  
2 separation of powers doctrine by allowing the State Engineer to  
3 legislate, specifically with development of the six criteria,  
4 but also departing from the statutory scheme, not designating  
5 basins, not designating critical management areas, not  
6 following prior rulings.

7           And Slide 34 just summarizes some of the case law  
8 from *Sheriff v. Luqman* that talks about the separation of  
9 powers. And I think the first quote is important because it  
10 talks about,

11                           Although the legislature may not delegate  
12                           its power to legislate, it may delegate the  
13                           power to determine the facts or the state upon  
14                           things -- state of things upon which the law  
15                           makes its own operations depend.

16           And that's not what happened here. This was not  
17 merely a fact-finding mission although it's been characterized  
18 that way.

19           And then the second quote, this legislature has to  
20 establish standards for the State Engineer. And so while two  
21 branches of the government are represented here, the judiciary  
22 and the executive, we can point the finger at the one that's  
23 absent, right. We can say that the legislature failed in its  
24 job to properly direct the State Engineer.

25           So you asked, and I just wanted to address quickly --

1 this is Slide 35. And again it's a quotation from the  
2 legislative history for Assembly Bill 51 in 2019. You asked  
3 whether or not you can take judicial notice of this, and it's  
4 our contention that, as a canon of statutory construction,  
5 legislative history aids the Court in interpretation of the  
6 statutes. Not only that, but I don't even think -- these are  
7 comments by the State Engineer regarding his authority, and  
8 there's been no contention by the State Engineer that these  
9 should not be considered by the Court.

10 THE COURT: And this is all part of your argument  
11 regarding the legal basis for the authority?

12 MR. KLOMP: Correct.

13 Finally, I wanted to raise one quote from one of the  
14 assembly people that considered Assembly Bill 51, recognizing  
15 that it's a separation of powers issue, and she said,

16 Assembly Bill 51 is essentially giving all  
17 of the authority to the State Engineer, someone  
18 who is not an elected official. This does not  
19 have a lot of input from the elected body,

20 Which we contend it's resulted in a fundamental  
21 change of our water rights, our property rights, and  
22 uncertainty. Going back to the first slide that talked about  
23 uncertainty is critical in administering water rights. That  
24 uncertainty has been removed.

25 With that, I'll yield time to Ms. Peterson.

1 THE COURT: Okay. Thank you.

2 ARGUMENT FOR VIDLER WATER COMPANY

3 MS. PETERSON: So, Your Honor, Karen Peterson from  
4 Allison MacKenzie law firm, and Mr. Hirth (phonetic) is going  
5 to switch over to our PowerPoint, but I did have a couple --

6 THE COURT: Did you want to take a couple minute  
7 break to do that or --

8 MS. PETERSON: No.

9 THE COURT: No. Okay.

10 MS. PETERSON: We'll try to -- I had a couple of  
11 comments. I just wanted to follow up on a couple of questions  
12 you had yesterday to some of the other attorneys.

13 THE COURT: Sure.

14 MS. PETERSON: And a question that you actually had  
15 today, but you asked Mr. Robison yesterday what his response  
16 was to the State Engineer's argument and others arguments that  
17 our -- we petitioners were reading the statutes too narrowly.  
18 And that also ties into I think one of the questions you had  
19 today just to Mr. Klomp about the difference between regulating  
20 by these 234 basins and, you know, geographic basins versus the  
21 larger basin. Mr. Robison said that the law dictates that it's  
22 the 232 or 234 hydrographic basins.

23 But I also wanted to say it's the way the State  
24 Engineer has managed and regulates those basins that also  
25 dictates that interpretation of the statute because he has set



1 priorities in the basins, the groundwater basins. Based upon  
2 those units, he's also set perennial yields, meaning the amount  
3 of groundwater that can be safely pumped from the basin based  
4 upon those hydrographic units. And we all as water  
5 practitioners have relied on those determinations when we make  
6 decisions with regard to water rights.

7           For example, Lincoln and Vidler applied for water  
8 rights in Kane Springs. There were no senior groundwater  
9 rights in the basin at that time, and Mr. Foletta was talking  
10 about the relative -- where you are in the relative priority.  
11 So we know we want to apply for water rights. We know under  
12 the statute we have to show there's no -- there's water  
13 available to appropriate in that basin. It's not going to  
14 conflict with any existing rights, and it's not going to be  
15 detrimental to the public interest.

16           And so we look at the basins. We see how many water  
17 rights are already appropriated in the basin. We see how --  
18 what the perennial yield is in the basin. And so let's say if  
19 the perennial yield of the basin is 100 acre-feet, and we want  
20 10 acre-feet of that we know that there's -- if then there's  
21 nobody else senior to us, we know that there's 100 acre-feet in  
22 that basin that can be appropriated, and so we can comply with  
23 the statute and hopefully the State Engineer would grant, it  
24 would mean a permit to appropriate.

25           If we are in a basin with a perennial yield of a

1 hundred acre-feet and there's already 95 acre-feet  
2 appropriated, then the State Engineer is not going to grant our  
3 application for 10 acre-feet to appropriate out of that basin  
4 because he'll find it's not in the public interest because it  
5 exceeds the perennial yield.

6           So there's decisions that are made to apply for water  
7 based on these discrete hydrographic units, and the seniority  
8 that's already in the basin, the water rights that have already  
9 been appropriated in the basin. There's decisions made on if  
10 you're going to change your water rights. Or let's say maybe  
11 I'm going to drill someplace in a basin. If you're going to  
12 drill someplace in a basin, and you know it's close to a senior  
13 water right, you may have water rights, but you can't impact  
14 that other senior water right by drilling your well close that  
15 senior water right.

16           There's decisions made on loans. People getting  
17 loans. Water rights are secured based upon opinions we lawyers  
18 make, based upon the seniority of the water rights in the  
19 basin, and are they in good standing, and that's the chaos that  
20 the Supreme Court was talking about in Mineral County versus  
21 Lyon County. By disrupting all of that, by changing  
22 priorities, because, you know, property rights, we have vested  
23 property rights with our applications. They can only be taken  
24 away under the statutory criteria that the legislature has set  
25 forth that the State Engineer has to curtail our water rights

1 or to not allow us to pump our water rights.

2 Businesses make decisions. The economy is based on  
3 this priority and knowing what your priority is, and that's the  
4 chaos again that the Supreme Court wants to avoid, as I said,  
5 in Mineral County versus Lyon County by upsetting that  
6 reprioritization.

7 And frankly, if there had been a superbasin back in  
8 2005 when Lincoln and Vidler applied for their water rights, we  
9 wouldn't have been granted our water rights in Kane Springs  
10 because if Kane Springs is part of the superbasin at that time,  
11 it would have been over appropriated, and we would never have  
12 gotten our rights.

13 So it just shows how this -- it just shows the  
14 disruption, and then I'm trying to give it to you from a  
15 practical standpoint.

16 THE COURT: Sure. I mean, so what you're -- I mean,  
17 you're making a point basically that it's not just the rights  
18 that are impacted that you already have, but in even making the  
19 initial decision of where am I going to place my business  
20 that's going to need this much water. You're looking at the  
21 existing framework of the basins, you know, the perennial yield  
22 and who actually has those rights within it to make that  
23 business decision and the investment within that basin?

24 MS. PETERSON: Right. And if the law is interpreted  
25 that the State Engineer has this power under the, you know,

1 under the existing statutes, then anywhere in the State of  
2 Nevada, the State Engineer can change those seniorities, those  
3 priorities in the basin and make a superbasin and reallocate  
4 those rights and again upset everything. And we want certainty  
5 in our property rights. We want certainty in our business  
6 decisions. We want certainty in our economy, as, again, as the  
7 Supreme Court said. And we don't want to always be looking  
8 over our shoulder: Are we going to be lumped into some  
9 superbasin down the future that disrupts all these decisions  
10 that have been made. So that's my practical explanation of how  
11 it impacts us.

12 THE COURT: Okay. Thank you. Sure.

13 (Pause in the proceedings.)

14 MS. PETERSON: Slide 1. Well, first of all I'm going  
15 to talk about substantial evidence with regard to the State  
16 Engineer's inclusion of Kane Springs. If I have time, I'm also  
17 going to talk about the 8000-acre foot pumping cap, how Lincoln  
18 and Vidler are compliant with the Endangered Species Act,  
19 observations about the Muddy River Decree and the State  
20 Engineer's management determinations are discriminatory. We've  
21 addressed all of those in our opening brief, and all of those  
22 are issues in our petition. So if I have time, I'll try to get  
23 to it.

24 But going to Slide 1, standard of judicial review,  
25 you've heard a lot about substantial evidence and what the

1 standard is, and you also know that you cannot -- and I'm not  
2 going to ask you to -- reweigh the evidence, rejudge the  
3 credibility of the witnesses, substitute your judgment for that  
4 of the State Engineer, but you do have the obligation under  
5 judicial review to look at the evidence that the State Engineer  
6 says he relied on to make his decision and determine if that's  
7 the evidence of the quality and the quantity that a reasonable  
8 mind might accept as adequate to support a conclusion and also  
9 that there's a rational connection between the facts that the  
10 State Engineer cites and the conclusion that he made.

11           Going to Slide 2. Your Honor, on the left-hand side  
12 is a map from one of the SNWA reports, and I believe it's  
13 probably from one of the 1169 reports, and the cites are on the  
14 slides to the record on appeal, but that shows you all the  
15 wells in the Lower White River Flow System. Kane is not  
16 included in there at the time, but it just gives you an idea of  
17 all the wells in the lower --

18           THE COURT: And this is slide -- which is Slide 2?

19           MS. PETERSON: This is Slide 2, yes. And then if you  
20 go to the depiction, the picture on the right, that does  
21 include Kane, and that gives you an idea of where the Kane  
22 Springs wells are.

23           Do you see that, it's right at the border there  
24 between Kane Springs Valley and Coyote Springs Valley, and it's  
25 KPW 1 that's the production well, and KP -- or KMW 1, and

1 that's the monitoring well. And those are, just to orient you  
2 a little bit, Kane Springs is 22 miles from the Muddy River  
3 Springs area, and that's where, you know, where all the Springs  
4 are located. And I think we said this in our brief too, just  
5 orient you from this courtroom, if we wanted to go 22 miles,  
6 we're talking about Boulder City High School.

7 THE COURT: So let me just ask quickly. Is that the  
8 only well that's within Kane Springs?

9 MS. PETERSON: Those two.

10 THE COURT: Those two are the only ones?

11 MS. PETERSON: Yes. Yes.

12 And then just to give you a little bit more  
13 information about our wells, the KMW, the monitoring well,  
14 KMW-1, we'll talk about that a lot, that -- the duct to water  
15 in that well is 990 feet, and the depth of the well is  
16 1800 feet. So there are 810 -- there's 810 feet of water in  
17 that well between the depth to water and the bottom of the  
18 well.

19 And then the well that KMW is compared to a lot is  
20 CSVM-4. And CSVM-4, you can see, if you look at the graph on  
21 the right, the picture on the right, you can see CSVM-4 there.  
22 It's in the northern Coyote Springs Valley, and there's  
23 2.5 miles between --

24 THE COURT: KMW one --

25 MR. TAGGART: KMW-1 and CSVM-4.

1           And then the other thing I wanted you to look at too  
2 is just keep it in your mind that Lower Meadow Valley Wash --  
3 do you see that off to the right there? It's basin --

4           THE COURT: Yes. 205.

5           MS. PETERSON: 205. We'll bring that up later on.  
6 Mr. Foletta brought that up.

7           THE COURT: Oh, okay.

8           MS. PETERSON: But and then so the depth to water in  
9 CSVN-4 is 970 feet. The depth of the well is 1580 feet. So  
10 there's 610 feet of water in that well between the depth to  
11 water in the bottom of that well.

12          THE COURT: So just so I make sure that I'm  
13 understanding this correctly, from the ground to the water --

14          MS. PETERSON: Level.

15          THE COURT: -- level, there's the air, right, and  
16 then the depth of the water to the bottom of the well is what  
17 you're talking about?

18          MS. PETERSON: Right. So for KMW, the depth of the  
19 water is 990 feet, over nine stories.

20          THE COURT: Okay.

21          MS. PETERSON: The well depth is 1800 feet. So that  
22 means there's 810 feet of water in the well, okay, and again,  
23 over eight stories.

24          THE COURT: Okay. Here's a very strange question.  
25 How big are these wells around?

1 MS. PETERSON: The production well KPW-1 is 18 inches  
2 in diameter, and KMW is 4 inches in diameter.

3 THE COURT: Okay. So all of the wells that we are  
4 talking about are not necessarily uniform in diameter?

5 MS. PETERSON: Correct. Correct.

6 And then going on to Slide 3, this is found on  
7 page -- well, the record on appeal, it's page 7.

8 THE COURT: And what slide is this?

9 MS. PETERSON: It's Slide 3. And that's where the  
10 State Engineer described, and this is in Order 1309, where the  
11 State Engineer describes the results of the aquifer test, and  
12 this is the first time in the second line there where he says  
13 that the result extended from Southern Kane Springs Valley --  
14 so you know where that is, and then he goes through, you know,  
15 the other areas in the Lower White River Flow System.

16 And then that last sentence there, he indicates that  
17 the water level decline was estimated, estimated, estimated to  
18 be 1 to 1.6 feet throughout this area.

19 And then he indicates with minor drawdowns of  
20 0.5-foot or less in the northern portion of Coyote Spring  
21 Valley, north of the Kane Springs Wash fault zone.

22 And so he's talking about minor drawdowns in northern  
23 Coyote Springs Valley, which you saw, and I brought my ruler  
24 today, and I'm showing you this. And it's estimates, in  
25 northern Coyote Springs Valley, which is not quite 22 miles



1 from the Springs, we're talking 6 inches or less of drawdown in  
2 the northern portion of Coyote Springs Valley. He doesn't talk  
3 at all in that determination of what the drawdown was in  
4 southern Kane Springs Valley at all. He's only talking about  
5 northern Coyote Springs Valley, not Kane Springs at all.

6 THE COURT: So and just so I understand -- I  
7 understand what that means, that means that there was 6 inches  
8 less in the well of that Coyote Springs well?

9 MS. PETERSON: He's saying there was -- there was,  
10 yeah, there was drawdown -- estimated drawdown of 6 inches or  
11 less in northern Coyote Springs Basin north of the Kane Springs  
12 wash fault, and I'll show you where the fault is.

13 THE COURT: Okay.

14 MS. PETERSON: But that's what he's saying. Again,  
15 he doesn't say anything about Kane Springs.

16 And if you want to put the quantities of water that  
17 are in those wells, the Kane Springs well and the Coyote  
18 Springs well in perspective, if you take that 810 feet of water  
19 that I said was in -- sorry, Kane Springs monitoring well, that  
20 equates to, if you want to convert that to inches, that's  
21 9,720 inches of water, and he's talking about 6-inch or less  
22 minor drawdown, if you can even equate it to Kane Springs to  
23 that level of water.

24 THE COURT: Okay. So here's a stupid question.

25 Since the width of the wells are not uniform, like

1 6 inches of drawdown in one well may not be the same water  
2 volume as 6 inches of drawdown in another well; right?

3 MS. PETERSON: Right. Well, it's the elevation.

4 THE COURT: Or is it --

5 MS. PETERSON: It's the elevation.

6 THE COURT: Okay. So when you're saying 6 inches of  
7 drawdown, is it the well or the basin, or is it measured by the  
8 well itself.

9 MS. PETERSON: It's measured in the well.

10 THE COURT: Okay. Okay.

11 MS. PETERSON: And then turning to Slide 4, and  
12 again, that's the State Engineer's -- that's his  
13 determination --

14 THE COURT: No, I understand --

15 MS. PETERSON: -- that he made --

16 THE COURT: -- I'm just trying to wrap my head  
17 around, I mean, since I have to look at this to see if this is  
18 substantial evidence or not, if, I mean, if there is a  
19 consideration regarding the differences in the volume or if  
20 that even matters or any of that kind of stuff.

21 MS. PETERSON: It's the water elevation.

22 THE COURT: Okay. It's just the elevation itself  
23 because if they're -- if they are hydrologically connected,  
24 then they would go down at an even rate. Is that the -- is  
25 that the -- if they are hydrologically connected, if you're

1 basing the assumption that there's a hydrological connection,  
2 then the actual basin itself would go down. Is that -- kind  
3 of -- kind of --

4 MS. PETERSON: I don't think you can say that.

5 THE COURT: I mean, I'm probably oversimplifying.

6 MS. PETERSON: I don't think you can get there, yeah.

7 THE COURT: Okay.

8 MS. PETERSON: What they show is that at that well,  
9 this is what we estimate the minor drawdown to be, 6 inches.

10 THE COURT: I see.

11 MS. PETERSON: Just at this well.

12 THE COURT: Okay.

13 MS. PETERSON: Just because the geology and the  
14 hydrology is --

15 THE COURT: I know it's way more complicated than  
16 I'll ever understand --

17 MS. PETERSON: So different.

18 THE COURT: -- but I'm just trying to get some  
19 basics.

20 MS. PETERSON: Right.

21 THE COURT: All right.

22 MS. PETERSON: And then turning to Slide 4, again,  
23 this is -- and you saw this with Mr. Klomp. The first quote is  
24 from State Engineer's Ruling 5710, and it talks about that  
25 difference in elevation between the Kane Springs wells and the

1 Lower White River Flow System wells that indicates the  
2 probability of a low permeability structure or change in  
3 lithology.

4 And then the second, again, the State Engineer ruling  
5 in 1309, page 52, record on appeal 53, again confirmed that he  
6 saw approximately 60 feet difference in water level elevations  
7 in the Kane Springs wells versus Lower White River Systems Flow  
8 wells, and 60 feet is six stories high, Your Honor. So we're  
9 on the fifth floor here. We go up one more floor. That's what  
10 were talking about the difference in elevations in the water  
11 levels are from Kane Springs, Kane Springs Valley, down to  
12 lower -- the southern part of the Lower White River Flow  
13 System, Muddy River Springs --

14 THE COURT: So and just so I understand, you're  
15 talking about the actual elevation of the land itself, no?

16 MS. PETERSON: Water level elevations.

17 THE COURT: Okay.

18 MS. PETERSON: Yeah, in the wells.

19 So the wells in -- the wells in Kane Springs.

20 THE COURT: Right.

21 MS. PETERSON: Has a water level elevation that's six  
22 stories higher than the water level elevations in the area near  
23 the Muddy River Springs.

24 THE COURT: Right. But that may also be related to  
25 the elevation of the land itself too; right?

1 MS. PETERSON: It could. It could.

2 And again, what we're talking about here when they're  
3 talking about this pump test, and they're talking about this  
4 connectivity and, you know, we want you to picture this, what  
5 they're talking about is that, you know, there's a change, up  
6 gradient from pumping six stories, right, lower Muddy River  
7 Springs area, six stories lower than the water elevations in  
8 the Kane Springs well, and they're saying that there's a 6-inch  
9 decline based on, you know, based on the pumping, and it just  
10 doesn't make a lot of hydrologic sense that there could be that  
11 change six stories high from the pumping over 22 miles away.

12 And if you look at what -- if you go to Slide 5, what  
13 SNWA said in their report after the 1169 pumping, they  
14 indicated, and it's right here on the left-hand side, that  
15 there's a lack of pumping response from the Order 1169 pumping  
16 north of the Kane Springs fault and west of MX-5 and CSI wells  
17 near the eastern front. That's their interpretation of the  
18 pump test.

19 And on this slide, which is Slide 5, we've shown, and  
20 again we give you the site to the record where this map is, and  
21 it's been blown up a little bit so that you can see where the  
22 Kane Springs wells are, and they're north on the Kane Springs  
23 wash fault. And the yellow in the graph is the Kane Springs  
24 basin. The wells -- our wells are on the basin boundary.

25 And again, north of the Kane Springs wash fault.

1           Turning now to Slide 6. This is the information that  
2 the State Engineer put in the order with regard to Kane Springs  
3 when he did his analysis of what he saw with regard to Kane  
4 Springs.

5           And so the first sentence in there is the 60-foot  
6 difference in the water elevations. And again he confirms it's  
7 consistent with a zone of low permeability. I just want you to  
8 look at the language here that the State Engineer uses.

9           Then going to the next sentence, he talks about the  
10 hydrographic response pattern, and he acknowledges that the  
11 hydrographic response pattern in Kane Springs is different,  
12 uses the word different, compared to that exhibited in the  
13 wells in the Lower White River Flow System, and then he uses  
14 the words muted, lagged, obscured by climate response or  
15 compromised by low resolution data.

16           And again, he indicates and makes a finding  
17 acknowledging that the hydrographic response pattern -- I'll  
18 show you the hydrograph, is different between Kane Springs  
19 wells, Kane Springs Valley and the rest of the Lower White  
20 River Flow System.

21           And then in the next sentence he acknowledges, the  
22 State Engineer recognizes these differences.

23           Then he does an about-face and goes on to the next  
24 sentence and indicates, however, you know, he's looked at the  
25 evidence from the National Park Service witness. He finds that

1 to be persuasive, and then he uses the word -- well, he's  
2 characterizing that evidence that,

3           While it's attenuated, he concludes the  
4           general hydrographic pattern observed in  
5           southern Kane Springs Valley reflects a response  
6           to Order 1169 pumping consistent with a closed  
7           hydraulic connection.

8           And again it's very curious language that the State  
9 Engineer used, and we brought this up in our brief, and I'm  
10 going on to slide 7 now, but the consistent with the zone of  
11 low permeability -- permeability, and I think this is in our  
12 brief, a definition of it, it means the ability to pass through  
13 generally. So he's saying there the ability of water to pass  
14 through in that first sentence is low.

15           The second sentence, the muted lag obscured by  
16 climate response data, he cites to our closing brief and CSI's  
17 closing brief, and so there he's explaining why the hydrographs  
18 are different between Kane Springs and the Lower White River  
19 Flow System.

20           And then we believe that the State Engineer -- the  
21 last part of that was referring to the 1 foot data error from  
22 CSVM-4, and I'll walk you through that too, is the compromised  
23 by low resolution data because that's what CSI cited in their  
24 closing brief there at pages 5 and 6.

25           And then attenuated, again we put this in our brief,

1 it means reduced in force, effect or value. Is weak. It's  
2 weak.

3 And so turning to the next slide, which is Slide 8,  
4 is a hydrograph. And when the State Engineer is talking in his  
5 ruling about -- or in the order about hydrographic patterns and  
6 responses, he's talking about these hydrographs, and he uses  
7 the word hydrograph in the criteria. So that's why I wanted to  
8 show that to you.

9 And if you look on the left axis, there is the 1 foot  
10 increments for the water level elevations. And then the blue  
11 there is the KMW-1 hydrograph. And the red is the CSVM-4  
12 hydrograph that's on the bottom.

13 And if you look at the text on the left-hand side of  
14 the slide, it came out at the hearing that CSVM-4, which is  
15 that well that's in northern Coyote Springs Basin that's  
16 2.5 miles from KMW, that there's a data error of a 1 foot or so  
17 associated with that, the data from that well, because the -- I  
18 guess it's warm, and the (indiscernible) failed, had a high  
19 rate of failure.

20 And again, that's in one of the SNWA reports.

21 And so the SNWA report tells you that what the data  
22 with regard to CSVM-4, fluctuations of a foot or less should  
23 not be used to infer an absolute response.

24 So again we're talking about how important the CSVM-4  
25 is because CSVM-4 was used by the State Engineer to correlate



1 with Kane Springs, the hydrograph in Kane Springs, and he also  
2 used CSVM-4 to correlate with the hydrographs in the Lower  
3 White River Flow System. And the gray or the -- or the blue,  
4 sorry, in the CSVM-4 red hydrograph on the bottom there,  
5 that -- that blue that's over the red bars in the hydrograph,  
6 that's the 1-foot error. It could be -- the error bar could be  
7 1 foot above, or it could be 1 foot below. They don't say.  
8 They just say there's an error of 1 foot.

9           So any correlation, and again we're talking about  
10 6 inches. Any correlation of a foot or less cannot be inferred  
11 from this data because of the data failure.

12           And then turning to page -- Slide 9. We asked the  
13 SNWA witness at the hearing, and again we've cited this in our  
14 brief, and the citations are there, has anybody that's given  
15 expert opinions on these hydrographs, have they taken this  
16 1-foot error into consideration for CSVM-4, and the SNWA  
17 witness said, no, not that I heard. And then again we asked,  
18 and the drawdowns or the impacts or the effects that everybody  
19 has been talking about this week with regard to CSVM-4 are in  
20 the 1-foot range, aren't they? Yes. So again, unrefuted  
21 evidence on the record that the data from CSVM-4 was  
22 compromised.

23           And then turning to Slide 10, again that's the six  
24 criteria. And we agree with Mr. Foletta, you know, that our  
25 due process rights were violated, and I think Mr. Klomp talked

1 about that also. We had no input into what the criteria were.  
2 But let's just talk about the criteria that the State Engineer  
3 laid out.

4 And so you're probably familiar with the six  
5 criteria, but let's go back to the next slide, Ryan -- or  
6 Mr. Hirth, if you could. Slide 11.

7 Which is the language from the State Engineer's order  
8 discussing the criteria, the six criteria.

9 So the first was -- the first sentence is again the  
10 water level elevations, and that deals with Criteria 1 and  
11 Criteria 4.

12 Criteria 1 is that if the water elevations are --  
13 they have a relatively uniform water elevation level. That's  
14 how I interpret that, that that's consistent with a close  
15 hydraulic connection. And the State Engineer is saying here  
16 that our water elevations fall under Number 4. There is a  
17 relatively steep hydraulic gradient consistent with a poor  
18 hydraulic connection and a potential boundary. So for criteria  
19 1 and 4, we don't satisfy that there's a close hydrologic  
20 connection.

21 Turning to the second sentence -- and again we're  
22 talking about that muted, lagged, obscured data where the State  
23 Engineer recognizes that the hydrographic patterns are  
24 different compared to Kane Springs and the Lower White River  
25 Flow System. He's talking about criteria Number 2 there, and

1 he's saying they're different. They're not well-to-well  
2 comparisons that demonstrate a simple similar temporal pattern.  
3 And so he's saying there under Criteria 2, no, we don't qualify  
4 under that criteria as a closed hydrologic connection.

5 We turn to the third criteria, which is the next  
6 sentence when he's talking about the National Park Service  
7 evidence. And again, he says that there's a similarity in the  
8 hydrographic patterns and the responses although it's  
9 attenuated. And again, attenuated is weak, less in force, of  
10 less value.

11 And when we go back to what the National Park Service  
12 testimony is, because he cites to the national park service  
13 testimony that he relied on to find persuasive, and there's 30  
14 pages of testimony that he cites to, and five slides from the  
15 NPS presentation there at the hearing.

16 And the State Engineer doesn't tell us in those 30  
17 pages what he relied on or the five slides what he relied on.

18 And when you read the 30 pages and you look at the  
19 five slides, most of them don't relate at all to testimony  
20 about hydrographic patterns or any kind of similarity or you  
21 don't even know what the NPS witness is referring to. You  
22 don't know in his testimony if he's referring to the slides  
23 when he's talking about certain things because there is no  
24 indication in the record, like you're having us do here that  
25 he's talking about whatever slide he's talking about. So we

1 have no basis to know what the State Engineer found to be  
2 persuasive in this 30 pages of testimony or these five slides.

3 And that doesn't allow you to properly judicially  
4 review what the State Engineer looked at to determine whether  
5 there's a rational connection between the facts that the State  
6 Engineer found and his conclusion. So that's one objection.  
7 We're left to guess what the State Engineer relied on in those  
8 30 pages.

9 And then the other thing with regard to that is that  
10 the criteria specifically says that the water level hydrographs  
11 have to demonstrate an observable increase in drawdown that  
12 corresponds to an increase in pumping and an observable  
13 decrease in drawdown or recovery that responds to the decrease  
14 in pumping.

15 And the State Engineer doesn't quantify or doesn't  
16 say that it's observable -- sorry. He just says that there's a  
17 general hydrographic pattern that's attenuated. So he doesn't  
18 even follow his own criteria in responding to that criteria.

19 And then when you look at the NPS witness testimony,  
20 and again we've cited this in our brief. It's at page 30 to 31  
21 in our brief, the NPS witness failed to consider the 1-foot  
22 measurement error in the CSVM-4 well, and he was talking about  
23 the CSVM-4 well in his testimony. He doesn't -- he doesn't say  
24 that the connection between CSVM-4 and the other wells in the  
25 Lower White River Flow System is attenuated. He says it's

1 greatly attenuated.

2           And he doesn't testify that there's -- the  
3 connection -- it's well-connected between CSVN-4 and the Lower  
4 White River Flow System. He just would only opine that it's  
5 connected. He doesn't say it's well-connected, like the State  
6 Engineer made the finding with regard to all the other basins  
7 in the Lower White River Flow System.

8           And again, the State Engineer, if you look at the  
9 language that he used, he says that he finds that the general  
10 hydrographic pattern observed in southern Kane Springs Valley  
11 reflects a response to the order 1169 pumping, but the State  
12 Engineer didn't look and rely on the NPS witness's testimony.  
13 The NPS witness was testifying about CSVN-4. He wasn't  
14 testifying about the Kane Springs well.

15           And so for all those reasons, Your Honor, we submit  
16 that that's not substantial evidence that satisfies the  
17 standard in *Revert versus Ray*.

18           And I do need to take a sip of water here.

19           And then turning to the next slide, which is slide  
20 12, the State Engineer made the further determination that the  
21 basins, like the Black Mountain area and the Kane Springs  
22 Valley should be included because there would be an opportunity  
23 for conducting additional hydrographic -- hydrologic studies in  
24 these subbasins to determine the degree to which water use  
25 would impact water resources in the Lower White River Flow

1 System.

2 And then he also made the conclusion, again without  
3 citing to any evidence, that these subbasins and other portions  
4 of the Lower White River Flow System may benefit from  
5 additional hydrologic study, and they can be managed more  
6 effectively and fairly within the Lower White River Flow  
7 System.

8 And he doesn't cite to any evidence of record that  
9 supports that conclusion.

10 And the other reason that we have a problem with this  
11 is that he's leaving to -- he's including Kane Springs in the  
12 Lower White River Flow System, but he's not made any  
13 determination that any pumping from Kane Springs has any impact  
14 to any other water sources in the Lower White River Flow  
15 System.

16 And so we're -- his analysis is backwards, and it's  
17 different than what he did for all of the other water right  
18 holders and all the other basins in the Lower White River Flow  
19 System.

20 He -- he had the pump test. The State Engineer had  
21 the pump test 1169. Based on the pump test, he included those  
22 six basins at that time in the Lower White River Flow System  
23 because he found that there were impacts from pumping, and  
24 therefore they needed to be jointly managed.

25 In this case, there's no evidence on the record of

1 any pumping from Kane Springs that's going to impact the Muddy  
2 River Springs. Yet he's forced us to be jointly managed with  
3 the other basins in the Lower White River Flow System without  
4 having conducted or having any evidence on the record that  
5 there is any impacts from the Kane Springs pumping.

6 And again, that's backwards. It's backwards under  
7 the statutes.

8 All the statutes that we've been talking about  
9 earlier today, they all require the State Engineer to find that  
10 there's decreasing water levels; there is a reduction in the  
11 groundwater basin levels, that there's not enough precipitation  
12 that can serve all the water right holders in the basin or that  
13 the basins have been continually over pumped for years, and  
14 therefore we need to designate it as a critical management  
15 area.

16 So make's the determination with regard to impacts  
17 first, then is allowed to manage under those statutes.

18 Again, that's not the process that was followed with  
19 regard to Kane Springs.

20 And if you go to the next slide, Slide 13. We did  
21 ask every expert at the hearing if there was any evidence or  
22 they had conducted any kind of an analysis, if Kane Springs,  
23 any pumping from Kane Springs would impact the Muddy River  
24 Springs.

25 And we've cited this in our brief too, and all the

1 cites to the record are there. No evidence at all from any  
2 experts that any pumping from Kane Springs would impact the  
3 Muddy River Springs.

4 And that's the other reason that we have such a big  
5 problem with this is that right now, in Kane Springs, there's  
6 no decreasing water levels. There's no -- there is no finding  
7 that the groundwater basin is being depleted. There's no  
8 finding that the average annual replenishment has not met the  
9 needs of the water right holders.

10 There's no finding that groundwater withdrawals  
11 consistently exceed the perennial yield of the basin.

12 And so right now the State Engineer could not  
13 designate or manage Kane Springs because there's none of this  
14 going on hydrologically in that basin, yet he's thrown Kane  
15 Springs, that he can't designate -- everybody acknowledges he  
16 would have the authority to designate basin by basin, but he  
17 can't designate Kane Springs. He can't manage Kane Springs  
18 because none of those things are happening. Yet he's thrown us  
19 into the mega mess. It is a mega mess. He's thrown us into  
20 the mega mess, and now is trying to manage us and throw us into  
21 that mess doing something he can't do on a basin by basin  
22 approach, and not allowing us to pump our water rights.

23 When there's no -- there's been no showing that  
24 pumping our water rights would impact any other water sources  
25 of the Lower White River Flow System. That's discriminatory.



1 That's against the law. That's illegal.

2 And then turning to Slide 14, this is -- there is  
3 evidence in the record during the Kane Springs pump test, and  
4 this shows the water elevations of the monitoring, well, in  
5 Kane Springs, KMW-1, and CSVN-4 during the aquifer tests for  
6 the production well, KPW-1. And the blue line shows the water  
7 levels in KMW, which is the Kane Springs well.

8 THE COURT: That's the monitoring well?

9 MS. PETERSON: The monitoring well. And the red  
10 lines shows the water level elevations in CSVN-4.

11 And again, CSVN-4 is 2.5 miles away, but it shows  
12 during the pump test that the water level elevations in CSVN-4  
13 were going up. And the pump test is that period in the blue  
14 line, you know, where there's that -- the big dip there.

15 So you can see the water elevation's going up, Your  
16 Honor. The pump test, it looks like it was held between  
17 January 3rd, 2006, and January 13, 2006. And you can see the  
18 water elevations going up between -- on the left axis it would  
19 be 1865 up to, if you use that same left axis, it would be  
20 about 1869.

21 THE COURT: But this is a different pump test than  
22 the pump test everyone else is talking about?

23 MS. PETERSON: Yes. Yes. So when Lincoln and Vidler  
24 put in their well, their production well, they -- it's  
25 standard. They did a pump test at that time.

1 THE COURT: Okay.

2 MS. PETERSON: So that's the only evidence of record  
3 with regard to pumping.

4 And again, it shows the well 2.5 miles away. The  
5 water level elevations are going up.

6 And then turning to the next slide, which is Slide  
7 15, there's been a lot of talk about the carbonate, and the  
8 basin in range, I think somebody brought up the basin in range.  
9 And so one of the earliest studies, and it's cited in order  
10 1309 at the beginning of the order, and this Dettinger report  
11 is in the record, and the cite to the record here is on Slide  
12 15.

13 But it just describes the general geologic setting of  
14 the basin and range province, the great basin province and the  
15 carbonate rock province, and turning to the next slide, which  
16 is Slide 16, it shows you the extent of the basin and range  
17 province. And again, this is from Dettinger's report.

18 And it shows that that extends, you know, Oregon,  
19 Idaho, Nevada, Utah, Arizona, New Mexico and down into Texas.

20 And then if you go turn to the next slide, which is  
21 Slide 17, that shows the actual carbonate rock aquifer, and  
22 again, it's from that Dettinger report. And you can see that  
23 the carbonate rock aquifer extends there from Nevada. You've  
24 got Nevada listed there, Utah and even a little bit up into  
25 Idaho.

1           So if we're talking about -- and I know Mr. Klomp  
2 talked about this connectiveness and the carbonate rock  
3 aquifer, I mean, it's a huge expansive area that everyone has  
4 known about for a long time, including when our water rights  
5 were created in 2005.

6           And then turning your attention to Slide 18, I asked  
7 you to remember the Lower Meadow Valley Wash in that one slide  
8 and where it was situated to the Muddy River Springs.

9           And if connection is to be considered -- and again,  
10 Mr. Foletta was talking a little bit about this, but there's  
11 been evidence in front of the State Engineer from the 1960s  
12 from these water resources reconnaissance reports that talk  
13 about the influence and the inflow from the Lower Meadow Valley  
14 Wash into the Muddy River area. And again, there is some  
15 excerpts there on page -- Slide 18 from the reconnaissance  
16 report from Russia (phonetic) in 1968. And then turning to  
17 page 19 -- and again, these are in the record -- turning to  
18 page 19, there's some excerpts there from the Eakin (phonetic)  
19 report in February 1964 with regard to Meadow Valley Wash and  
20 that contributing to the Springs.

21           And so if we want to tie it up with the Muddy River  
22 and Mr. Dotson being concerned about all the sources that are  
23 flowing to the Muddy River, that those being accounted for and  
24 those being looked at, you know, we believe that the State  
25 Engineer should have looked at Meadow Valley Wash and from the

1 scientific records that were before the State Engineer with  
2 regard to that flow -- inflow into the Muddy River area, as  
3 Mr. Foletta said, and that evidence being ignored because it  
4 just wasn't part of the six criteria.

5           So the other thing I was going to talk about a little  
6 bit was the 8,000 pumping cap. And --

7                           (Pause in the proceedings.)

8           MS. PETERSON: And again, as Mr. Foletta said, there  
9 wasn't any cite of evidence to the record to support that  
10 8,000-foot pumping cap. What evidence the State Engineer did  
11 cite to was the NV Energy report, and the NV Energy witness and  
12 the report at that section was talking about the 7- to  
13 8,000 acre-foot number as correlating or using that figure to  
14 determine that there was no one-to-one depletion ratio from  
15 groundwater pumping to impacts to the Muddy. He wasn't talking  
16 about that that was a safe -- that could be a safe number that  
17 can be pumped from the Lower White River Flow System. He was  
18 doing a different analysis.

19           And we also brought up in our brief about the 8,000  
20 pumping cap, that it was arbitrary and capricious with regard  
21 to Lincoln and Vidler because we are compliant.

22           The State Engineer used that 8,000 acre-foot pumping  
23 cap to show that there were -- or to try to show that there  
24 wouldn't be any take with regard to the dace, that that was a  
25 safe amount that could be pumped. But Lincoln and Vidler are

1 compliant with the Endangered Species Act because, number one,  
2 we entered into the amended stipulation with the U.S. Fish and  
3 Wildlife where we are -- where the U.S. Fish and Wildlife  
4 agreed that we were allowed to -- we would be allowed pump our  
5 water rights with monitoring and with all the triggers in place  
6 so that we wouldn't affect the dace. And also we had the  
7 biological opinion issued by the U.S. Fish and Wildlife that  
8 with the plan that was in place, the pumping from the Kane  
9 Springs project would not likely impact the dace at all.

10 And we also wanted to bring to your attention, and  
11 this is Slide 23, and this is cited in the Georgia-Pacific  
12 brief. There's some testimony there, and we've given you the  
13 cite on Slide 23 here.

14 Mr. Miller was the U.S. Fish and Wildlife attorney,  
15 and Dr. Schwemm was the expert biologist from the U.S. Fish and  
16 wildlife at the hearing, and Mr. Miller, the U.S. Fish and  
17 Wildlife attorney clarified in the record because he says it  
18 could be inferred from the Center for Biological Diversity's  
19 cross-examination that essentially any or all pumping is just  
20 inherently take, and Dr. Schwemm said likely not, and indicated  
21 as Mr. Foletta did that, well, he -- I'll just read what it  
22 says here.

23 And it's -- take is more nuanced. It would -- it  
24 would take a very sophisticated explicit analysis to analyze  
25 take because of the other features or the other attributes that

1 are at work, it's difficult.

2 So here on the record in front of the State Engineer,  
3 notwithstanding his determination that he made, is evidence  
4 from the U.S. Fish and Wildlife itself that pumping is not in  
5 and of itself inherently a take.

6 The Muddy River Decree observations that we made in  
7 our opening brief, and again we talked about the headwaters and  
8 the tributaries, but what we also wanted to point out to Your  
9 Honor that the adjudication was to the waters in Clark County.  
10 That's what it sets forth specifically in the adjudication.  
11 It's not an adjudication --

12 THE COURT: Oh, you mean the Muddy River Decree  
13 itself. I see.

14 MS. PETERSON: The Muddy River Decree itself. It's  
15 not an adjudication with regard to any waters in Lincoln County  
16 or in Kane Springs. And again, as we already set fourth, the  
17 decree specifically says, and again we cited this in our brief,  
18 that only the Springs and the waters developed by the  
19 plaintiff, the claimants and as adjudicated by the decree were  
20 granted under the decree.

21 And we'd also point out that there is no evidence in  
22 the record before the State Engineer in Order 1309 that Muddy  
23 Valley Irrigation Company has not gotten all the water that it  
24 is entitled to under the decree. They have never claimed that  
25 they've not gotten their water under the decree. They've never

1 made any call for their water under the decree. They've never  
2 filed to enforce anything under the decree. This isn't an  
3 action. This Order 1309 proceedings are not an action to  
4 enforce the decree.

5 The Muddy River Decree, that's not an issue that's  
6 before the Court.

7 And finally, the last thing we brought up in our  
8 opening brief was the management practices of Order 1309 are  
9 discriminatory, and that would be Slide 20.

10 And what we've done here, Your Honor, is we have  
11 taken from the references that are cited on the slide and shown  
12 where the pumping was during the pump tests, the 1169 pump test  
13 and who -- who was pumping. And you'll see that closest to the  
14 Muddy River Springs are the red -- are the red squares there,  
15 and that was pumping by Nevada Power of about 7300 acre-feet.

16 And then you'll see the yellow circles down there in  
17 the Muddy River Springs area, and that was the pumping by Moapa  
18 Valley Water District, which is about 4400 acre-feet.

19 And then turning west on the slide, the green, again  
20 Slide 20, the green circle, that was the SNWA and the Las Vegas  
21 Valley Water District pumping, which was about 9200 acre-feet.

22 And again, those are centered in -- those basins are  
23 the Muddy River Springs area basin and then a portion, the  
24 southern portion of the Coyote Spring Valley basin. And the  
25 State Engineer has already made determinations in Order 1309

1 that pumping from those basins are -- is what has impacted the  
2 spring. He's already made that determination. And so our  
3 point is why doesn't he manage those basins? And if the  
4 pumping from those basins is impacting the Springs, he could  
5 take care of that right now under his basin-by-basin authority  
6 and manage those impacts or figure out a management plan for  
7 those basins.

8 And, I mean, it's discriminatory, again, as I brought  
9 up, that he can't designate Kane Springs under the statutory  
10 criteria right now because there is no deplete -- you know,  
11 there's no groundwater levels that are depleting or anything.  
12 Yet he's refused to take action and pulled us into this mega  
13 mess when he knows what the sources of the pumping are that are  
14 impacting the springs.

15 And so we would reserve the rest of our time for our  
16 answering and our closing.

17 THE COURT: Okay. Great. Thank you.

18 (Pause in the proceedings.)

19 THE COURT: So I think it's now time for our lunch  
20 break, and then when we get back at 1:30, I think it's  
21 Mr. Bolotin.

22 Are you -- I assume then you're taking the full  
23 four hours; is that right? Or --

24 MR. BOLOTIN: No, Your Honor.

25 THE COURT: Oh, okay.



1 MR. BOLOTIN: It will -- I think we'll likely get  
2 into some of the intervenors today too I would guess.

3 THE COURT: Okay. So, you know what, and I did not  
4 take a look to -- what is the order of the intervenors?

5 MR. BOLOTIN: I'm pretty sure, Your Honor, that it's  
6 the Church followed by Moapa Valley Water District, followed by  
7 NV Energy. It might be NV Energy ahead of Moapa Valley Water  
8 District, but we --

9 THE COURT: Okay. All right. Great. Right. Thank  
10 you everyone. So we'll see everyone back at 1:30.

11 (Proceedings recessed at 12:22 p.m., until 1:32 p.m.)

12 THE COURT: Okay. Tell me when you're ready.

13 MR. BOLOTIN: I'm ready.

14 THE COURT: Okay.

15 **ARGUMENT FOR THE STATE ENGINEER**

16 MR. BOLOTIN: Good afternoon, Your Honor. May it  
17 please the Court. For the record, my name is James Bolotin,  
18 Senior Deputy Attorney General, representing the Nevada State  
19 Engineer in defense of Order 1309.

20 I brought with me a demonstrative exhibit, Your  
21 Honor. I gave one to the clerk, but may I approach if you  
22 wanted a smaller version too?

23 THE COURT: Yes, please. Thank you very much.

24 MR. BOLOTIN: And also with me today, Your Honor, I  
25 have Adam Sullivan, the Nevada State Engineer, Micheline

1 Fairbank, who I introduced earlier. And judging by the  
2 BlueJeans, we have a large number of people from the Nevada  
3 Division of Water Resources watching the hearing who worked  
4 very hard on putting together the hearing proceeding Order 1309  
5 and in drafting and issuing it.

6 I'm going to give a little bit of roadmap first.  
7 First I'm going to do a little bit of an introduction, go  
8 through some initial facts. I know we've heard a lot of it,  
9 but I want to just hit the high points. I'm going to touch on  
10 the standard of review, then go through the central questions I  
11 think that people have talked about over the last few days, the  
12 State Engineer's authority, substantial evidence, due process  
13 and some other legal issues that have come up in the briefing  
14 and in the arguments.

15 Order 1309 is the latest decision in the State -- of  
16 the State Engineer in a long line of administrative processes  
17 related to this area of Nevada located just north of Las Vegas  
18 in Clark and Lincoln counties.

19 The main point here is that scientifically speaking,  
20 the Lower White River Flow System acts as one hydrographic  
21 basin underlain by a single carbonate rock aquifer and all  
22 groundwater pumping in the LWRFS shares the same supply of  
23 water, as do the springs that form the headwaters of the Muddy  
24 River.

25 The Muddy River is a decreed surface water source

1 that has the oldest and most senior water rights in the LWRFS,  
2 and is home to an endangered fish called the Moapa dace.

3           Pumping groundwater at unsustainable levels leads to  
4 drops in groundwater across the LWRFS and drops in spring  
5 discharge, which can negatively affect more senior rights, as  
6 all the surface water rights are senior to all of the  
7 groundwater rights in the area as they were established in the  
8 decree in 1920, and I don't believe there are any groundwater  
9 rights that predate the surface water decree.

10           It is also -- unsustainable pumping also negatively  
11 impacts the habitat at the Moapa dace, which its only habitat  
12 is the headwaters Springs of the Muddy River.

13           And we don't have to guess if this is the case.  
14 There's been a pumping test that shows definitively this is  
15 true. And on the demonstrative I have up here and that I've  
16 handed to Your Honor, the green charts are spring discharge,  
17 and then the ones that have blue dots are the groundwater  
18 levels at the various different parts, subbasins of the LWRFS.

19           THE COURT: Okay. Say that again. The green is?

20           MR. BOLOTIN: The greens one in the upper right-hand  
21 corner are the spring discharge.

22           THE COURT: So that's the surface water?

23           MR. BOLOTIN: That's the surface water source.

24           THE COURT: Okay.

25           MR. BOLOTIN: And then the ones with the blue dots

1 reflect monitoring wells for the groundwater levels.

2 THE COURT: For the groundwater, okay.

3 MR. BOLOTIN: And you can see the part that's  
4 highlighted in red, and we brought this from SNWA. Most of  
5 these graphs are from -- I think they're all from SNWA's  
6 reports just because they were the most consistent and clear.  
7 And the area that's highlighted in red was the period of the  
8 1169.

9 THE COURT: So 2011 through almost 2013 is what  
10 you're talking about?

11 MR. BOLOTIN: Yeah. Yeah.

12 While many parties have asked this Court to shield  
13 its eyes and argued that science does not show this  
14 interconnection of all of these basins -- subbasins, which it  
15 clearly does, a primary argument advanced by a group of  
16 petitioners is that despite the substantial evidence showing  
17 the interconnectivity of these -- this groundwater system, the  
18 wash should nonetheless prevent the State Engineer from being  
19 able to do anything about it.

20 Stated slightly differently, despite clear evidence  
21 showing uniform drops and groundwater levels and spring  
22 discharge when quantities in excess of 8,000 acre-feet are  
23 pumped from the Lower White River Flow System and despite the  
24 State Engineer being required to administer all water in the  
25 State of Nevada, water which belongs to the public and has duty

1 to protect existing rights, he should be prevented from taking  
2 the necessary steps to do so. This cannot be the case given  
3 the State Engineer's responsibilities under the law.

4 The science here is clear, and it is the State  
5 Engineer's duty, as is both explicitly and implicitly set out  
6 in the water law as the Supreme Court said in the *Pahrump Fair*  
7 *Water* case, to protect existing rights and to consider the  
8 public interest. That is exactly what the State Engineer has  
9 done here with Order 1309. The water law has brought  
10 provisions that both expressly and implicitly delegate power to  
11 the State Engineer.

12 The legislature cannot possibly envision each and  
13 every scenario that may occur with the State's water resources,  
14 and that is why they establish the water law with broad  
15 authorities for the State Engineer.

16 It's also important to note at the onset that  
17 Order 1309 is not the end of this process either. The State  
18 Engineer envisions additional public administrative proceedings  
19 to determine how the LWRFIS is best managed within these  
20 boundaries and within the 8,000 acre-foot or less perennial  
21 yield established through Order 1309, but we aren't there yet.

22 Parties alleging curtailment or reprioritization of  
23 their rights are just plain wrong. These are buzzwords to try  
24 and persuade the Court to find that the State Engineer is  
25 overreaching or acting inappropriately when in reality the

1 State Engineer is doing what the legislature has asked him to  
2 do.

3 THE COURT: Let me ask you. You're saying that this  
4 is not a reprioritization of their rights. If you're going to  
5 be managing all of these seven basins together as one, how is  
6 that not reprioritizing their rights?

7 MR. BOLOTIN: Well, Your Honor, the priority date is  
8 the same before Order 1309 as after Order 1309 was issued, and  
9 I'm going to get into a little --

10 THE COURT: But it's in a -- it's in a whole huge  
11 basin with a whole lot of other entities; right?

12 MR. BOLOTIN: That's correct, Your Honor. And I'm  
13 going to get into it a little bit more, but the fact is that  
14 the prior appropriation doctrine is first in time first in  
15 right, and I understand that historically, before the pumping  
16 test especially, these separate subbasins were treated  
17 separately, but there is no caveats in the prior appropriation  
18 doctrine that say first in time, first and right except if  
19 you're over here, except if you're separated by a basin  
20 boundary, except if -- no caveats for except if it's  
21 groundwater that causes the effect on surface water.

22 What has happened here is that through the pumping  
23 test --

24 THE COURT: Well, I mean, I think you're talking  
25 about a general principle of first in time, first in rights

1 versus how the statutory framework is regarding those rights;  
2 correct?

3 MR. BOLOTIN: Correct. And the State Engineer  
4 doesn't disagree that historically speaking it's a basin by  
5 basin process, and I'm going to get into that.

6 THE COURT: Sure.

7 MR. BOLOTIN: And that's kind of why I said at the  
8 beginning that the facts and science show this is one basin,  
9 and it needs to be managed as one basin.

10 The State Engineer is doing what the legislature has  
11 asked him to do, and that's follow the best available science  
12 to conjunctively manage Nevada's precious water resources while  
13 honoring existing rights and the public interest.

14 In these types of proceedings, under NRS 533.450, the  
15 Court's review is in the nature of an appeal, and the State  
16 Engineer's decision is prima facie correct, and the burden of  
17 proof is on petitioners.

18 The State Engineer's factual findings cannot be  
19 disturbed if they are supported by substantial evidence, which  
20 is defined as the amount of evidence that a reasonable mind  
21 would accept as adequate.

22 The Court is prohibited from reweighing the evidence  
23 or passing upon the witness's credibility, and the Court must  
24 be at its most deferential, where like here is reviewing  
25 complex scientific determinations.

1           And I wanted to touch on something that some of the  
2 petitioners have said in their arguments where the brief says  
3 peak deference. That is just related to the scientific  
4 determinations as affirmed in the *Pahrump Fair Water* case.  
5 Peak deference was an argument from us in the brief, but it's  
6 not -- it's basically a way of explaining that in this case,  
7 where it involves complex scientific determinations, that's  
8 when the Court should be at its most deferential, and it wasn't  
9 intended to be any kind of slight on the Court at all. We  
10 understand --

11           THE COURT: Oh, no. We all know that I'm not a  
12 scientist. So that is not anything that is a slight on the  
13 Court.

14           MR. BOLOTIN: And the State Engineer also recognizes  
15 that as legal interpretations may be reviewed *de novo*, but the  
16 case law does say that its interpretations are persuasive when  
17 it's in the language of the statute, and that's all we tried to  
18 say when we were arguing that in the brief. It is in the case  
19 law.

20           And now to move on to some of the facts, even though  
21 we've heard a lot of it over the last few days.

22           The story goes back decades here. A key stop along  
23 that time line was Order 1169 issued in March of 2002 which  
24 held in abeyance all pending applications in the area while  
25 stakeholders conducted a pumping test of the aquifer. For a



1 variety of reasons that some of the other parties have touched  
2 on, that pumping test didn't actually start until over eight  
3 years after it was ordered, starting in November 2010 and  
4 declared complete in December of 2012 via Order 1169A.

5           One of the reasons for the delay included the  
6 implicit recognition that the pumping could impact the Muddy  
7 River such that SNWA, the U.S. Fish and Wildlife Service, CSI,  
8 the Moapa Band of Paiute Indians and the Moapa Valley Water  
9 District entered into a memorandum of agreement, or what some  
10 parties have called the MOA, that required monitoring and set  
11 triggers for spring flow such that if spring flow dropped to  
12 certain levels, pumping would be reduced or ceased, all in an  
13 effort to protect the surface flows of the Muddy River and the  
14 endangered Moapa dace.

15           While this pumping test was meant to pump 50 percent  
16 of the then existing rights in Coyote Spring Valley which were  
17 8,050 acre-feet per year would be 50 percent of what existed at  
18 the time for two consecutive years along with the other  
19 existing pumping in the LWRFS, that did not ultimately happen  
20 due to mechanical problems with certain wells and other issues.

21           But approximately 5,290 acre-feet were pumped from  
22 Coyote Spring Valley during the pump test, along with pumping  
23 from 30 other wells in the other 1169 study basins, including  
24 Black Mountain's area, Garnet Valley, Hidden Valley, Muddy  
25 River Springs area, Lower Moapa Valley and California Wash for

1 a cumulative reported total average between the two years was  
2 14,535 acre-feet during the pump test.

3 3,840 of that was pumped from the alluvial aquifer  
4 near the Muddy River Springs area, and the balance 10,695  
5 acre-feet were pumped from the carbonate rock aquifer.

6 And data was recorded from a total of 79 monitoring  
7 and pumping wells.

8 This pumping, which again did not equal the amount  
9 originally ordered from the pumping test, resulted in dramatic  
10 effects that I don't think a lot of people anticipated at the  
11 time the pumping test was ordered. Water level declines were  
12 seen across over 1100 square miles, from Southern Kane Springs  
13 Valley, Northern Coyote Springs Valley, through the Muddy River  
14 Springs area, Hidden Valley, Garnet Valley, California Wash and  
15 the northwestern portion of Black Mountains Area. And that's  
16 indicated on the demonstrative that I have here. These  
17 declines were estimated to be between 1 to 1.6 feet throughout  
18 the area, and major drops in the headwater springs of the Muddy  
19 River were also observed, which again is the decreed surface  
20 water source and the only habitat of the dace.

21 Based on these findings from the pumping test, the  
22 State Engineer issued various rulings. These are Rulings 6254  
23 through 6261 found at the ROA from 726 to 948. These rulings  
24 denied all pending applications in these then individual  
25 basins.

1           Importantly, these rulings also put the writing on  
2 the wall that existing water rights were in question based on  
3 the findings of the pumping results. The results were  
4 undeniable and dramatic despite only pumping one third of the  
5 water rights already granted in Coyote Spring Valley. In those  
6 rulings, which were never challenged or overturned, the State  
7 Engineer determined that, and this is verbatim from one of the  
8 rulings,

9                         These basins share a unique and close  
10                        hydrological connection and share virtually all  
11                        of the same source and supply of water, unlike  
12                        other basins in Nevada. These five basins will  
13                        be jointly managed. The perennial yield of  
14                        these basins cannot be more than the total  
15                        annual supply of 50,000 acre-feet. Because the  
16                        Muddy River and Muddy River Springs also utilize  
17                        the same supply and are the most senior water  
18                        rights in the region, the perennial yield is  
19                        further reduced to an amount less than 50,000  
20                        acre-feet.

21                       The State Engineer finds that the amount  
22                        and location of groundwater that can be  
23                        developed without capture of and conflict with  
24                        senior rights on the Muddy River and springs  
25                        remains unclear, but the evidence is

1           overwhelming that unappropriated water does not  
2           exist.

3           And that's in the ROA at 749.

4           It's important to note that in that 50,000 acre-feet,  
5 that includes the whole flow of the river, which we've heard  
6 various arguments about 30, 33,000 acre-feet. So this is  
7 essentially the starting point of the administrative process  
8 that led to Interim Order 1303 and Order 1309 that is  
9 challenged in this case.

10           Based on this, a lot of petitioners' positions kind  
11 of defy reality, as it's been known at least since 2014 when  
12 the State Engineer issued these rulings that the State Engineer  
13 would be jointly managing the basins that showed this  
14 interconnectivity, the subbasins that now make up the LWRFS and  
15 that there would be one perennial yield for these basins that  
16 had to be far less than 50,000 acre-feet.

17           THE COURT: So let me stop you there. I need you to  
18 walk me through the -- and it doesn't have to be right this  
19 minute, but sometime during your argument, exactly where the  
20 State Engineer derives its power to, one, conjunctively manage;  
21 and two, jointly manage.

22           MR. BOLOTIN: Okay.

23           THE COURT: So sometime in your argument, if you  
24 could really touch upon that and be very specific as to  
25 referring to the statutes and what parts of the statutes, that

1 would be very helpful for me.

2 MR. BOLOTIN: Yes, Your Honor. And I have a little  
3 bit more of the --

4 THE COURT: No, no. Yeah, and I don't want to  
5 interrupt.

6 MR. BOLOTIN: Yeah.

7 THE COURT: I just want to make sure at some point in  
8 your argument that you really -- you're going to really have to  
9 spell it out for me.

10 MR. BOLOTIN: Okay. Yeah. We get to the authority  
11 portion after a little bit of this background.

12 THE COURT: All right. Thank you.

13 MR. BOLOTIN: Again, the State Engineer in these  
14 orders said the amount and location of groundwater that can be  
15 developed without capture and conflict with senior water rights  
16 of the Muddy River and springs remains unclear.

17 1309 was the first step in figuring that out by  
18 setting the boundaries of the LWRFs. That's the location --  
19 and the 8,000 maximum -- 8,000 acre-foot maximum amount of  
20 water available. That's the amount. Those are the things that  
21 he discussed in those rulings as things we didn't know and  
22 why -- and in 1303 he said these are the things we're going to  
23 figure out now.

24 The State Engineer was well aware of the due process  
25 implications at play in these decisions and therefore ensured

1 that all stakeholders had notice and ability to be heard in the  
2 process leading to Order 1309.

3           The State Engineer entered Interim Order 1303 to  
4 begin the public process to address strategies related to the  
5 existing water rights in the region. The State Engineer again  
6 made it clear that if the pumping returned to the level during  
7 the pumping test, which again is a very realistic possibility  
8 based on the volume of existing rights that are on the books  
9 already, that would adversely affect the Muddy River, including  
10 senior rights and the Moapa dace therein, and that's from the  
11 ROA at 644.

12           The State Engineer issued Interim Order 1303 on  
13 January 11th, 2019. Interim Order 1303 included the initial  
14 identification of the boundaries of the LWRFS as a single unit,  
15 which is very similar to the eventual final boundaries found in  
16 1309 with the exception that in 1303 it didn't include Kane  
17 Springs Valley, and the border with the Black Mountains Area  
18 was a little bit different at that time.

19           Interim Order 1303 solicited reports from any  
20 stakeholder with interest that may be affected by water right  
21 development within the LWRFS and with the reports to address  
22 five topics. These topics or the boundaries of the connected  
23 groundwater and surface water system, data from the 1169  
24 aquifer pumping test and subsequent data on the recovery since  
25 the test, the long-term annual quantity of groundwater that may

1 be pumped considering the Springs in the Muddy River, effects  
2 of moving water rights between alluvial and carbonate wells on  
3 the Muddy River decreed rights and any other matter believed to  
4 the party to be relevant.

5 Interim Order 1303 also anticipated a hearing would  
6 be held and instituted a moratorium on approval of plans for  
7 construction development in the area pending the administrative  
8 process with an exception where adequate water supply could be  
9 shown for the life of the subdivision other construction for  
10 development and held in abeyance permanent change apps  
11 (phonetic) while providing an allowance for those applying for  
12 extensions of time to avoid cancellation or forfeiture of their  
13 water rights.

14 Almost all participants in this case, including  
15 petitioners and intervenors filed reports solicited by order  
16 1303 with the exception of Apex and Dry Lake.

17 During the prehearing conference, the State Engineer  
18 explained that this would be a multitiered process with the  
19 purpose of this first hearing being to determine exactly what I  
20 said earlier, the where, the boundaries of the LWRFS and the  
21 amount. The volume of water available for pumping without  
22 interfering with senior rights in the river.

23 What tools to ensure that pumping was limited to a  
24 sustainable amount is a question for the future proceedings, as  
25 any potential -- as was any potential allegations of conflict.

1 The hearing lasted for about two weeks in the fall of 2019, and  
2 every petitioner and most intervenors presented expert  
3 testimony subject to cross-examination except again Apex and  
4 Dry Lake. This included those parties that raised due process  
5 issues in this case, including CSI and Lincoln County Water  
6 District and Vidler, who put on cases raising their various  
7 concerns, including their arguments that Kane Springs should  
8 not be concluded in the LWRFS.

9 The participants were also entitled to submit written  
10 closing arguments, and 13 participants did so.

11 I want to note that it's a little questionable about  
12 these due process concerns given the notice and process that  
13 was provided to the State Engineer that the parties took  
14 advantage of, and this is especially true with Apex and Dry  
15 Lake, who were afforded the same due process as others, but  
16 just decided not to participate.

17 About six months after this hearing, the State  
18 Engineer issued Order 1309, finding a direct hydraulic  
19 connection between the subbasins that now make up the LWRFS and  
20 delineated the boundaries of the LWRFS accordingly. It also  
21 established 8,000 acre-feet or less as the maximum sustainable  
22 amount of water that could be developed in the LWRFS without  
23 conflicting with senior rights in the Muddy River. I like to  
24 call that, to use another term for basins, the perennial yield  
25 of the LWRFS, 8,000 acre-feet or less, all other aspects of



1 Order 1303 not specifically retained in 1309 were rescinded.

2 And that brings us to where we are today. Eight  
3 different petitions were filed with varying challenges that  
4 include those who say the State Engineer had authority to issue  
5 Order 1309; that found too much water available; those who say  
6 the State Engineer didn't have authority to issue Order 1309,  
7 and even if he did, he didn't find enough water available;  
8 those who say the boundaries are incorrect, and those who  
9 challenge Order 1309 insofar as it relates to the Muddy River  
10 Decree. There are also intervenors who will be arguing after  
11 me who support Order 1309, among other miscellaneous legal  
12 arguments that have made throughout these arguments so far in  
13 the briefs.

14 So I want to start out with the authority question  
15 because I think the authority is very clear. The State  
16 Engineer had authority to issue Order 1309. The State  
17 Engineer's interpretation is persuasive under Nevada law, even  
18 if it's not controlling, but for some petitioners to argue it  
19 has no weight, again, defies the case law that's existed in  
20 this State that says that the State Engineer's interpretation  
21 is persuasive even if the Court can conduct a *de novo* review of  
22 his authority.

23 The persuasive character of the State Engineer's  
24 interpretation is also built into the statute that authorizes  
25 this very proceeding. NRS 533.450, Sub 9, provides that the

1 decision of a State Engineer is prima fascia correct, and the  
2 burden of proof is on the parties attacking the State  
3 Engineer's decision.

4 I know a lot of the petitioners don't like it --

5 THE COURT: I need you to slow down. Hold on. So  
6 you're saying 533.450, Subsection 9.

7 MR. BOLOTIN: Provides that the decision of the State  
8 Engineer is prima fascia correct and that the burden of proof  
9 is on the parties attacking the State Engineer's decision.

10 THE COURT: Do you mean Subsection 10?

11 MR. BOLOTIN: Subsection 10, yeah.

12 THE COURT: Okay. Thank you.

13 MR. BOLOTIN: I know a lot of the petitioners don't  
14 like it, but this is the truth. The question of whether the  
15 LWRFS is a single administrative unit or basin from a water  
16 resources perspective is a factual or scientific question, not  
17 a legal one. NRS 533.024(1)(c) mandates that the State  
18 Engineer consider the best available science in rendering his  
19 decisions, and the scientific finding of the LWRFS acting as  
20 one basin rather than separate basins is based on the best  
21 available science and guided the rest of the State Engineer's  
22 decision-making.

23 This finding that it acts as one basin was the  
24 primary basis behind Order 1309. The State Engineer is  
25 responsible for managing all water resources in Nevada, both

1 groundwater and surface water, and this precious resource  
2 belongs to the public.

3           The legislature has made it the policy of the State  
4 to conjunctively manage the waters of the State, regardless of  
5 source.

6           THE COURT: So let me just stop you there for a  
7 minute because then you're talking about 533.024, which talks  
8 about using the best available evidence, but that is under a  
9 legislative declaration. Are you saying that that legislative  
10 declaration basically gives him the authority under using the  
11 science to then jointly manage everything?

12           MR. BOLOTIN: I'm saying that the legislative  
13 declaration provides the lens that the State Engineer is  
14 supposed to look through when he reads the rest of his  
15 authority under the statute.

16           THE COURT: Okay.

17           MR. BOLOTIN: So he has an obligation to protect  
18 existing rights, not impaired decrees and --

19           THE COURT: Right. All of the --

20           MR. BOLOTIN: All of the other things.

21           THE COURT: Right.

22           MR. BOLOTIN: So when he's using his other powers, he  
23 should keep in mind what the legislature told him the policy of  
24 the State should be. So it's not an independent source of  
25 authority. It's, like I said, the lens that he should look

1 through when looking at his individual types of authority.

2 THE COURT: So basically when this is the directive  
3 that he is given under the declaration that he still has to  
4 have the authority based on other statutory provisions, and  
5 that's what you're talking about; is that correct?

6 MR. BOLOTIN: Correct.

7 THE COURT: Okay.

8 MR. BOLOTIN: And so under the policy declaration  
9 regarding conjunctive management, it says that to manage water  
10 regardless of a source, and that means managing surface and  
11 groundwater as interconnected sources of water and to utilize  
12 the best available science in doing so. And again, that  
13 informs how he manages the other requirements, such as  
14 protecting existing rights, not impairing decrees, considering  
15 the public interest, et cetera.

16 Yes, as we've heard a lot over the last few days, the  
17 water law often refers to basin management, but what  
18 constitutes a basin is naturally a scientific finding. The  
19 State Engineer found all of these basins at one point in time,  
20 and I don't think anybody has challenged the State Engineer's  
21 authority to say that --

22 THE COURT: So I guess my question is if the water  
23 engineer has found these basins to exist as a scientific  
24 finding, and now there are 233 basins, how can he then say that  
25 there are six basins -- seven basins that are actually now one

1 basin if he's already -- I mean, if he's already made that  
2 decision based on a scientific finding that it's a singular  
3 basin, how does he then change it to seven basins as one?

4 MR. BOLOTIN: That requires going back and  
5 understanding how these original basins were laid out. A lot  
6 of these basin boundaries were drawn in the '50s, '60s and  
7 '70s through reconnaissance reports. The State Engineer  
8 worked hand-in-hand with the U.S. geological survey, and they  
9 were based mostly at the time on topographic features, such as  
10 there's a valley here, that's a basin; there's a valley here,  
11 that's a basin. But the State Engineer is not bound by *stare*  
12 *decisis*, despite what some other parties have said earlier.  
13 That is in Nevada case law, and it -- the State Engineer, the  
14 science says this is one basin, and it doesn't make sense for  
15 the State Engineer to not be able to update the scientific  
16 findings he's found.

17 Up until the pumping test, people thought that these  
18 were separate basins. The fact is that pumping even a fraction  
19 of the existing water rights out there show water levels that  
20 dropped almost uniformly in response to that pumping stress on  
21 the system.

22 THE COURT: So, but you would concede though there's  
23 not any specific framework within the statute that its  
24 direction as to how the Nevada State Engineer would determine  
25 whether or not singular basins should be managed jointly?

1 MR. BOLOTIN: I would point, and I haven't gotten  
2 there yet, to NRS 532.120.

3 THE COURT: Okay. And that's the area one that I  
4 talked about earlier?

5 MR. BOLOTIN: No. This is -- you were talking about  
6 534.

7 THE COURT: Did you say -- oh, 532. Sorry.

8 MR. BOLOTIN: Uh-huh.

9 THE COURT: Sorry. 532.

10 MR. BOLOTIN: And I don't have the exact statutory  
11 language in front of me, Your Honor, but that --

12 THE COURT: The rules and regulations regulating and  
13 governing --

14 MR. BOLOTIN: Yes. The --

15 THE COURT: -- contest.

16 MR. BOLOTIN: The first part of the statute provides  
17 that the State Engineer can create reasonable rules and  
18 regulations I think to exercise the rest of his powers issued  
19 under the --

20 THE COURT: Well, it says, As may be necessary for  
21 the proper and orderly execution of the powers conferred by  
22 law. So if those original powers are conferred on him or her,  
23 that within that they can make -- they can make such reasonable  
24 rules and regulations regarding those. Right?

25 MR. BOLOTIN: And that's where -- yes. And so by

1 laying out basically the rules of the road with LWRFS, that  
2 brings it into its one basin, and the rest of his authority  
3 does apply to managing on a basin by basin basis, but the  
4 basins are a scientific finding, Your Honor, and he didn't  
5 think -- I don't know how else to say it, Your Honor. They  
6 weren't -- they were treated separately until we figured out  
7 these are not separate basins, and we have to protect senior  
8 rights, and we have to protect the river.

9 THE COURT: And I understand -- I understand the  
10 reasoning. I understand the --

11 MR. BOLOTIN: And those are in the, yeah.

12 THE COURT: -- the scientific basis. What I'm stuck  
13 on is what confers on him the authority now to then just  
14 decide, okay, I'm going to treat these all as one joint basin  
15 because, I mean, it does not appear that there is anything  
16 explicitly in the statute that allows him to make a decision  
17 about joining together basins and then figuring out how to  
18 manage those existing rights within those basins.

19 MR. BOLOTIN: And I think -- I do touch on that a  
20 little bit later, but, yeah, I'll touch on that in a second. I  
21 promise, Your Honor.

22 THE COURT: That's okay. I realize I'm asking for a  
23 lot, but I really just need you to spell it out.

24 MR. BOLOTIN: And it's -- it hinges mostly on he  
25 can't impair decrees, and he has to protect existing rights,

1 and that is in the statute. That's the main charge of the  
2 State Engineer's office in general.

3 So again, the water law does often refer to basin  
4 management, but what constitutes a basin is a scientific  
5 finding.

6 The pumping test, the best available science here  
7 reveal that these subbasins that were formerly treated as  
8 separate basins are underlain by one single highly transmissive  
9 carbonate aquifer that shares the same supply of water. This  
10 can be seen in demonstrative. And the ground water levels and  
11 spring flows, and this is important, have never fully recovered  
12 to where they were before the pumping test. This is from a  
13 little over 14,000 acre-feet on average over those two years  
14 pumped, which is far less than the volume of water rights that  
15 exist on paper in this area. This is one basin.

16 The petitioners' descriptions of the mega basin or  
17 super basin should not persuade the Court otherwise. The  
18 number of basins in the State or what constitutes a basin is  
19 also not dictated by the legislature. This is a factual  
20 scientific finding that is within the State Engineer's  
21 specialized area of expertise, and the finding that the LWRFSS  
22 is a single basin is supported by the evidence in the record.

23 The prior appropriation doctrine requires that all  
24 water rights are granted subject to existing rights and cannot  
25 interfere with more senior rights. In times where the volume



1 of water available is less than needed to serve all rights and  
2 curtailment is necessary, the prior appropriation doctrine  
3 requires that senior rights get all of their water first before  
4 juniors get any of their water.

5           The prior appropriation doctrine first in time, first  
6 and right has no limits between surface water or groundwater or  
7 geographic location. The doctrine's fundamental holding is  
8 that older rights are protected from conflicts caused by newer  
9 rights.

10           The doctrine says nothing about limiting its  
11 application based on hydrographic area or proximity between  
12 rights.

13           A lot of the petitioner's arguments regarding a basin  
14 by basin approach ignores that most basins in the State of  
15 Nevada are underlain by single aquifers and therefore, at the  
16 very least, have less transmissivity between separate basins  
17 such that, yes, who is junior, who is senior can usually be  
18 determined on a single geographic basin.

19           But here, substantial evidence in the record  
20 following the 1169 aquifer test that subbasins making up the  
21 LWRFs are similarly underlain by a single highly transmissive  
22 carbonate aquifer. Therefore, delineating this as a single  
23 basin and administering it accordingly is in compliance with  
24 what petitioners would call basin by basin management because  
25 it is one basin.

1           The scientific fact is that these formerly -- these  
2 subbasins that were formerly treated independently do not have  
3 independent supplies of waters. They share --

4           THE COURT: Oh. So then is it your position that all  
5 of the water rights holders in Nevada are -- don't really have  
6 any sort of finality or ability to reasonably rely on where  
7 they are because at some point in time in the future the Nevada  
8 State Engineer might determine that the basin actually needs to  
9 be jointly managed with another basin?

10          MR. BOLOTIN: No, Your Honor. This is a very unique  
11 area of Nevada. It is unlike all of the other areas.

12          Most of the basins proximity to each other does  
13 matter. Seniority can be determined on a basin by basin basis,  
14 but to turn your question on your head, Your Honor, if it was  
15 shown that someone with a 2020 water right in Reno was causing  
16 a well to fail with a 1920 water right in Las Vegas, the State  
17 Engineer would have to have the power to shut off the one in  
18 Reno. That's not the case here. There isn't a single long  
19 aquifer that stretches from Reno to Las Vegas.

20          THE COURT: Right.

21          MR. BOLOTIN: But --

22          THE COURT: But there's a curtailment procedure to do  
23 that; right?

24          MR. BOLOTIN: Correct.

25          THE COURT: Okay.

1 MR. BOLOTIN: And I'm going to get to it in a second,  
2 but the State Engineer hasn't instituted curtailment here.

3 THE COURT: Okay.

4 MR. BOLOTIN: Doing what the State Engineer did in  
5 Order 1309 fully complies with the legislature's policy  
6 objectives. In NRS 533.024(1)(e) to manage water conjunctively  
7 regardless of source, and the State Engineer's duty to honor  
8 prior appropriation and protecting existing rights under  
9 NRS 533.430, sub 1 and 534.020, sub 1.

10 THE COURT: Wait. Slow down. Say that one more  
11 time.

12 MR. BOLOTIN: Yep. 533.430, sub 1 is the surface  
13 water, where it is in the surface water statute. 534.020 1 is  
14 where protecting existing rights exists in the groundwater  
15 statute.

16 And again, this protection that's required by law is  
17 not limited in the manner argued by some petitioners. It is  
18 not limited based on proximity or source.

19 While petitioners attempt to completely jump the  
20 legislature's policy declaration regarding conjunctive  
21 management, this declaration of policy is entitled to great  
22 weight.

23 While the State Engineer doesn't argue that it's an  
24 independent source of authority, it does provide the policy  
25 goals for how the State Engineer utilizes the rest of his

1 authority in NRS 532 through 534, and it was under that  
2 authority through the lens of the legislature's policy  
3 declarations that the State Engineer appropriately rendered  
4 Order 1309.

5           Again, at the center of this case and the LWRFS is  
6 the decreed Muddy River. The State Engineer is prohibited by  
7 law from carrying out his duties in a manner that conflicts  
8 with the decree, and that's in NRS 533.0245.

9           Full stop. There is no caveat that he can't -- that  
10 he can let decreed systems be harmed by more junior water  
11 rights holders if the harm is caused by groundwater pumping or  
12 caused by water use that's far away. These carve outs are what  
13 many petitioners essentially request in this case, and these  
14 carve outs don't exist in the law.

15           Further, NRS 534.110, sub 6, authorizes the State  
16 Engineer to conduct investigations in groundwater basins where  
17 it appears that replenishment of groundwater supply is  
18 inadequate to serve the needs of all vested and permanent  
19 rights holders.

20           That statute also explicitly provides that the State  
21 Engineer can order withdrawals be restricted to conform to  
22 priority rights or what it is called curtailment. And again,  
23 curtailment hasn't happened in this case, but the investigation  
24 was nonetheless allowed before such a decision is made.

25           And as I said earlier, 534 -- 532.120 provides the

1 authority for the State Engineer's actions to create the rules  
2 and regulations needed to properly administer the rest of his  
3 powers provided by the statutes, and the best available science  
4 dictates that Order 1309 is necessary in order for the State  
5 Engineer to comply with his duties regarding senior rights and  
6 the water resources in this region.

7 THE COURT: So let me just ask you then because, you  
8 know, a lot of the statutes that you're referring to refer to a  
9 singular basin, right. So is it your contention then that it  
10 is the Nevada State Engineer's ability based on the scientific  
11 evidence to then redesignate what a basin is and then manage it  
12 accordingly that way? Even though there are already these 230  
13 some odd established basins?

14 MR. BOLOTIN: I think if I understand your question  
15 correctly, Your Honor, that is the -- the State Engineer's  
16 position is that he needs to treat the areas that are -- the  
17 legislature doesn't define what a basin is anywhere in the  
18 statute.

19 THE COURT: So that is something that the State  
20 Engineer can do and that he can change at any time?

21 MR. BOLOTIN: It needs to be supported by substantial  
22 evidence, and the State Engineer does -- he has had hearings  
23 where he adjusts perennial yields of basins. He moves a  
24 boundary here. He moves the boundary there. There are areas,  
25 such as in the Death Valley Flow System, where multiple basins

1 share a perennial yield. These are scientific determinations  
2 that the State Engineer's office makes on a regular basis.

3 THE COURT: But this is the first time that the State  
4 Engineer has actually determined conjunctive management and  
5 joint management; is that correct?

6 MR. BOLOTIN: I believe so, Your Honor. This is --  
7 like I said, there's other times where he's adjusted --

8 THE COURT: Yeah. He might adjust like a boundary  
9 here and there, but if you're talking about putting multiple  
10 already existing of the 230 some odd basins together, that's  
11 the first time that he's done that for joint management, and  
12 this is the first time that there's also the consideration of  
13 conjunctive management for managing a surface rights and the  
14 groundwater rights?

15 MR. BOLOTIN: Correct. The State Engineer has  
16 considered on an individual basis groundwater pumping's effect  
17 on surface water sources.

18 THE COURT: Sure.

19 MR. BOLOTIN: And other rivers and has denied  
20 applications or approved them for less than they were asked on  
21 the basis that they -- he's still doing conjunctive management  
22 at that time because he's treating them as one source -- two  
23 sources together that can affect each other, but this is -- I  
24 would say the State Engineer's largest step into fully  
25 conjunctively managing an entire source because the pumping

1 test was so undeniable that something needed to be done here.

2 And I did want to bring up one thing, Your Honor, if  
3 I can go over to the map that CSI had.

4 THE COURT: Sure.

5 MR. BOLOTIN: I do think that there's a little bit  
6 of -- the word designation has a few different meanings in the  
7 law.

8 THE COURT: Sure.

9 MR. BOLOTIN: And in this map, that's kind of laid  
10 out. So I think people have throughout the case have said  
11 these are all the designated basins, and, yes, this is a basin,  
12 this is a basin. But if you look at the key, the gray ones are  
13 the ones that have been designated under 534.030.

14 THE COURT: Okay.

15 MR. BOLOTIN: And these are the ones no one doubts  
16 that they're a basin themselves --

17 THE COURT: A basin. But they haven't actually gone  
18 through a process where they've been declared a basin?

19 MR. BOLOTIN: No. They're basins because Coyote  
20 Springs -- I mean not Coyote Springs. Kane Springs Valley, for  
21 example --

22 THE COURT: Right.

23 MR. BOLOTIN: -- has not gone through the 534.030  
24 process.

25 THE COURT: Okay. And remind me what the -- are you

1 talking about the 534 --

2 MR. BOLOTIN: Designated for further administration  
3 so he can do assessments and other --

4 THE COURT: Oh, okay. Right. Right. Right. Okay.

5 MR. BOLOTIN: -- it opens up the tools, the toolbox  
6 of other things that he can use.

7 THE COURT: Okay.

8 MR. BOLOTIN: But no one denies that it's a basin.

9 THE COURT: A basin. Okay.

10 MR. BOLOTIN: We say that it's a subbasin, part of a  
11 bigger basin, but even Lincoln, Vidler and CSI, they call  
12 Coyote -- Kane Springs Valley a basin.

13 THE COURT: Okay.

14 MR. BOLOTIN: There's just a difference between  
15 what's designated and what's not, and in the general sense, all  
16 of the basins have been designated. They're all basins, but  
17 when it's -- in this map, where it's a gray, that means it went  
18 through the 534.030 process either through the petition or the  
19 State Engineer held a hearing in that basin saying these are  
20 additional administration so that he can monitor all of the  
21 wells. He can assess groundwater rights in those basins,  
22 various other parts of the statute.

23 THE COURT: Okay. But there's also nothing  
24 explicitly in the statute that allows for the Nevada State  
25 Engineer to then decide if a designated basin can now be



1 treated as a subbasin of a larger basin; correct?

2 MR. BOLOTIN: There's nothing that explicitly says it  
3 other than the State Engineer used the best available science  
4 at the time to establish the 232 or --

5 THE COURT: Right. Or, yeah, whatever. Or now it's  
6 231 with one larger basin with seven sub- or seven --

7 MR. BOLOTIN: Yeah, seven subbasins. Correct.

8 THE COURT: Okay. Subbasins.

9 MR. BOLOTIN: Or a part of, yeah. Six and part of a  
10 seventh.

11 THE COURT: Okay.

12 MR. BOLOTIN: As to the evidence considered, once  
13 again the parties' submissions varied in form and substance,  
14 ranging from the 1169 pumping test water level data in the area  
15 since the pumping test, modeling efforts, new geological  
16 studies, climate information and other evidence submitted by  
17 the various parties. The State Engineer considered all of  
18 these submissions. And using his expertise, the actual results  
19 from the pumping test and the data seen since then were given  
20 the most weight by the State Engineer. We do not dispute that.

21 He didn't ignore anyone's evidence though. He just  
22 gave the most weight to the evidence. Then his expertise  
23 actually detailed what was actually happening when water was  
24 pumped from the region and what recovery was actually observed  
25 when the volume of pumping was reduced, which as we can see,

1 was not very much recovery at all.

2 Believe me, models and other studies presented have  
3 value and were considered throughout the process. But when you  
4 can see what the actual effects of pumping existing water  
5 rights are, it makes some of these theoretical models and other  
6 types of studies less persuasive. And it was this data related  
7 to the actual 1169 aquifer pumping test and the monitoring of  
8 groundwater levels and spring discharge since that showed that  
9 even pumping a fraction of existing rights in the area causes  
10 drastic results uniformly throughout the LWRFSS; that is, during  
11 the pumping test, similar groundwater responses were seen from  
12 Kane Springs Valley to the northwest portion of Black Mountains  
13 Area from Coyote Springs Valley and the California Wash and  
14 everywhere in between, and significant drops in spring  
15 discharges at the headwaters of the Muddy River.

16 Drops in spring discharge that have never fully  
17 recovered since the aquifer test, and again, this is all  
18 spelled out there, and I think it's most dramatically seen in  
19 the headwaters Springs. They didn't even get close to  
20 recovering to where they were.

21 THE COURT: So let me ask you because, you know,  
22 Lincoln and Vidler contend that the pumping was never done in  
23 Kane Springs Valley. So then how can you determine that the  
24 drops occurred in Kane Springs Valley?

25 MR. BOLOTIN: So at the time that the pumping test

1 was done, there was no pumping in Kane Springs Valley at all,  
2 and I do not think that it's working backwards as their counsel  
3 said. If the data we had shows if the north -- right here is  
4 the --

5 THE COURT: Yeah, the upper --

6 MR. BOLOTIN: -- the upper one. A very similar  
7 response as the northern Coyote Spring Valley well, and even  
8 though it was less severe than some of the other groundwater  
9 basins, it followed the same pattern following the pumping. So  
10 that indicated to the State Engineer that it did share the same  
11 source.

12 And I would suggest, Your Honor, that the 8,000  
13 acre-foot or less and the continuing process, the State  
14 Engineer is never going to be allergic to additional testing or  
15 information. The State Engineer would welcome the parties of  
16 interest in Kane Springs Valley to do a pumping test, prove  
17 that the State Engineer is wrong or that the boundary is not  
18 what it should be. Maybe it's a part of Kane Springs Valley.  
19 Maybe it's just the southern part, but the geology indicates  
20 that the carbonate rock aquifer does extend in the Kane Springs  
21 Valley, and it had very similar responses to the pumping tests  
22 as the other areas that were pumped as part of the pumping  
23 test.

24 And again, these responses to the pumping test are  
25 the main problem here. The Springs feed the Muddy River. The

1 Muddy River is a decreed system, meaning that all water rights  
2 in the river predate 1905, and are therefore senior to all the  
3 groundwater rights in the LWRFS.

4 Further, the Muddy River is the only known habitat  
5 and the Moapa dace, an endangered fish. Therefore, under the  
6 State Engineer's duty to protect existing rights based on  
7 seniority, his duty to protect decrees and his duty to consider  
8 the public interest, the State Engineer not only had authority,  
9 but had a duty to follow the science here, and that means  
10 finding that the LWRFS with the boundaries identified shares a  
11 single supply of water and therefore must be managed as one  
12 basin with a perennial yield that is far less than what exists  
13 on paper and must be 8,000 acre-feet or less.

14 It's true that during the hearings preceding  
15 Order 1309 there was no consensus among the participants as the  
16 volume of sustainable groundwater in the LWRFS.  
17 Recommendations range from as low as zero acre-feet allowed, as  
18 high as 30,000 acre-feet allowed; however, most experts agree  
19 that the right amount that could be pumped without hurting  
20 senior rights or the dace was somewhere between the extreme  
21 ends of that range.

22 Substantial evidence supports the finding of 8,000  
23 acre-feet or less, and the State Engineer was not required to  
24 disprove every other potential figure between 30,000 acre-feet  
25 and zero. We know that it cannot be over 8,000 acre-feet

1 because we've seen what happens when more than 8,000 acre-feet  
2 are pumped from the area.

3           Since the end of the 1169 pumping test, pumping has  
4 decreased from over 12,000 acre-feet a year to about an average  
5 of 8300 acre-feet per year. This has led to groundwater levels  
6 and spring flow nearly stabilizing; however, neither has  
7 returned to the pretest levels before the pumping test;  
8 however, the 8,000 acre-foot or less number also recognizes  
9 that other nonLWRFS basins have seen increasing groundwater  
10 levels in line with increased precipitation. Thus if it were  
11 to become drier, it's possible that the current level of  
12 pumping over 8,000 acre-feet could once again lead to drops in  
13 groundwater level and spring flows.

14           Thus, based on all the evidence in the record, the  
15 State Engineer came to the supported conclusion that 8,000  
16 acre-feet is the maximum amount that can be developed. And  
17 ultimately this number may need to be reduced further to  
18 protect people's interests and their senior rights. And again,  
19 the State Engineer stated that monitoring is necessary. So  
20 this number could be further reduced if the conditions so  
21 indicate that doing so is necessary to protect senior rights or  
22 the habitat of the fish, which are essentially one and the  
23 same, Your Honor.

24           Importantly, in setting the boundaries of the LWRFS  
25 and the sustainable pumping volume, it's also important to

1 explain what the State Engineer did not do here. This is  
2 important because many petitioners accuse Order 1309 of  
3 containing provisions that are nowhere in the text of the  
4 order.

5 Order 1309 did not change the priority date of any  
6 water right, for example.

7 THE COURT: So it may not have changed the priority  
8 date, but if they're all in one basin now, it does change the  
9 priority order?

10 MR. BOLOTIN: Not necessarily. We haven't gotten to  
11 the point of what to do with -- we're setting up the facts of  
12 the boundary and the perennial yield, but the State Engineer  
13 hasn't said he's going to do strict curtailment by priority.  
14 There's a lot of water rights that are senior but aren't  
15 necessarily being pumped. There's water rights that are being  
16 pumped, but are more recent. It's -- I know a lot of people  
17 used the word mega mess throughout the last few days. The  
18 State Engineer is trying to -- the mega mess exists, 1309 or  
19 no. The State Engineer's 1309 is the first step in solving the  
20 mega mess by laying out what the ground rules are, and then  
21 we're going to have another hearing or hearings to see what the  
22 next steps are. One of those might involve, for example, the  
23 534.030 designation hearing to designate the one basin in need  
24 of additional administration.

25 THE COURT: But you agree that, it's your position

1 that it's the Nevada State Engineer that decides what all those  
2 rules are?

3 MR. BOLOTIN: The State Engineer --

4 THE COURT: Is --

5 MR. BOLOTIN: He has rule-making authority under the  
6 law in order to make his powers --

7 THE COURT: No. You talk about the statutes,  
8 which --

9 MR. BOLOTIN: Such reasonable rules and regulations  
10 as may be necessary for the proper and orderly execution of  
11 powers conferred by the law.

12 THE COURT: Okay. So there's nothing in the statute  
13 that explicitly gives authority for joint management. So  
14 there's nothing explicitly in the law that gives direction as  
15 to how to reprioritize those rights; correct?

16 MR. BOLOTIN: Correct. Other than I do think if the  
17 parties -- say we reached 534.030 designation, things get worse  
18 out there, something like that, I do think the State Engineer  
19 would have authority to do the worst -- the worst result which  
20 would be curtailment by priority.

21 THE COURT: Curtailment. Okay.

22 MR. BOLOTIN: We hope we don't reach there. The  
23 State Engineer does not like to curtail. He's not in the  
24 business of ruining people's livelihoods or businesses. That's  
25 not what he wants to do, but if things don't get figured out,

1 pumping were to increase, the river is going to go down, that's  
2 the conclusion if there's not some other resolution reached  
3 before then.

4 Order 1309 also did not grant or revoke any water  
5 rights, and Order 1309 did not curtail anyone's water rights.  
6 Order 1309 basically found that the LWRFS is one basin that is  
7 overappropriated and has been overpumped, but it did not  
8 curtail anyone's water rights.

9 I think somebody else said this earlier today. There  
10 are basins across the State that are both overappropriated and  
11 overpumped, and yet they're not curtailed. And they won't be  
12 until the State Engineer specifically says withdrawals will be  
13 restricted to conform to priority rights, have a hearing, give  
14 people due process and move down that path, but that has not  
15 happened yet here in the LWRFS, and for now that LWRFS is  
16 simply another overappropriated and overpumped basin in the  
17 State of Nevada, the driest state in the nation.

18 Order 1309 also did not designate the LWRFS as a  
19 critical management area or a CMA. There is currently only one  
20 CMA in Nevada, and that's in Diamond Valley in Eureka County.  
21 And while that remains an option in the LWRFS during some of  
22 the next phases, Order 1309 did not designate the LWRFS as a  
23 CMA. And if the Court has another week or two, I can tell it  
24 all about Diamond Valley and everything that's gone out there.

25 Rather, Order 1309 was a basic exercise of the State



1 Engineer's authorities and duties as prescribed by the  
2 legislature to create the rules and regulations he needs to use  
3 his powers to protect existing rights and consider the public  
4 interest in doing so and not allowing impairment of decreed  
5 sources. And substantial evidence in the record on appeal  
6 supports the State Engineer's finding in Order 1309, and this  
7 is when the Court should be at its most deferential with these  
8 scientific findings.

9           Again, I may have already said this, but I want to  
10 repeat it because it's in the briefs over and over again.  
11 Simply because the State Engineer was not persuaded by some  
12 evidence does not mean that he ignored that evidence. And the  
13 Court should reject the repeated invitations to reweigh the  
14 evidence and request from the petitioners that the Court  
15 substitute its judgment for the State Engineer on these  
16 scientific findings. Doing so would violate the standard of  
17 review that's been laid out in the case law of the water law of  
18 Nevada.

19           As to the specific substantial evidence, I don't want  
20 to go through everything we've argued in the briefs or  
21 everything I've already touched on or everything everybody else  
22 has touched on, but I do want to hit some of the high notes  
23 that we've heard over the last couple of days.

24           The State Engineer did consider climate, and  
25 substantial evidence in the record disproved this theory that

1 climate alone caused the drops in water levels and spring  
2 flows. The State Engineer is entitled to give more weight to  
3 certain witnesses and evidence than others, and this does not  
4 mean the State Engineer ignored that evidence. Substantial  
5 evidence in the record supports the State Engineer's findings  
6 that even if they run counter to some of the evidence  
7 presented, this is natural considering that people have their  
8 own interests they want to advance in these types of hearings.

9           Some parties suggest that the State Engineer should  
10 have followed their modeling or water budget analysis rather  
11 than placing more weight on the results of the aquifer pumping  
12 test. This is an example of petitioners asking the Court to  
13 improperly reweigh the evidence.

14           The water budget is basically an estimate based on  
15 how much water flows in and out of an area. The pumping test  
16 shows real-world effects of pumping on the system, and those  
17 real-world effects were dramatic and showed groundwater levels  
18 and spring flows throughout the LWRFS 1100 square miles  
19 falling, and they've never fully recovered.

20           I wanted to touch on the argument that said what's  
21 stopping the State Engineer from making a Nevada wide mega  
22 basin. it's in the Order 1309 itself, Your Honor. The State  
23 Engineer found that some basins that border the LWRFS did not  
24 meet the criteria to be included in the LWRFS. The State  
25 Engineer could not, as CSI and some others allege, combine

1 every basin into one basin for management. There would need to  
2 be a defensible basis for treating formerly separate basins as  
3 one basin, and there is substantial evidence supporting how the  
4 State Engineer did so here in the LWRFS.

5 Multiple parties had experts testify that Kane  
6 Springs Valley should be included in the LWRFS. So it's not  
7 like the State Engineer pulled that conclusion out of thin air  
8 either. There's evidence in the record showing that the  
9 geology of Kane Springs is consistent with the rest of the  
10 LWRFS and hydrographs from the 1169 pumping test showed similar  
11 patterns between the monitoring well and Kane Springs Valley  
12 and the rest of the LWRFS.

13 I think there's some discussion about attenuated, and  
14 I think that can be attributed to the fact that Kane Springs  
15 Valley is further away from the other pumping. So it takes a  
16 little bit longer for the pumping effects to reach there, but  
17 the pattern is the same: Even if it's not as quickly to drop,  
18 it follows the same pattern. It shares the same source of  
19 supply as the other water -- as the other subbasins that make  
20 up the LWRFS.

21 And again, simply because certain parties like CSI  
22 and Lincoln County Water District and Vidler would have  
23 preferred that the State Engineer rely on their other evidence,  
24 including the CSAMT geologic studies that they supplied, it was  
25 the State Engineer's prerogative to be persuaded by other

1 parties like the federal government's analysis and the findings  
2 from the -- and finding that the findings from the aquifer test  
3 were more credible.

4 This is especially true since this data provided by  
5 these parties said nothing about the permeability of the  
6 alleged faults such that there's no real evidence showing that  
7 these was actually act as a barrier to flow; whereas the  
8 aquifer test results showed clearly that the groundwater levels  
9 in Kane Springs Valley reacted to pumping in a similar fashion  
10 as the other areas of the LWRFs.

11 I also wanted to touch on Ruling 5712 that we heard  
12 Lincoln County and Vidler talk about before lunch. It's  
13 important to note that was issued before the pumping test  
14 commenced at all. And in its own language it acknowledges  
15 strong hydrologic connection between Kane Springs Valley and  
16 the other LWRFs subbasins such that the State Engineer actually  
17 awarded less water than what Lincoln County Water District and  
18 Vidler actually asked for in the applications that led to that  
19 ruling.

20 Lincoln and Vidler's arguments concerning that what  
21 occurred before 2010 are deserving of little weight in light of  
22 the pumping test results that have been seen since.

23 These findings are -- one second. I did want to also  
24 touch on the *Mineral County* case that Lincoln-Vidler talked  
25 about before lunch too. It's the State Engineer's position

1 that for lack of a better word -- term, they cherry picked the  
2 language from the case and argued that their permitted rights  
3 that the Court is focused on protecting in that case. That  
4 case dealt with the finality of a decree and the inability to  
5 reopen a decree to send more water down the Walker Lake in  
6 Northern Nevada.

7 The better analogy, if we're going to talk about  
8 Mineral County here, is that the State Engineer must protect  
9 decrees certainty. That would be the Muddy River and the  
10 decreed rights in there, and that would be the junior  
11 groundwater rights would have to fall subservient to the Muddy  
12 River rights.

13 Your Honor, would it be okay if I take a five-minute  
14 break?

15 THE COURT: That's okay.

16 (Proceedings recessed at 2:31 p.m., until 2:36 p.m.)

17 THE COURT: Okay. Back on the record.

18 THE COURT RECORDER: On the record.

19 MR. BOLOTIN: I want to go back and make a point of  
20 clarification regarding the individual priorities in the  
21 subbasins. It's important to note that as of right now, as we  
22 stand here today, the water rights do retain their individual  
23 priorities in those subbasins. It's just what to do with that  
24 and whether that stays the case is for the next phase of the  
25 administrative process, and I think there's some confusion

1 about this because in Interim Order 1303, I think there was  
2 either an exhibit or an attachment that did say here's all the  
3 priorities in a bucket. This is who would be senior, and this  
4 is who would be junior, but that was not one of the things that  
5 was retained over from Order 1309. That was one of the things  
6 that was rescinded because it was not specifically retained in  
7 Order 1309.

8 And again maybe that's where things head. Maybe  
9 that's what has to happen, but right now everybody's individual  
10 water rights are still in their --

11 THE COURT: As they are within the basin, but that  
12 may change depending on what the water engineer decides will be  
13 the process.

14 MR. BOLOTIN: When he follows the correct process for  
15 what needs to happen, whether we head towards curtailment, CMA  
16 designation, something else to protect senior rights still  
17 based on priority. But as we stand here today, he has not  
18 thrown them all into a bucket and said seniority from top to  
19 bottom. But he's basically --

20 THE COURT: No, but, I mean, the order is that  
21 everything is going to be jointly managed in one basin;  
22 correct?

23 MR. BOLOTIN: That these are the boundaries as one  
24 basin, and it has a perennial yield of 8,000 acre-feet or less.

25 And one other thing related to the King Springs

1 Valley stuff that I was talking about before the break. The  
2 State Engineer's findings are not undermined by his  
3 acknowledgment that more data will be helpful going forward.  
4 Substantial evidence supports Kane Springs inclusion in the  
5 LWRFS. But, of course, more data to further hone these  
6 findings is helpful. And, in fact, the State Engineer would  
7 welcome Lincoln County Water District or Vidler Water Company  
8 or CSI or others to try additional aquifer tests in the Kane  
9 Springs portion of the LWRFS or elsewhere (video interference)  
10 further refine the data; however, based on some of the  
11 arguments, it seems as though some parties would rather rely on  
12 their models and that say what could happen rather than what  
13 actual pumping shows happens, and this is likely because the  
14 substantial evidence that exists shows that there is a  
15 connection.

16 In the meantime, the State Engineer should not be  
17 required to sit on his hands and let potentially irreparable  
18 harm be done to the resource when he already has substantial  
19 evidence supporting the decisions made in Order 1309.

20 And that's one more point regarding -- this is an  
21 estimate. Perennial yields around the State are explicitly  
22 estimates. The State Engineer cannot get it down to the last  
23 drop of what an exact number is. There's a reason why most  
24 perennial yields, if not all of them, end in round numbers like  
25 50 or a hundred or a thousand, et cetera.

1           But the most important thing is that his estimate is  
2 based on substantial evidence.

3           Similarly, the geological and hydrological evidence  
4 support the finding that Nevada Cogenerations well locations  
5 are also within the LWRFS.

6           Their primary reliance is on the SNWA model that many  
7 participants found inaccuracies with. This was the multiple  
8 linear regression model; however, the geology is very similar  
9 to the rest of the LWRFS, and the monitoring in this area  
10 showed the groundwater reacted very similarly to the 1169  
11 pumping test, as did the other parts of the LWRFS. And this is  
12 also -- the State Engineer did find that parts of the Black  
13 Mountains Area are not part of the LWRFS because he did give  
14 credence to the -- there is a fault that the State Engineer  
15 identified was low permeability structure, and therefore did  
16 not allow the same level of transmissivity as the -- I think  
17 it's the northwest portion of Black Mountains Area.

18           I also want to touch on Nevada Cogeneration's  
19 argument regarding Assembly Bill 51 in 2019. To be honest,  
20 Your Honor, this argument is completely off base. First,  
21 failed legislation is deserving of little to no weight  
22 regarding legislative intent. It could mean, as the parties  
23 argue, it means the legislature didn't want to give the State  
24 Engineer this power, but it could just as also mean that the  
25 legislature thought that it was an unnecessary because the



1 State Engineer already had enough power to do what he needed to  
2 do.

3           Additionally, NCA has failed to make any showing that  
4 the legislature's policy direction to conjunctively manage  
5 Nevada's water resources is vague or ambiguous such that the  
6 Court should even be looking at legislative history in  
7 determining what was meant by those policy declarations.

8           THE COURT: So then what about the testimony that was  
9 presented that the State Engineer doesn't feel that they have  
10 the tools or equipment or the power to do the management,  
11 the -- I just forgot the word for a second, the co-

12           MR. BOLOTIN: Conjunctive management.

13           THE COURT: Conjunctive management.

14           MR. BOLOTIN: You read my mind, Your Honor, because  
15 that's the next thing I was about to talk about.

16           But again, we shouldn't get there because there's  
17 been no finding or showing that the text was vague or  
18 ambiguous, but even if it was shown, obviously additional  
19 guidance on how to conjunctively manage water resources would  
20 be helpful in effectively implementing the legislature's policy  
21 direction.

22           As the State Engineer testified in that hearing, it  
23 would be helpful to have more direction on how to effectively  
24 implement conjunctive management. And, in fact, that might  
25 prevent the State Engineer from being sued by eight different

1 people if there's more specific guidance in the law moving  
2 forward; however, the policy declaration is still in the law,  
3 and it is the State Engineer's duty to adhere to it in managing  
4 these State's water resources.

5           Lastly, and this is important, AB 51 has nothing to  
6 do with this case. It was a case that was very -- it was  
7 proposed legislation that was very specifically tailored to the  
8 Humboldt River in Northern Nevada, and a major portion of  
9 Assembly Bill 51 dealt with compensating senior water right  
10 holders with money instead of water for conflicts caused by  
11 junior groundwater use, and that is something that the law does  
12 not provide for as it stands right now, and that was a major  
13 part of the testimony in opposition to that bill and a likely  
14 major reason that the legislation failed.

15           This compensation with money for conflicts with  
16 senior rights is not part of Order 1309. Order 1309 rather  
17 leans on the long-held doctrine of prior appropriation: First  
18 in time, first in right, protecting senior rights, which  
19 remains the law of Nevada.

20           Substantial evidence likewise supports the finding in  
21 1309 that carbonate and alluvial aquifers are also connected  
22 while supporting the idea that there may be discrete pockets in  
23 the LWRFS that do not have the same close connection, hence why  
24 Order 1309 held that change applications will still be  
25 considered on a case-by-case basis and denials or approvals of

1 those individual change applications also can be challenged  
2 under 533.450 on a case-by-case basis.

3           Lastly, there's this issue raised by SNWA and MVIC in  
4 regards to Order 1309's effects on the Muddy River Decree.  
5 Substantial evidence supports the State Engineer's conclusions  
6 that 8,000 acre-feet or less is sufficient to maintain the  
7 current spring flow and could allow additional aquifer recovery  
8 in greater spring flow in the future, but the State Engineer  
9 also put in place substantial monitoring requirements that left  
10 the door open to further reduce the maximum sustainable amount  
11 of pumping if necessary to protect these senior rates. These  
12 parties primary concern is they allege that Order 1309's  
13 language regarding the current flow being sufficient to serve  
14 decreed rights is an impermissible reduction or  
15 requantification of the Muddy River's decreed rights.

16           Order 1309 did not requantify the decreed rights.  
17 The decreed rights are the same as they were when the decree  
18 was entered in 1920. The State Engineer simply applied a  
19 common method of calculating that irrigation water requirement  
20 to estimate the actual water needed to satisfy the vested  
21 rights in the decree. This doesn't recalculate the values in  
22 the decree for acreage or diversion rates and cubic feet per  
23 second. The tables, everything that's in the decree is still  
24 there today. The State Engineer didn't go through and try to  
25 edit that.

1 THE COURT: But what about the argument that  
2 consumption testing can't be used for any of the waters that  
3 have to do with the Muddy River Decree?

4 MR. BOLOTIN: Can you repeat that, Your Honor. I  
5 missed the first part.

6 THE COURT: So there's the argument that was made  
7 that a consumptive water test, like the Nevada State Engineer  
8 used with the alfalfa, you know, alfalfa crops is not the kind  
9 of test that is allowed when you're dealing with the Muddy  
10 Water Decree rights.

11 MR. BOLOTIN: Basically what the State Engineer did  
12 here was just try to find what the volume would be for the  
13 beneficial -- because beneficial use is still required even  
14 under a decree. You can't waste water or have -- just say I  
15 have water without any purpose to beneficially use it.

16 But regardless, Your Honor, I wanted to get to the  
17 next part though.

18 THE COURT: Okay.

19 MR. BOLOTIN: The part of Order 1309 is nowhere near  
20 as important to the long-term sustainability of the LWRFS as  
21 the ultimate determination that 8,000 acre-feet or less is the  
22 maximum possible sustainable amount of pumping and the  
23 boundaries of the LWRFS that are delineated in Order 1309.

24 And again the State Engineer said that this 8,000  
25 acre-feet might need to be reduced in the future to protect

1 those rights in the Muddy River Decree.

2           The State Engineer's goal here was actually to  
3 protect SNWA and MVIC's senior rights on the river and to  
4 protect the Moapa dace. Therefore, if the Court is inclined to  
5 find that this section of Order 1309 exceeded the charge of  
6 Order 1303 or the State Engineer's legal authority under the  
7 law regarding decrees, the State Engineer respectfully requests  
8 that rather than use this issue as a basis to overturn or  
9 remand all of Order 1309, that the Court instead affirm  
10 Order 1309 while striking these paragraphs from the order found  
11 at the bottom of ROA 61, going to the top of ROA 62.

12           This section was not core to the where, the  
13 boundaries, and the how much the 8,000 feet or less. And 1309  
14 can stand on its own without these paragraphs in Order 1309.

15           Finally, as to due process, and other legal issues,  
16 various petitioners also argue that there was a due process  
17 violation because the State Engineer spelled out his criteria  
18 for whether there was a close hydrologic connection between the  
19 LWRFS subbasins in Order 1309 rather than spelling it out prior  
20 to the hearing.

21           But in determining the boundary of the LWRFS, aka  
22 which basins were connected, that was the main question of the  
23 1309 administrative proceedings. Parties presented a number of  
24 different types of evidence to answer this question. These  
25 criteria were based on what the parties submitted into the

1 record, and it indicates the evidence that the State Engineer  
2 found persuasive in finding what was a connection.

3 THE COURT: So let me ask then, you know, when the  
4 State Engineer proposed these are the four, you know, plus the  
5 catchall five things that I'll be looking at or things that I  
6 wanted to know information about, why would the State Engineer  
7 not also say, you know, also information as far as what kind of  
8 criteria should be used to decide whether or not there's a  
9 close hydrological connection?

10 MR. BOLOTIN: So I think it went from broad to  
11 specific between 1303 and 1309. And he said we think all of  
12 this stuff is connected. Please give us your evidence on  
13 what -- whether there's a connection and to the extent of the  
14 connection.

15 THE COURT: Right. But not what do you think -- what  
16 criteria should be used to determine that.

17 MR. BOLOTIN: No. And he got a variety of answers  
18 with a bunch of different findings for how people thought it  
19 was connected or why people thought it wasn't connected. And  
20 in weighing all of the evidence using his expertise, that's why  
21 he laid out the criteria of how he -- those are pieces that he  
22 found in the various pieces of evidence that people submitted,  
23 but it wasn't a predeterminative criteria some people have  
24 alleged.

25 THE COURT: No, I understand that, but I think what's

1 alleged in -- as far as the due process violation is that they  
2 were not notified as far -- well, notified as to what criteria  
3 would be used, but that that was even on the table, that there  
4 was certain specific criteria that was going to be -- you know,  
5 that there was -- that was up for, I guess information  
6 gathering to figure out what would be the most accurate  
7 criteria to use in order to determine whether or not there's a  
8 close hydrological connection.

9 I mean, I think that's what part of the due process  
10 argument is. If I'm wrong, let me know, but that was my  
11 understanding, that it was sort of a -- it was more than just  
12 we didn't receive the criteria beforehand, but also that we  
13 didn't have any -- we didn't even know that it was going to be  
14 considered for criteria, and we didn't have any input as to  
15 what kinds of things should be used in order to find, you know,  
16 to define what the criteria should be.

17 MR. BOLOTIN: And what I would say is that the State  
18 Engineer said, please tell us what you think is connected here,  
19 and he got a variety of different things. Those criteria were  
20 in there, but that's just what he found persuasive in his  
21 expertise as to what the connection was. Every party was on  
22 notice that he was determining this ultimate question of which  
23 areas are connected and why, and that's what many of the  
24 parties' reports said, and I'm not sure that that would have  
25 changed.

1           And to the -- and to the extent some petitioners  
2 accuse the State Engineer as ad hoc rule making, it's important  
3 to note that this concept does not apply to the State Engineer  
4 in Nevada. Ad hoc rule making applies solely to the rule  
5 making procedures under the Nevada Administrative Procedures  
6 Act, NRS Chapter 233B. However, no ad hoc rule making  
7 complaint can be made against the State Engineer as he is  
8 exempt from 233B, as seen at NRS Chapter 233B.039 sub 1.

9           THE COURT: Okay. Slow down. I'm taking notes.  
10 233B.

11           MR. BOLOTIN: 039, sub 1, sub I. And this was also  
12 reaffirmed in the Nevada Supreme Court's decision in *Wilson*  
13 *versus Pahrump Fair Water*.

14           And once again, many of the due process attacks are  
15 framed in the context of alleging that Order 1309 does things  
16 that it doesn't actually do. It doesn't modify priority dates.  
17 It doesn't curtail anyone's water rights. It certainly doesn't  
18 curtail senior water rights. Order 1309 does not reprioritize  
19 anyone's water rights, and it makes no distinguished -- it  
20 makes no attempt in the text of the order to distinguish  
21 between junior and senior groundwater rights.

22           I'm not sure if this is the place to do it, but I did  
23 also want to distinguish the *Eureka County* case. That was a  
24 unique situation based specifically on applications to grant  
25 additional water. And in that case the Supreme Court said the



1 State Engineer cannot grant new water rights based on a  
2 mitigation plan that he hasn't seen yet. That is not the same  
3 thing as saying 8,000 or less is an unknown. The State  
4 Engineer knows you cannot go over 8,000 acre-feet here.

5 THE COURT: Because it's a cap.

6 MR. BOLOTIN: It's a cap. It is known, even if  
7 it's -- he hasn't told anybody to stop pumping over that amount  
8 right now, but he knows that the sustainable amount of the  
9 system cannot support over 8,000 acre-feet. So there is  
10 certainty as to that number.

11 Let's see, I think I already had on this in the  
12 answer to your question.

13 Before the hearing, the State Engineer provided  
14 notice that he would be considering the geographic boundary and  
15 the hydrologically connected groundwater and surface water  
16 systems now comprising the LWRFS and the long-term annual  
17 quantity of groundwater that may be pumped from the LWRFS.

18 The parties had the opportunity to be heard on these  
19 exact topics. Order 1309 made conclusions on these exact  
20 topics. The policy tools that will be used to manage the LWRFS  
21 within the sustainable pumping volume are for the next phase or  
22 phases, and for that phase, the State Engineer will also  
23 provide notice and an ability to be heard.

24 The State Engineer had discretion to decide the scope  
25 of the proceeding and to the extent parties like

1 Georgia-Pacific argue that he was required to make those policy  
2 decisions now, they point to no authority that would require  
3 him to do so. Rather it makes perfect sense that the State  
4 Engineer would first conclude what the conditions are and then  
5 in the next step decide how to manage the rights within those  
6 conditions.

7           The State Engineer's administrative process and  
8 hearing satisfied due process. Everyone had notice and the  
9 ability to be heard, and the State Engineer even allowed  
10 posthearing briefs so that they heard what other parties  
11 evidence were and were able to tie a knot and add additional  
12 evidence if they wanted to.

13           Nothing required the State Engineer to hold a hearing  
14 of a certain length, and the procedures and evidentiary rules  
15 are more relaxed in an administrative setting. Due process  
16 requires notice and an opportunity to be heard. Everyone in  
17 this case had the notice and had the ability to be heard if  
18 they wanted to use it.

19           Finally, Order 1309 did not effect a taking. Such a  
20 claim is inappropriately raised in the context of a petition  
21 for judicial review process, and parties that allege this, such  
22 as CSI know the proper vehicle to assert such a taking of claim  
23 is in a separate civil action, and they've already done that.

24           Further, there is just no taking here. No one's  
25 rights are being taken for public use. All parties own the

1 same water rights with the same priority dates today as they  
2 did before Order 1309 was issued.

3 Also to the extent CSI raised a judicial estoppel  
4 argument in its reply brief and in its oral argument, such an  
5 argument does not make sense in this case. The *Pyramid Lake*  
6 *Paiute Tribe* case is completely different than this case and  
7 dealt with a specific granting of a change application that the  
8 Paiute Tribe sued the State Engineer for approving. This one  
9 sentence from that case completely distinguishes that case from  
10 this case.

11 Additionally, the Tribe's own expert testified that  
12 the change use application would not interfere with the Tribe's  
13 water rights under the Orr Ditch decree, and that's from the  
14 *Pyramid Lake Paiute Tribe of Indians versus Ricci* case, 126  
15 Nevada 521 at 527. Here there's evidence that shows that  
16 existing rights at their existing points of diversion would  
17 interfere with the decree if fully pumped. There's no  
18 comparison between the issues in that case and this case.

19 Lastly, the State Engineer had the right to consider  
20 the endangered species act in issuing Order 1309. The Center  
21 for Biological Diversity does a good job of explaining this in  
22 depth in their briefing, but simply put, it is reasonable for  
23 the State Engineer to be cognizant of possible State liability  
24 for a take under the ESA. Even on top of that, Nevada water  
25 law requires the State Engineer to consider the public interest

1 when administering water rights, and that's from the *Mineral*  
2 *County* case.

3           While the public interest alone is not a permissible  
4 basis to reallocate water rights, Order 1309 did not reallocate  
5 water rights. Protecting the State's biodiversity and  
6 preventing the violation of the federal statute are public  
7 interest considerations the State Engineer must take into  
8 account when he's administering water rights. Failing to  
9 protect the Moapa dace could result in legal liability to the  
10 State.

11           And even on a more basic level, the Moapa dace's only  
12 home is the Muddy River. It is completely reasonable that the  
13 State Engineer would simultaneously seek to protect senior  
14 rights in the Muddy River while also preventing its depletion,  
15 which would unquestionably lead to devastating consequences for  
16 the dace.

17           So to conclude, Your Honor, the State Engineer  
18 respectfully requests that the Court affirm Order 1309. It  
19 consists at its core of a series of highly scientific factual  
20 findings that this Court should defer to. Substantial evidence  
21 in the record supports these determinations, including the  
22 findings that the LWRFS is one basin with the boundaries  
23 identified in Order 1309 with a maximum sustainable pumping  
24 amount of 8,000 acre-feet or less, and that's on an annual  
25 basis.

1           The State Engineer had legal authority to issue  
2 Order 1309, and he's empowered to regulate all water within the  
3 state of Nevada and is obligated to take the necessary steps to  
4 protect senior existing rights and step in when supply is  
5 inadequate to do so.

6           Order 1309 is essentially a set of factual  
7 determinations that allow him to perform his legal duties.

8           Lastly, the State Engineer provided notice that he  
9 would be determining these factual issues and allowed all  
10 participants in this case to be heard, whether or not they took  
11 advantage of it.

12           The State Engineer did exactly what he provided  
13 notice that he was trying to do, and therefore, the State  
14 Engineer's actions in issuing Order 1309 complied with  
15 constitutional due process requirements.

16           Nevada is the driest state in the nation, and it is  
17 important that the State Engineer can adequately manage the  
18 State's scarce water resources. Doing so requires the factual  
19 findings, like those in Order 1309.

20           Accordingly, the State Engineer again requests that  
21 this Court affirm Order 1309. Thank you.

22           THE COURT: Thank you.

23           All right. Does everyone want like a five-minute  
24 break, or are you good? Anyone? Anyone?

25           UNIDENTIFIED SPEAKER: Five-minute break is good.

1 THE COURT: Okay. Why don't we do a five-minute  
2 break. Back at 3:05.

3 (Proceedings recessed at 3:00 p.m., until 3:08 p.m.)

4 THE COURT: Okay. Mr. Carlson, whenever you're  
5 ready, let me know.

6 THE COURT RECORDER: We'll be on the record again.

7 **ARGUMENT FOR THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS**

8 MR. CARLSON: Thank you, Your Honor. Good afternoon.  
9 Sev Carlson, for the record. I'm here on behalf of the Church  
10 of Jesus Christ of Latter-day Saints.

11 I've represented the Church corporation since 2011 on  
12 water rights issues, not only with respect to their holdings in  
13 the Lower White River Flow System, but also with respect to  
14 their branch operations and water rights in White Pine County,  
15 and we want to thank you for your time and reading our  
16 briefing.

17 And I won't be using a whole lot of time today as an  
18 intervenor, but do want to highlight in particular some  
19 historical points not only in terms of the Church's water  
20 rights but also in terms of Nevada's water law.

21 As an introduction, the Church corporation owns both  
22 surface and groundwater rights in the Lower White River Flow  
23 System. The Church corporation owns approximately 2,000  
24 acre-feet of surface water rights and a little more than 2,300  
25 acre-feet of groundwater rights in the Muddy River Springs

1 area. Those groundwater rights have significant priority  
2 dating back to 1947, 1949 and 1965, and I'm going to go back to  
3 those points in time a little bit later, but I think it's  
4 important to keep in mind, particularly the 1947 and the 1949  
5 groundwater rights.

6 In terms of the State Engineer's authority, there's a  
7 1992 case from the Nevada Supreme Court called *Eureka versus*  
8 *the State Engineer*, and the Pacific Reporter cite is 826 P.2d  
9 948. And in that case, the Supreme Court talks about Nevada  
10 enacting its first comprehensive water law in 1913, and that  
11 case talks about the 1913 law that provided language subject to  
12 existing rights.

13 Fast-forward a little bit to 1939, we have  
14 NRS 534.020, Subsection 1, which reads,

15 All underground waters within the  
16 boundaries of the State belong to the public and  
17 subject to all existing rights to the use  
18 thereof are subject to appropriation for  
19 beneficial use only under the laws of this State  
20 relating to the appropriation and use of water  
21 and not otherwise.

22 So again that statute was adopted in 1939. That  
23 statute has never been amended. When you take that  
24 consideration of subject to existing rights, you can look at  
25 other statutes that talk about that as well, and I don't know

1 that I need to go through all of those examples, but I think  
2 it's important for the Court to keep that in mind when looking  
3 at both express and implied powers of the State Engineer, that  
4 we have these statutes that have been on the books talking  
5 about subject to existing rights.

6           And I think it's safe to say that for the water  
7 practitioners in this room, something that we always see in a  
8 permit term from the State Engineer is that a water right  
9 permit is always granted subject to existing rights. The State  
10 Engineer's counsel today offered argument that it's the duty of  
11 the State Engineer to protect those existing rights. When you  
12 combine that duty with these historical references in the  
13 statutes, you need to combine that then ultimately with the  
14 legislative policy of conjunctive management, with the  
15 legislative policy of encouraging the use of best science in  
16 the context of subject to existing rights.

17           Now, we've had some discussion about well, how have  
18 we gotten here, and we've looked at some historical documents  
19 that talked about the potential interplay of surface and  
20 groundwater, and we have the history with Order 1169 and the  
21 pump tests. We have the January -- or January 2014 rulings of  
22 6254 to 6261 that denied numerous applications that dated as  
23 far back as 1989, and those rulings concluded that the basins  
24 at issue share a unique and close hydrological connection and  
25 share virtually all of the same source and supply of water,



1 unlike other basins in Nevada. And that's at the record at  
2 749.

3           So there again, we have a unique circumstance, and I  
4 know Your Honor asked counsel for the State Engineer, well, are  
5 we going to go back to first in time, first in right and  
6 destroy all of the boundaries on Mr. Robison's map? I don't  
7 think we have to go that far, but the concept is we are first  
8 in time, first in right. We do have statutes that say you take  
9 subject to existing rights. So everyone who comes to the  
10 table, before we get into any of these boundaries comes to the  
11 table knowing they're applying to be next in line, that if  
12 there is any water right in front of them they are next in  
13 line.

14           Now, that doesn't mean that a senior right in the  
15 Muddy River Springs area, one of the church's rights, for  
16 example, could necessarily claim an impact or a conflict with a  
17 right outside of its basin.

18           But what if the science ultimately, I hate to say it,  
19 bears witness to there being an impact. I think these other  
20 statutes and the command to the State Engineer of protecting  
21 existing senior rights, if the science shows interference,  
22 impact, a conflict, and this order doesn't get there, but it's  
23 setting that up. If we have that ultimate interference impact  
24 or conflict, what's going to take control, and prior  
25 appropriation can and is harsh that we probably haven't seen

1 the reality of how that law is carried out because generally  
2 society tries to get along.

3 So going back to the Church corporations groundwater  
4 rights and the map of basins which through argument it sounds  
5 like the regions in the hydrographic basins on the map came to  
6 fruition as a result of work from The Division of Conservation  
7 and Natural Resources, the State Engineer and the USGS in the  
8 1960s.

9 So what does that mean for groundwater appropriations  
10 that were approved and that have priority dates prior to those  
11 basins being drawn? On the one hand you have plenty of parties  
12 who say we're in this basin. Here's our priority date in this  
13 basin. Now you've moved us into this super basin. Our  
14 priority date shifts, and we don't know what the outcome of  
15 that potential shift will be.

16 But what about for those water rights holders who are  
17 here before the map was drawn? And I think the important part  
18 is I don't believe anyone has contested the State Engineer's  
19 ability to delineate -- I'll use that word rather than  
20 designate -- groundwater basins, that the statutes over the  
21 years have allowed the State Engineer to administer the waters  
22 of the State. They're a public resource subject to  
23 appropriation.

24 And if the State Engineer in the 1960s could draw  
25 these lines, and I understand there could be negative impacts

1 if a line has to be erased or redrawn, but I think from a  
2 practical standpoint the State Engineer has looked at basins in  
3 the past. We haven't had the collective group of seven. We  
4 haven't had so many water resources at issue and contentions of  
5 development versus existing businesses that have been using the  
6 water for decades, but if the State Engineer has the power to  
7 draw the lines in which we've all operated, if science shows a  
8 connection -- and I'm going to defer to the State Engineer's  
9 briefing on it, I don't think the State Engineer can sit on his  
10 hands or her hands and just say, well, we're out of luck,  
11 particularly as water resources have become I'll say more  
12 scarce, and I'm not making a judgment as to the science.

13           There may be plenty of water available, but looking  
14 at it just generically as I walked into the courthouse this  
15 morning, security asked me, oh, what are you here for? And I  
16 said, oh, I'm here for a water case, and he says, oh, Lake  
17 Mead's going dry.

18           And I said, well, I said, you know, he says, do you  
19 have a jury? I said no, I don't have a jury, but I think we  
20 have to put on that kind of hat of the citizens of Nevada who  
21 own this water, they're the ones who own it. The Church  
22 corporation has a right to appropriate it, just like all the  
23 parties in this case do.

24           The State Engineer can't sit on his or her hands when  
25 we know that science changes. We have all of these historical

1 reports of saying, look, there's something going on here. And  
2 at a minimum, when you have those historical reports, and if  
3 parties are going to the great lengths of looking at what can  
4 we appropriate? What do we need to have to make this business  
5 venture function? I venture to say they're aware of those  
6 historical documents. They're aware of that potential  
7 uncertainty of, well, where did this mysterious Muddy River  
8 come from in the middle of the desert in Nevada? That it just  
9 suddenly appears? It's unique. Everyone is aware that it's  
10 unique.

11           And if it's unique, I think we have to be straight  
12 faced and say it can be subject to change.

13           Now, I don't know where the State Engineer is going  
14 to take the next step. A main driver for why the Church  
15 corporation has been involved is that it has significant senior  
16 rights. We want a seat at the table to protect those rights,  
17 but at the end of the day, I think everyone has been on notice  
18 that the Muddy River is unique.

19           And if the Muddy River is unique and you know that  
20 from historical documents, relying on lines that for whatever  
21 reason were finally drawn in the 1960s that weren't there  
22 before when other groundwater was approved for appropriation,  
23 that's a change in itself. And the Church corporation isn't  
24 taking a position on, well, gosh, State Engineer, you drew  
25 these lines in the 1960s with the USGS. How does that impact

1 us? But we've lived through that change, and as science  
2 becomes better, and we have more knowledge, the State Engineer  
3 is charged with taking care of this public resource.

4 In that line, I would also point -- I know there was  
5 some discussion relative to NRS 534.120. And of course that  
6 was enacted in 1955, and so prior to the maps being drawn as  
7 well.

8 When we look at the term basin or basins, I think  
9 there's another statute that's worth keeping in mind out of  
10 Chapter 534, and that's aquifer, and it's not used a whole lot,  
11 but aquifer means a geological formation or structure that  
12 stores or transmits water or both. That was adopted in 1987,  
13 so after a lot of the groundwater law had been adopted, again  
14 showing that science and information evolve over time.

15 But not being the scientists, it appears that the  
16 aquifer -- we know more about it today after the proceedings  
17 that we're on judicial review for than we did prior to those  
18 proceedings.

19 And then I would also look at -- one more statute to  
20 keep in mind is 533.030, Subsection 1, which again talks about  
21 existing rights; 533.430, which again talks about permits and  
22 certificates of appropriation subject to existing rights.

23 And then in closing, I think it's just important to  
24 kind of paint a picture in terms of those senior groundwater  
25 rights. And it really touches upon what Mr. Dotson discussed

1 with respect to the decreed surface rights, but it's the  
2 similar notion that if we have a senior groundwater right,  
3 particularly a senior groundwater right before any of the  
4 mapping was done, ultimately if we have some form of  
5 interference with those senior rights, the Church certainly has  
6 the ability of filing we'll call it a complaint with the State  
7 Engineer to say we believe our rights are being interfered  
8 with, but we need to I think come back to that.

9           The existing right component I think is the real  
10 driver for that explicit direct authority for the State  
11 Engineer, and the implied authority comes from that, right.  
12 What does the State Engineer have to do in order to protect  
13 existing rights, whether it's a decreed right, whether it's a  
14 senior groundwater right, a senior groundwater right before the  
15 maps were drawn up to draw out all of these basins, but that's  
16 really the direct authority of protecting senior rights. And  
17 we have implied authorities that stem from that. How is the  
18 State Engineer going to carry out that obligation that he or  
19 she is charged with by the legislature?

20           So in closing, Your Honor, we would ask that you  
21 affirm the State Engineer's order in its entirety.

22           Thank you for your time this afternoon.

23           THE COURT: Thank you.

24           I think -- is NV Energy next?

25           MS. CAVIGLIA: I'm here.

1 THE COURT: Okay. Let me know when you're ready.

2 MS. CAVIGLIA: I'm ready.

3 THE COURT: Okay. Please proceed.

4 ARGUMENT FOR SIERRA PACIFIC AND NEVADA POWER

5 MS. CAVIGLIA: Thank you, Your Honor. Good  
6 afternoon, Your Honor. My name is Justina Caviglia, and I  
7 represent both Sierra Pacific Power Company and Nevada Power  
8 Company. We do business here in the state as NV Energy. We  
9 provide power to 2 million customers throughout the State, and  
10 I almost want to just say ditto to Mr. Carlson's statement.

11 Very much like the Church, NV Energy's water rights  
12 start in 1948. The majority of our water rights are 1948, 1950  
13 to '59, in 1962 and 1966. We do have some junior water rights  
14 as well, and we also own decreed water rights on the Muddy  
15 River. So we are that weird party that conflicts with  
16 ourselves. We have water rights in Coyote Springs Valley,  
17 Muddy River Springs area, Garnet Valley. All of it serves our  
18 various generation plants, and so this case has been very  
19 difficult for us because we're stuck in the middle.

20 THE COURT: And you're in conflict with yourself.

21 MS. CAVIGLIA: We're in conflict with ourselves. And  
22 I think that's what comes as unique and why we've also kept a  
23 seat at the table. Because no matter what happens in this  
24 decision, whether the decision is upheld, if it's sent back to  
25 the State Engineer, our water rights are going to be impacted

1 some way or another, which will also impact our ability to  
2 serve our customers with our electric resources.

3 One of the big issues and one of the big themes that  
4 we saw with the State Engineer's argument is the protection of  
5 those senior water rights. As Mr. Carlson just stated, there  
6 are water right holders, like the Church and myself or the  
7 company, that our water rights existed prior to the designation  
8 of these basins, and that's the one thing that is interesting  
9 in the statute is there is no definition of a basin. There is  
10 no definition or rules on how a basin is created.

11 The basins have come and gone through reconnaissance  
12 reports. They've been amended. They've gone to subbasins.  
13 And so this idea and this concept that the State Engineer  
14 cannot change his mind over time based upon scientific evidence  
15 is -- it's sort of hard to deal with, especially when you're an  
16 older water holder.

17 We've seen the progression of these basins. We've  
18 seen how our water rights have changed because of it, but at  
19 the end of the day, the State Engineer's job is to protect the  
20 company's water rights over junior water appropriators.

21 The two week long hearing we had in this case showed  
22 that there is connectivity between the Coyote Springs water  
23 rights and Vidler's water rights that are much junior than NV  
24 Energy's, but they're going to try to ensure that NV Energy's  
25 water rights are not protected because of that. It's one



1 source that -- it's hard not to say that. This isn't a  
2 situation where the river starts and ends and you can find it.  
3 It's the same source of water.

4 So if an upstream user is impacting NV Energy's water  
5 rights, we do have the right, as Mr. Carlson said, to go after  
6 them. And yesterday you did ask one of the parties, and I  
7 can't remember which one, on whether it was pragmatic or  
8 practical for the State Engineer to do this piecemeal.

9 One of those issues would be would it be practical  
10 for NV Energy to go after every junior water right holder in  
11 all of these upstream basins and file complaints with the State  
12 Engineer? Because that is the other option.

13 And so I think from our perspective, you know, we do  
14 support the State Engineer's order. Is it a hundred percent  
15 perfect? No. But we think it's a good start. And as they've  
16 stated, there will be future phases, which, from our  
17 perspective as a senior water right holder, we are going to be  
18 much more interested in.

19 I don't think I'll take much more of the Court's  
20 time. The statutes have been brought forward by both the State  
21 Engineer and Sev Carlson. So thank you.

22 THE COURT: Okay. Okay.

23 And then is it Moapa Valley that's next or --

24 Okay. Are you ready?

25 (Pause in the proceedings.)

1 MR. MORRISON: I'm ready whenever you are.

2 THE COURT: Tell me when you're ready -- okay. You  
3 may start.

4 ARGUMENT FOR MOAPA VALLEY

5 MR. MORRISON: Well, good afternoon. I'm Greg  
6 Morrison. I'm here on behalf of the Moapa Valley Water  
7 District. You know, I had quite a few arguments to make, and  
8 then I thought I would kind of cross them off as other  
9 participants made those same arguments, and I found that  
10 everything was crossed off of my list.

11 THE COURT: Well, if there are ones that you want to  
12 highlight, you may certainly go ahead.

13 MR. MORRISON: Yeah. There are certain arguments  
14 that I would like to highlight and talk a little bit about my  
15 client as well.

16 So the Moapa Valley Water District, its service area  
17 is entirely within what we now are discussing as the Lower  
18 White River Flow System. The District was created pursuant to  
19 NRS Chapter 477. It not only empowers the District to provide  
20 adequate and efficient water service to its customers, but it  
21 mandates it. Pursuant to that mandate, the District is the  
22 municipal water provider to several communities in its 79  
23 square mile service area. The towns of Warm Springs, Moapa,  
24 Logandale, Overton, as well as the Reservation of the Moapa  
25 Band of Paiutes. These are the only established communities in

1 the Lower White River Flow System.

2 So in sum, over 8500 Clark County citizens rely on  
3 the District's water supply for their homes and drinking water.

4 So why is the District here? Why are we arguing on  
5 behalf of the State Engineer here? You know, I try to stay  
6 away from more of the bombastic elements of litigation, but I  
7 did particularly like this mega mess concept that's been  
8 brought up by a few petitioners, and I agree. We've got a mess  
9 in the Lower White River Flow System, but that mess existed, as  
10 Mr. Bolotin said, well before Order 1309 came out.

11 You've got a lot more water rights on paper than  
12 there is water.

13 Right now, pumping is not grossly depleting the  
14 aquifer. So now is the time to address how to manage the Lower  
15 White River Flow System going forward, before pumping shoots  
16 past any sustainable levels and then people have to be  
17 curtailed.

18 So we are just here maintaining our seat at the  
19 table, to make sure we have a say in the process of management  
20 of the water of the Lower White River Flow System.

21 We do believe that Order 1309 is effective for what  
22 it was intended to do, which was only defining the guardrails  
23 that will allow the stakeholders and the State Engineer to  
24 begin their discussions on how to conjunctively manage the  
25 Lower White River Flow System within those guardrails, but

1 that's all it does; it sets guardrails.

2 With that in mind, there's a couple of realities that  
3 I think we need to keep in mind in considering Order 1309.

4 One is every petitioner, every intervenor, every  
5 shareholder, stakeholder here has a groundwater right or a  
6 Muddy River Decree right. Everybody has a water right they are  
7 trying to protect. Not every foot of permitted water can be  
8 protected. Something is going to have to be changed as we go  
9 forward.

10 So in light of that, we're litigating Order 1309,  
11 which really just moved this process forward one small step,  
12 but not much beyond that.

13 So Mr. Bolotin kind of stole my thunder on this as  
14 well, but what did Order 1309 do and what did it not do? It  
15 defined the boundaries of the Lower White River Flow System.  
16 It declared it to be a basin, and the previous basins  
17 subbasins. The order declared that the maximum quantity of  
18 water that could be pumped is 8,000 acre-feet annually,  
19 possibly less. That's it.

20 It did not create a management plan. It did not  
21 designate who can pump from that 8,000 acre-feet. It did not  
22 order curtailment by strict priority or otherwise. It did not  
23 reprioritize water rights within the management area.

24 So I'm not going to go over the standard of review  
25 again. That's been discussed plenty.

1           We'll get right into substantive arguments, and I  
2 want to talk about three major categories. One, the State  
3 Engineer's authority; two, substantial evidence in the record  
4 supporting State Engineer's inclusion of Kane Springs Valley,  
5 and third whether substantial evidence in the record supports  
6 the determination that 8,000 acre-feet is the volume of water  
7 that can be safely withdrawn.

8           So Mr. Bolotin touched on it briefly, and I wanted to  
9 really kind of hammer it home, the concept of implicit  
10 authority of the State Engineer. As recently as the *Pahrump*  
11 *Fair Water case*, the Nevada Supreme Court has affirmed that the  
12 State Engineer has implicit authority to govern Nevada's  
13 water --

14           Excuse me. I'm jumping around a little bit to try  
15 and skip some of my sections that I crossed out.

16           So a lot of petitioners are questioning the State  
17 Engineer's statutory authority, again saying that the State  
18 Engineer is constrained to 232 existing as of 1968 groundwater  
19 basins. Interestingly enough, those petitioners, not one of  
20 them identified any statutory authority that allowed the State  
21 Engineer to designate those basins back in the '60s because  
22 there was no statutory authority.

23           If you look at the designation orders of the basins,  
24 they generally say at the top, By the virtue of  
25 NRS Chapter 534, we're designating this basin. It's a general

1 statement. So it raises a really interesting question. If the  
2 State Engineer didn't have the explicit authority to designate  
3 groundwater basins in the '60s, was that somehow in error?  
4 Was that somehow reversible? If there was no explicit  
5 authority, was there implicit authority? And if there was  
6 then, is that implicit authority no longer there?

7 The statutes haven't changed much. A few statutes  
8 have been adopted mentioning basins, but to date, no statute  
9 defines basin. So it's always been a concept that's -- I don't  
10 want to let Mr. Dotson have all the pun fun here. So it's a  
11 fluid concept, subject to change over time.

12 So as far as the concept of a basin, the State  
13 Engineer and others have discussed a concept of what level of  
14 deference is owed. I'll just echo the State Engineer, and I  
15 believe this definition of what is a basin is within the realm  
16 of the deference that the State Engineer should be able to  
17 expect. So let's see. We'll go past with that.

18 All right. A lot of petitioners are predicating a  
19 lot of their arguments -- it's a jumping off point. They're  
20 saying 1309 reprioritize water rights.

21 Now, I'm not going to call that a strawman. I don't  
22 think that's the accurate word. I think it's a reasonable  
23 interpretation of Order 1309, but ultimately an incorrect  
24 interpretation of Order 1309. I do not believe priorities are  
25 affected at all by 1309 in and of itself, and that's not to say

1 that as this process moves forward priorities will come into  
2 play.

3 So the order doesn't change the definition of any of  
4 the subbasins it has designated. I want to bring up the fact  
5 that there are subbasins in Nevada that are managed as distinct  
6 basins despite their designation as subbasin. The Kings River  
7 Basin, which is Basin 30, has the Rio King and Sod House  
8 subareas. And the Quinn River Basin has the Orovada and  
9 McDermitt subareas. And those are managed as discrete  
10 hydrologic units despite the fact that they are lesser parts of  
11 a whole hydrographic basin.

12 That's all I need to talk about on the basins I  
13 think.

14 Let's get into Kane Springs Valley. The State  
15 Engineer correctly concluded that Kane Springs is a part of the  
16 Lower White River Flow System. There was myriad evidence to  
17 support that. There was the propagation of the declines in  
18 Kane Springs Valley as the result of the Order 1169 pumping  
19 tests. Petitioners have stressed that Kane Springs wasn't  
20 within the 1169 study area and that there was no pumping in  
21 Kane Springs. Pumping in Kane Springs wasn't necessary to  
22 determine that there's a hydrologic connection between the two.  
23 The declines propagated into Kane Springs.

24 The hydraulic gradient between Kane Springs Valley  
25 and the remaining Lower White River Flow System basins, as the

1 District's expert stated at the hearing, is remarkably flat.

2           Now a couple of petitioners are stressing that okay,  
3 between these two discrete wells, one in Kane Springs Valley  
4 and one in Coyote Springs Valley, there's a 50, 60-foot head  
5 difference, and that's great. And that may indicate some sort  
6 of isolated impediment to flows, but that's not how you  
7 determine hydrologic connectivity among a large area. That  
8 would be a gradient from the top to the bottom, and that  
9 gradient between Kane Springs Valley and the Muddy -- or the  
10 Muddy River Springs area, as our expert put it is remarkably  
11 flat. It indicates hydrologic connectivity.

12           Every stakeholder agreed that the carbonate aquifer  
13 extends into Kane Springs Valley to some extent. Some have  
14 posited a fault or subterranean structure, but everybody agrees  
15 that carbonate aquifer does extend up there. I think it's a  
16 matter of possibly degree and speed of flow, but the water from  
17 Kane Springs ultimately ends up, I believe the State Engineer  
18 correctly determined, at the Muddy River Springs area.

19           No one yet has really brought up the Zollen  
20 (phonetic) report that was cited by both CSI and Lincoln  
21 Vidler, and I don't want to argue the merits of that evidence.  
22 I think the State Engineer properly discounted that evidence.  
23 There were some serious issues with reliability that were  
24 pointed out over the course of that hearing. So I don't think  
25 any request to revisit that evidence would be appropriate. The



1 State Engineer handled it properly.

2 And then finally on Kane, Order 5712 and 1169, and  
3 the fact that those did not include Kane Springs as part of the  
4 study area that would become the Lower White River Flow System.  
5 At the Interim Order 1303 hearing, former State Engineer Hugh  
6 Ritchie and former Deputy State Engineer Bob Kochi (phonetic)  
7 appeared as witnesses on behalf of one of the stakeholders.  
8 Mr. Ritchie and Mr. Kochi were two of the parties very  
9 responsible for both Ruling 5712 and Order 1169.

10 On cross-examination -- excuse me, cross-examination,  
11 both of those men were asked, knowing what they know now, would  
12 you have included Kane Springs in the Order 1169 study area?  
13 Both men, without hesitation said yes, they would have included  
14 Kane Springs in the Order 1169 study area, and the point to  
15 that is the State Engineer is to rely on the best available  
16 science.

17 The best available science changes over time. In  
18 2006 and 2008, the best available science said Kane Springs  
19 should not be included in this study area. In 2019, 2020, the  
20 State Engineer determined, yes, the best available science does  
21 support its inclusion, and the parties responsible for its  
22 exclusion also agree with that.

23 So that's pretty much all I have to say. Anything I  
24 wanted to say on the 8,000 acre-foot pump limit I think has  
25 been said.

1 I don't want to argue anything further other than  
2 Order 1309 is not perfect. The District doesn't argue that  
3 it's perfect or flawless. It's legally defensible. It is  
4 within the statutes. It is within the State Engineer's  
5 authority, and it's the first step to getting this mega mess  
6 under control.

7 Thank you for your time.

8 THE COURT: Thank you.

9 So who is next up?

10 Do you need a minute, Mr. Taggart?

11 (Pause in the proceedings.)

12 MR. TAGGART: Your Honor, so I have a PowerPoint, but  
13 it's not physically here at the moment.

14 THE COURT: Okay.

15 MR. TAGGART: But it's on its way.

16 THE COURT: Okay.

17 MR. TAGGART: But I can get going anyway. I can talk  
18 about some things, but when it does arrive, I might take a  
19 little break. Is that okay?

20 THE COURT: Do you want to take a break now? Do want  
21 to call them to see where they're at?

22 MR. TAGGART: Yeah, they're on their way over.

23 THE COURT: Like --

24 MR. TAGGART: I didn't know I was going to get up --

25 THE COURT: -- they're on their way over by a car,

JD Reporting, Inc.

1 by --

2 MR. TAGGART: No. They're driving, well, just from  
3 the office across -- our office is right across the way here.  
4 So I think they'll be here in 10 minutes, but I think I can get  
5 started.

6 THE COURT: Well, we can take a 10-minute break if  
7 you think that that would be more effective or not. If you  
8 want to just get started, we can do that too.

9 MR. TAGGART: Okay.

10 THE COURT: I don't want to deny you your  
11 opportunity.

12 MR. TAGGART: Right.

13 THE COURT: But I think we're moving at a faster pace  
14 than anticipated.

15 MR. TAGGART: I think we are.

16 THE COURT: So does everyone want to have a break  
17 or -- yeah, it looks like everyone wants a break.

18 MR. TAGGART: Okay. Let's take a break.

19 THE COURT: Why don't we take a 10-minute break, and  
20 then let me know where you're at.

21 (Proceedings recessed at 3:46 p.m., until 3:58 p.m.)

22 MR. TAGGART: All right, Your Honor. I'm ready.

23 THE COURT: You're ready.

24 MR. TAGGART: I was prepared to do it the  
25 old-fashioned way --

1 THE COURT: Oh, that's okay. You've got --

2 MR. TAGGART: -- with just the voice. This is the  
3 presentation I'm going to give.

4 ARGUMENT FOR SNWA AND LVVWD

5 MR. TAGGART: Well, Your Honor, Paul Taggart again  
6 for the Water District and the Water Authority.

7 And it's 4:00 o'clock, and I for one am usually not  
8 sharpest at 4:00. So I'm going to do my best here, but I am  
9 not going to do everything I have to say today. So I'll do  
10 some today, and then I'll come back tomorrow and finish it if  
11 that's okay.

12 THE COURT: That's fine.

13 MR. TAGGART: All right. And I have two main areas  
14 that we'll cover. One has to do with delineating the basin. The  
15 other has to do with the 8,000 acre-foot cap. So we'll  
16 definitely -- the 8,000 acre-foot cap will be tomorrow.

17 THE COURT: That's fine.

18 MR. TAGGART: And so now I'll get into the authority  
19 to delineate.

20 We've talked about a lot today, and so I will get  
21 into some of the things that were discussed and hopefully not  
22 be repetitive.

23 Just a second.

24 I want to start by telling the story about a recent  
25 case from the United States Supreme Court. It's called

1 *Tennessee versus Mississippi*, and it has to do with the ground  
2 waters. It was decided in November of 2021, and  
3 Justice Roberts wrote the opinion, and Mississippi claimed that  
4 Memphis, Tennessee, was pumping too much water in a basin that  
5 was shared with Mississippi. So Tennessee and Mississippi are  
6 both on top of them, and Memphis is close to the border.

7           And what was argued by Mississippi was that's our  
8 water. It's underneath our state. You can't take it. When  
9 they pump it, it sucks it to Tennessee, and that's a violation.  
10 That's a trespass, if you will.

11           And what Mississippi argued was that equitable  
12 apportionment does not apply. And that's a doctrine that the  
13 United States Supreme Court uses in water law when two states  
14 share a water supply. So we don't have that here.

15           We have multiple basins, but when multiple states are  
16 involved, the states -- or the United State Supreme Court  
17 looked at that and said, well, when -- because really the pure  
18 question was on surface systems that are shared between states,  
19 the Supreme Court, the Colorado River, the Supreme Court has  
20 always used equitable apportionment. It's different than prior  
21 appropriation. It's a bit of a different animal, but that's  
22 what they used.

23           And Mississippi was saying, wait, this is  
24 groundwater. It's not surface water. Equitable apportionment  
25 doesn't apply. The Supreme Court said, You're wrong, it does.

1 It's one aquifer. It's just like a surface system. And so  
2 we're going to treat it like that, and your case is dismissed.  
3 And that was like seven years and I don't know how many  
4 millions of dollars and special masters later, but the point is  
5 that these aquifers aren't just here. They're everywhere.

6 The Ogallala Aquifer underlies Colorado, Kansas,  
7 Nebraska. There's people here who know a lot more about other  
8 parts of the country than I do, but I do know that there's many  
9 places with large aquifers like this.

10 So the -- you know, we've heard that the State  
11 Engineer is the primary authority over water in Nevada. That's  
12 in dispute -- undisputed, but if anyone is going to do anything  
13 about this situation, who's going to do it? And Mr. Robison  
14 said, we'll go to the legislature and ask them for a fix.  
15 Okay.

16 We'll talk a little bit about AB51 and how that went  
17 and how difficult it is to get legislation through our  
18 legislature. And if we're going to wait for that, then, you  
19 know, we've got bigger problems, and I don't think we need to  
20 wait. I think it's clear that the State Engineer is the  
21 authority over groundwater, particularly the rights that he  
22 granted, and a lot of the rights that we're talking about, the  
23 groundwater rights we're talking about are rights that he  
24 granted -- and that's really important -- as opposed to the  
25 decreed rights, that came about before his office existed.

1           So if anyone is going to do anything, it's the State  
2 Engineer, and is it bad that he's doing it piecemeal? I mean,  
3 is it bad that he said, you know what, I'm going to decide the  
4 facts first, and then I'm going to decide the policy later. I  
5 mean, isn't that good? I mean, everyone now is on notice that  
6 there's a problem out there. There's a number out there, and  
7 when we go to the second phase of this, maybe folks will sit  
8 down and make deals. Maybe there'll be decisions made. Maybe  
9 there'll be management plans decided. Maybe people will  
10 negotiate ways of resolving their issues when they know what  
11 the facts are.

12           And somebody once, you know, told me a long time ago  
13 that if you can solve the facts, solve the facts first, and  
14 then everyone will know what the rules are when they move  
15 forward. And so I think it's prudent for the State Engineer to  
16 have said I need to decide what these facts are first based on  
17 the science and based on the evidence. And, you know, I  
18 challenge the State Engineer a lot. I end up in court against  
19 him a lot.

20           And so this peak deference idea, I don't particularly  
21 love because I don't always agree with the State Engineer, but  
22 when the State Engineer is looking at hydrographs and measuring  
23 correlations statistically between drawdown and flow, I think  
24 that's his bailiwick. I think -- I mean, if I were -- I mean,  
25 I know where I get nervous. I'm not an engineer. I spend a

1 lot of time with them. I am raising two and I have -- my dad  
2 is one, but I skipped it I guess. And I know when I tread into  
3 that area that's a little bit not comfortable, and that's when  
4 I think those are the facts hydrologic decisions the State  
5 Engineer made. So we want him to do that. We need him to do  
6 that. And so for him to say I'm going to make those decisions  
7 first I think is really important.

8 Now, there's been a lot of discussion about where  
9 these lines came from originally, and I've spent years trying  
10 to figure it out myself.

11 THE COURT: And you're talking about the lines  
12 delineating the different basins?

13 MR. TAGGART: Yes. And let's choose some words,  
14 because words -- since we are lawyers --

15 THE COURT: Words matter.

16 MR. TAGGART: -- words matter, right. And that's  
17 what we can -- that's what we can feel comfortable with. And  
18 "delineate" and "designate" are two different words with two  
19 different meanings in what we have going on here, and I think  
20 it's really important for us to think about that.

21 Because when those lines were originally drawn on  
22 that map, they delineated -- let's call that they delineated  
23 lines. They selected basins. They identify areas that they  
24 would treat as an area. They didn't designate them. Designate  
25 is a different animal altogether. That's 534.030. The State



1 Engineer can designate a basin. Obviously when they made that  
2 map in 1968, they did not designate those basins, but they did  
3 something. Let's call that they delineated them. They drew  
4 them.

5 Now, what did they base it on? I mean, again I've  
6 had cases where we challenged whether someone's in or out of a  
7 basin. When we say typography, all typography means is that if  
8 a drop falls out of the sky, which direction does it flow? So  
9 water on one side of the Continental Divide flows to the  
10 Mississippi. Water on the other side flows to the Colorado or  
11 the Snake unless you're in the great basin where it flows to  
12 one of our terminal lakes. But the idea is that it's where  
13 they -- it's where surface water falls and would flow if there  
14 was enough of it, and that's typography. It has nothing to do  
15 with groundwater. I mean, it has nothing to do with  
16 groundwater. It had to do with these high points.

17 And sometimes, sometimes these lines, if you were to  
18 go out there and walk, and I will say that I think Kane Spring  
19 and Coyote Spring is one of these, if you were to go out and  
20 walk there and look around, you wouldn't see any hill or  
21 mountain. Some of them it's obvious. Some of them, you know,  
22 it's Mt. Charleston style, you know, divide, but some of them  
23 is it's -- like in Carson City, there is a divide between  
24 Carson City and Eagle Valley. And I forget the name of the one  
25 to the east, but it's like a road I drive over every day, and

1 that's a hydrologic divide on that map.

2           So they, you know, they carved up the State. They  
3 did analysis, the USGS did, and we call them reconnaissance  
4 reports. And what does reconnaissance mean? Reconnaissance  
5 means you kind of do the best you can with what you've got.  
6 They didn't -- I mean, literally, literally they drove out for  
7 a couple weeks to one of these basins. They looked up on the  
8 mountains. They figured out what the elevations were. They  
9 tried to estimate snowpack. And then they -- I mean, they  
10 literally spent a couple weeks in each one, and then they wrote  
11 a report. And based upon that reconnaissance level analysis in  
12 the typography, they came up with these lines.

13           And so I don't think there's anything magic about  
14 them. I'm not going to -- I will not try to say that people  
15 haven't relied on them the way they are, and that's a different  
16 question, but from a scientific standpoint, updating those  
17 lines is critical when more science comes along.

18           How you can update them is what we're talking about.  
19 What you have to do to update them is what we're talking about,  
20 but that they have to be, you know, the State Engineer has to  
21 be able to recognize that sometimes those lines are not on that  
22 map correctly, and they need to be updated.

23           I refer to it as kind of upgrading the operating  
24 system. I don't use Windows 95. I don't use DOS. I don't use  
25 AOL anymore, you know. I use teams because it does a lot of

1 things that I couldn't do otherwise.

2 Well, they need to be able to update their operating  
3 system on these basins when they get new science. And  
4 certainly I couldn't agree more with the notion that the best  
5 available science requirement or well, it's not --  
6 encouragement is a lens through which everything the State  
7 Engineer does should occur. I mean, don't we want that?

8 At federal level, there's a higher standard of best  
9 available science, and we test things by it, and it is a  
10 requirement. It's not an encouragement, but certainly,  
11 certainly we want that.

12 So that's -- so those lines were done that way. And,  
13 I mean, in fact, we've got this --

14 Oh. We've got a --

15 (Pause in the proceedings.)

16 MR. TAGGART: There we go. Okay.

17 THE COURT: All right. So Slide 3?

18 MR. TAGGART: Yes.

19 Do I have numbers on these?

20 THE COURT: Yeah. Are there --

21 MR. TAGGART: Here we go again, right?

22 THE COURT: Yeah. On the upper left, sort of like --

23 MR. TAGGART: Okay. Thank you.

24 THE COURT: Yeah.

25 MR. TAGGART: So we showed you this -- this is

1 page 4 -- already. And here's -- what I wanted to show is on  
2 page -- this is page 11.

3 THE COURT: 11.

4 MR. TAGGART: This is the plate that's -- and the  
5 plate is like a fold-out map that's at the back of these old  
6 recon reports, and I don't think we can probably blow this up,  
7 but it's Kane and Coyote Spring, and they were analyzed  
8 together in the same hydrologic report, and there's no line  
9 between Kane and Coyote Spring Valley. I mean, that was -- and  
10 then after that, this map came out, and they were separated,  
11 delineated separately. So sometimes it gets done as one group.  
12 Sometimes it gets done as a delineation. So I guess my point  
13 is that we have to update what was done 50 years ago.

14 So let me jump to -- I'm going to jump around a  
15 little bit. I want to talk about whether priorities were  
16 changed, and so -- so I think Mr. Bolotin covered this. So I  
17 won't belabor it too much, but Order 1303 definitely said that  
18 the priorities of the basins were going to be put into one  
19 bucket. 1303 said that. And one of the draft -- I mean, the  
20 State Engineer's office went through a lot. I don't know how  
21 many meetings we had, but we had public workshops on the draft  
22 order of 1303. They had a different 1303 originally. We had  
23 meetings in Moapa. We had meetings in Las Vegas. I mean, I  
24 remember going to I think at least four, and then we got here.  
25 And people commented. People submitted information. They

1 changed the order from the way it was originally written, 1303.  
2 And then we got the one we have now. So they said that.

3 Then we had the hearing, and then 1309, they said --  
4 Is this Slide 29?

5 Okay. This is Slide 29.

6 Then in Order 1309 they didn't address the question,  
7 and they said at the end of 1309 that everything in 1303 is  
8 rescinded unless it's been repeated here essentially is -- I  
9 mean, you can read the -- I think it says all other matters set  
10 forth in Interim Order 1303 that are not specifically addressed  
11 herein are hereby rescinded.

12 So they started doing it. They started thinking of  
13 it that way. And then they stopped.

14 And so we've set it. No priorities were changed in  
15 1309. I mean, should people be worried about their priority?  
16 Uh, yeah, they should be. Has anybody been ordered to stop  
17 pumping? No. Has anybody had their rights -- (indiscernible)  
18 said this, their rights curtailed, no. So none of that's  
19 happened. I don't think the State Engineer is, you know,  
20 chomping at the bit to go out and do that. I mean, he'll do a  
21 pumping inventory to see how much is pumped this year. If more  
22 than 8,000 acre-feet is pumped, I'm not sure what they would  
23 do, but there's no plans right now to go out and enforce the  
24 8,000. People can't waste water, but there hasn't been any  
25 action to actually say you can't pump now. You know, the who

1 of this whole process hasn't been established yet.

2 THE COURT: But it's kind of looming in the --

3 MR. TAGGART: Oh, it is, right.

4 THE COURT: In the --

5 MR. TAGGART: Right.

6 THE COURT: In the distance not too far.

7 MR. TAGGART: Uh-huh. So it sure is. And, I mean,  
8 we have power plants that have junior water, right. That's --  
9 we can't allow a power plant to not have water. I represented  
10 a power company one time, and their water permit was going to  
11 expire. They thought they were going to have to shut the plant  
12 down. I mean, it was terrible. It was a fire drill, big time.  
13 So that is, you know, a big part of what's going to happen  
14 next, but we need to know the factual predicate so all the  
15 parties can go back into their places and decide where do I go  
16 now, now that I know. I mean, if there's less water than there  
17 is water rights -- I think Mr. Morrison said it -- somebody is  
18 going to get cut, and so we have to, you know -- so people know  
19 that, but we don't know how it will be done.

20 I don't -- I mean, obviously the most senior rights  
21 are in the Muddy River, but what I have down here at the bottom  
22 is that the State Engineer may order that withdrawals be  
23 restricted to conform to priority rights.

24 Mr. Bolotin referenced this provision, and it's kind  
25 of two-part provision. It first allows the State Engineer to

1 investigate a basin if withdrawals are exceeding supply, and  
2 then it says he may order withdrawals be restricted to conform  
3 with priority of rights. How will that happen? I have a TBD,  
4 to be determined. As a whole or basin specific? We don't  
5 know. That's something we'll decide going forward. And that's  
6 something that -- that just hasn't been determined.

7           So it was determined in 1303. It was expressly  
8 rescinded in 1309, and it's something that will be decided in  
9 the future. So it's right for people to be concerned, but to  
10 come in here and say that I am now a junior is not accurate. I  
11 mean, it may end up being accurate, and I think as a result of  
12 us being here, I mean, we could ask you for an advisory opinion  
13 to say how should the State Engineer divide up the 8,000, but I  
14 don't think we're doing that.

15           THE COURT: I don't think you want that from me.

16           MR. TAGGART: Okay. But we're -- we need to make --  
17 we need to get to where we can make those kind of decisions.

18           Okay. I wanted to talk about AB51. I'm skipping  
19 around a little bit. So...

20                           (Pause in the proceedings.)

21           THE COURT: This is Slide 25?

22           MR. TAGGART: Slide 25.

23           All right. So before I get into this, I think I want  
24 to say that when I write briefs, I have this pattern where I  
25 don't want to really get into it because once I get into it

1 real deep I get overwhelmed by the weeds, and I try to say --  
2 before I start writing, I try to get up high and think about  
3 what is this all really about, and I think here we get dug  
4 down -- we get dragged down into a lot of little like lawyer  
5 arguments, semantic arguments about statutes.

6           The statutes are important, and they're going to be  
7 part of how we solve this, how we resolve this, but sometimes  
8 we can compartmentalize things and not look at how it all fits  
9 together, and I think that we know that prior appropriations is  
10 the law of the state. It always has been. It's what the  
11 legislature codified. It should be the overarching color to  
12 everything that the State Engineer has power to do.

13           That's what he's trying to accomplish is the concept  
14 of priority and controlling water usage based upon water  
15 availability. That's been the role of Courts and now the State  
16 Engineer. Courts before the State Engineer's office and now  
17 the State Engineer. I said this I think in my earlier remarks  
18 that how river systems control deliveries and shortages is the  
19 same thing we're doing now. It's just that it's more  
20 complicated because it's groundwater. But that whole concept  
21 in the water law that was codified from common law is what  
22 we're trying to accomplish.

23           And while I'm talking about that, I'll just describe  
24 another situation where on the -- the Truckee River, runs  
25 through Reno; that is under the Orr Ditch decree. It starts in



1 Tahoe. It starts in South Tahoe, runs into Tahoe, and then it  
2 leaves Tahoe at Tahoe City, goes through Truckee, California,  
3 and then it comes down into Nevada. We've been fighting over  
4 that one since 1905, and an entity got a groundwater right  
5 approved right next to the river.

6 And the State Engineer approved that water right, and  
7 the case was filed in the river court, the Orr Ditch court, the  
8 federal court. There's an appeal of the groundwater approval  
9 by the State Engineer, but the parties alleged it was impacting  
10 the surface water.

11 So you want to talk about conjunctive management,  
12 again, when we look at it in isolation, it's one thing. But  
13 when we look at what does it really mean, it means that you  
14 can't ignore the hydrologic connection between ground and  
15 surface water. In that case, the Ninth Circuit said if there  
16 is an impact of a groundwater well on a surface water decree,  
17 the decree court has jurisdiction.

18 That was the challenge at the time, was does the  
19 decree court have jurisdiction over a State Engineer decision  
20 on groundwater? That's not in the decree. The groundwater is  
21 not in the decree. The groundwater is under the State  
22 Engineer's jurisdiction. And the Court said if there's an  
23 alleged injury that the decree court has jurisdiction over  
24 that. So this isn't the first time we've run into, you know,  
25 interference between ground and surface water.

1 I mean, there's a case called *Western RV Griffin* from  
2 I think the '70s where pumping in Mason Valley was impacting  
3 the Walker River, and the Supreme Court considered what the  
4 State Engineer had to do there in terms of groundwater  
5 interference with surface water. So it's not anything -- it's  
6 not brand new, I mean.

7 So AB51, first of all, legislative interpretation  
8 rules, they're clear. Failed legislation means nothing. I  
9 mean, you cannot rely on failed legislation. It's too  
10 dangerous. The reason why we are so careful with legislative  
11 history is because people can cherry pick legislator comments,  
12 like the one we saw earlier. I mean, one legislature doesn't  
13 speak for the whole body. And the only thing that the whole  
14 body says together is what they approve, and that's the only  
15 thing we know about a legislative body and what it meant by its  
16 action is when all of them, well, at least a majority, agree on  
17 something and enact it. And that's what we can believe. So  
18 when they fail -- when something fails, it has absolutely no  
19 value. So that's one thing.

20 But AB51 didn't do what people are claiming. It  
21 wasn't trying to do what people were claiming. I think it was  
22 stated. I'll just go into it a little more is that we fought  
23 over what you do about a conflict in a lot of cases, and one of  
24 them is the *Eureka County* case that we talked about, about  
25 substantial -- presently known substantial evidence. That was

1 the case that came up yesterday. And in that case the State  
2 Engineer said as long as there's a mitigation plan for a -- so  
3 I'm going to -- my client had water right that would impact  
4 someone else's water right. If we designed a mitigation plan  
5 for that, would that avoid being a conflict? That was the  
6 question. The Court said, no, unless you have -- unless you  
7 have the mitigation plan done ahead of time, you can't. No.

8 Well, my point is that this statute had to do with  
9 the concept of what it might be, some would say force  
10 mitigation. Can a senior be told, hey, here's money in lieu of  
11 your water right. So now there's no conflict. That's what the  
12 State Engineer was proposing on the Humboldt. That's what the  
13 bill was looking into. It wasn't about conjunctive management.

14 Now, did the State Engineer get up and say some  
15 things to the legislature like I don't have the powers I need?  
16 Yeah, he did, but we don't know -- I mean, we shouldn't just  
17 see that in the abstract and think about what he -- he was  
18 saying I don't have the powers I need to do what I want to do  
19 on the Humboldt River, which was impose a fee on folks that  
20 were capturing river flow from their wells and take that money  
21 and give it to the surface water users. So that's what that  
22 was about. It wasn't about the concept -- I mean, he didn't  
23 need that bill to do conjunctive management.

24 Conjunctive management has been something that he's  
25 had to do since the groundwater law was enacted. Because as

1 Mr. Carlson said, one of the first statutes in the groundwater  
2 law that was adopted in 1939 is these groundwater rights are  
3 granted subject to existing rights. That includes every right  
4 that existed before that time, ground and surface.

5 So AB51 I think is -- I think it's not valuable in  
6 this case.

7 Now, while I'm talking about the Humboldt, and I know  
8 that 1329 was discussed earlier. 1329 is an order of the State  
9 Engineer involving the Humboldt.

10 I'm not going to get into that, the details of it,  
11 except to say that this isn't the only place this is happening.  
12 The State Engineer is trying to solve this problem in other  
13 places where we have a -- where we have alleged interference  
14 from groundwater pumping on a surface water system. And so I  
15 just wanted to point that out.

16 Okay. So the criteria that the State Engineer relied  
17 on --

18 THE COURT: Are you talking about the six or the --

19 MR. TAGGART: The six.

20 THE COURT: Okay.

21 MR. TAGGART: I'm going to go to --

22 So, yeah, there were six.

23 (Pause in the proceedings.)

24 So, yeah, there were six, and --

25 THE COURT: So we're on Slide 51. Is that --

1 MR. TAGGART: That's right. Slide 51. Thank you,  
2 Your Honor.

3 So I'm going to go back to 50 actually first.

4 THE COURT: Okay.

5 MR. TAGGART: So first of all, these criteria have  
6 been made into something that they're not. The State Engineer  
7 might just regret calling them criteria. They just happened to  
8 be what everybody looks at when they try to decide what they  
9 were looking at. So if you were to ask an expert witness how  
10 would you decide what to do or how would you decide whether  
11 these basins are connected, this is the kind of thing they look  
12 at. That's all it is. These are the scientific types of  
13 principles that you would look at to see if things are  
14 connected. And it happens to be kind of -- I think of it as a  
15 summary of how all the experts looked at this problem, and the  
16 State Engineer kind of summarized with all of these principles  
17 were.

18 And it could have just as easily been a list of  
19 factors or a list of reasons why they made the decisions they  
20 made.

21 And so you asked Ms. Peterson about, you know, if the  
22 water levels go up and down together in basins, you know, Basin  
23 A versus Basin B, is that what we're talking about? I think  
24 that is what we're talking about, that if you see a similar --  
25 first of all, if you see a similar water level in all of the

1 basins, then that's a factor; right? You can look at the State  
2 Engineer's, you know, blowup about that. And I think that's,  
3 you know, number one. That's what they have there. It's a  
4 relatively -- it's a similar -- that's what any hydrologist  
5 would look at first. Oh, okay. You're going to ask me -- the  
6 State Engineer says, I want to know whether these basins are  
7 connected. Well, what's the water levels in each one? So they  
8 have a well, a monitor well, in each one. They look at it.  
9 They compare those numbers, and they look at it over time.

10           And then when they look at it over time and whether  
11 it goes up and down, that's where -- that's number two, whether  
12 the hydrograph's demonstrate a similar pattern over time.  
13 That's all that is. That's what everybody did for any -- I  
14 mean, if I put one of those experts on the stand right now and  
15 said, hey, is this what you did, I mean, I think I know mine  
16 would say this is what they did.

17           This is just -- and then the next one, whether the  
18 water levels demonstrate a similar decrease or increase  
19 corresponding to a change in pumping. That's just everybody  
20 looked at the same thing the State Engineer asked them to.  
21 There was a pump test. How did each one of these wells respond  
22 to the pump test? That's all that is. And do they all respond  
23 similarly to the same stress?

24           And if you look at the State Engineer's handout here,  
25 that's sort of what, you know, that's what you see,

1 particularly -- like, I'm going to point out, you know, this  
2 Pederson Spring, Warm Springs area, EH4, these four. This is  
3 the critical area where the dace are located here at Warm  
4 Springs and at Pederson. And EH4 right here, is a well, a  
5 groundwater well, really close to the spring. And the point of  
6 that well was to be able to compare changes in water level of  
7 the well to changes in flow of the spring. So that was what  
8 they tried to do here.

9 Well, you can see during the pump test -- I think  
10 you've seen this from a lot of people here in this little pink  
11 area, you can see similar reactions. That's all they did.  
12 That's all this criteria was. It was nothing remarkable.

13 And to say that no one knew that this is what the  
14 State Engineer was going to look at is just not what -- I mean,  
15 every expert knew this is what the State Engineer was going to  
16 be looking at, these --

17 THE COURT: Well, let me ask then, you know, what  
18 about the criticism that there wasn't an opportunity to discuss  
19 or present evidence about what criteria the State Engineer  
20 should be looking at?

21 MR. TAGGART: That there was. So when he said I want  
22 you to -- the five -- the 51303 instructions, when he said I  
23 want you to tell me whether these basins are hydrologically  
24 connected, every expert developed a method of how to analyze  
25 that question with their scientific information, and they would

1 have looked at -- they looked at the data. That's like the  
2 first step is they look at what's the data that I have  
3 available. And then what's -- and then how am I going to  
4 analyze the data. And then they analyze the data.

5 And so to say that they didn't know that this is what  
6 the State Engineer was going to do, what else was he going to  
7 do? I mean --

8 THE COURT: Well, I guess maybe more specifics of  
9 what the criteria would be and if we had known that, you know,  
10 criteria 5 is something that he was really going to be basing  
11 it on, we would have focused our information that we would be  
12 giving in the hearings in a different way. Do you think that's  
13 a deprivation of due process?

14 MR. TAGGART: Well, I don't because, well, I think --  
15 let me answer it this way. If that had been what happened, it  
16 would be, but I don't think that's what happened. Because like  
17 Number 5, whether geologic structures -- and this is page 50 --

18 THE COURT: No, I just picked five out of -- out  
19 of --

20 MR. TAGGART: Well, yeah, but this came up the other  
21 day; right? I think Mr. Herrera --

22 MR. DOTSON: Herrema.

23 MR. TAGGART: Herrema. Thank you, Bob.

24 I think he was talking about how they would have done  
25 something different if they'd known Number 5 was there. Well,



1 but what they did was investigate geology. That is what they  
2 did. They went out and tried to find faults that would form  
3 barriers or that might be barriers between their wells and the  
4 rest of the flow system.

5 THE COURT: Because that's one of the natural  
6 principles that you would be looking at in talking about water  
7 connectivity or hydrological connectivity?

8 MR. TAGGART: Right. And you asked a question about  
9 what do faults do to water flow. Well, they do -- either they  
10 are the edge of the bathtub like we talked about -- that's easy  
11 to understand. The harder part to understand is a lot of times  
12 these faults are where the water is. So folks who know where  
13 to put wells, it's the edge of the fault where all this rock  
14 has been crushed up and is more granular, and so there's more  
15 water that flows along the fault. Some of the biggest wells  
16 are along faults. Or -- so you look for those.

17 And anyway, I think the point that the State Engineer  
18 was making is that if I had a well on both sides of the fault  
19 and I pumped one, and I pumped Well A on this side, on the  
20 right side of the fault, and I looked at a monitor well on the  
21 left side of the fault, if I see a reaction over here, the  
22 fault is not a barrier; right? But if I don't see a reaction,  
23 it is. And so that's why well level data is so important, more  
24 important than geology, and I think that's part of what the  
25 State Engineer was saying.

1           So again, I think it's the way that we look at this  
2 order, and if we're looking for ways to challenge the order,  
3 oh, it's a post hoc, you know, it's post hoc rule making. We  
4 didn't know about these criteria. And then if you dig into  
5 what the experts actually submitted, this is exactly what they  
6 all knew was coming, and this is exactly what they all  
7 testified about.

8           So it's not -- and I don't think it's a card game. I  
9 can't resist -- because, you know --

10           THE COURT: Yes, it's Vegas.

11           MR. TAGGART: Yeah, exactly. I mean, it was a  
12 scientific exercise where you use scientific principles to find  
13 the answer. And the State Engineer asked everybody to come in  
14 and tell him what they knew. And then he put all that  
15 information into one place and identified what he thought the  
16 most important factors were based on that evidence that the --  
17 based on the testimony that was provided to him.

18           Okay. I want to talk a little bit about joint versus  
19 conjunctive versus critical management.

20           So I just want there to be, you know, crystal clear  
21 clarity on this is that, you know, they're all -- they're all  
22 distinctly different items. You've accurately identified the  
23 two. First, the joint is the joint groundwater basins  
24 together. Conjunctive is ground and surface. I talked a  
25 little bit about that already because I think that came with

1 existing rights; whenever you're subject to existing rights  
2 it's ground and surface.

3 And then there's critical management area.

4 So critical management area is a whole different  
5 thing. I don't want it to be confusing, but it does exist in  
6 one basin in Diamond Valley, and we may get there. We may not.  
7 I don't know.

8 But for instance, it allows a groundwater management  
9 plan to be developed by the water users that might be different  
10 than what would happen to strict priority. And we have a case  
11 in front of the State Supreme Court right now that we're  
12 waiting for a decision on about whether a groundwater  
13 management plan is valid. We -- you know, there's the one side  
14 that I've represented is saying that you've got to follow  
15 priority. You can't change priority with the groundwater  
16 management plan.

17 And the other side's saying that the legislature  
18 authorized that. That's my characterization. I'm sure no one  
19 will agree with that, but that's -- so that's already  
20 happening.

21 So in Phase 2 of this proceeding, maybe we'll get  
22 direction from the Supreme Court on how a groundwater  
23 management plan works, and maybe that's a path we end up going.

24 So a lot of these questions that were -- that we  
25 don't know the answers to yet about policy, that's why they're

1 being left off to the next -- to the next point.

2           So that's -- I just wanted to clarify that for joint  
3 management. Your question was where in the statutes does it  
4 authorize the State Engineer to do joint management. So I will  
5 endeavor to answer that question.

6           Okay. Page 12. And so I think that -- I think I  
7 have to concede that there's no statute that says State  
8 Engineer you can do joint management. The words joint  
9 management are not in a statute.

10           But first of all, these are the three statutes that  
11 I've started with, but before we even start there, I want to  
12 remind, you know, the Court of this notion that prior  
13 appropriation is the overlying color to everything the State  
14 Engineer does. So every one of these statutes needs to be  
15 interpreted, and this is how he's supposed to accomplish prior  
16 appropriation; where a prior appropriation stays that's what  
17 he's supposed to do. They're not -- they're not considered in  
18 isolation. I call it a mosaic of powers in my brief, and if  
19 you took each little -- each little tile and looked at it, it  
20 wouldn't be anything, but when you look at them all as a  
21 mosaic, it's something -- you know, it could be something --  
22 you know, the sum is greater than the parts.

23           So that -- so I think we need to keep that in mind.  
24 The first one being no conflicts. Groundwater cannot conflict  
25 with other -- with senior groundwater rights or senior surface

1 water rights.

2           And then 532.120, Sub 1, the State Engineer talked  
3 about this, that's the general authority. General police  
4 power, it creates the implied authority you've heard some  
5 people talk about. So, you know, the agencies can sometimes be  
6 only limited or can be limited to only their express powers.  
7 The legislature here has said you have your express powers, and  
8 you have implied powers based on 532.120, Sub 1.

9           Now, here I'm going to vary a bit from the State  
10 Engineer. I believe that 532.120, Sub 1, justifies the  
11 inclusion of Kane Spring. And I think it -- but I think  
12 there's more authority than that for the other basins. So I  
13 think that everything he did is justified by 532.120, as he  
14 argued.

15           But in the basins that were already designated, he  
16 has more authority.

17           So let me get into that.

18           So we have seven basins, and six of them have  
19 designation orders. Remember I talked earlier is there's  
20 delineation, and there's designation, and designation is  
21 534.030. It allows the State Engineer to designate a basin if  
22 it's in need of additional administration.

23           Once he does that, 534.120, sub 1, gives him  
24 additional power after he's designated a basin.

25           And that's where these words deemed essential for the

1 welfare in a designated area come from. In our brief, we point  
2 out this is a police power, which means it's broadly  
3 interpreted for the health, safety and welfare of the public.  
4 It's a public resource. The State Engineer is supposed to  
5 manage it for the public. It includes the dace. It includes  
6 senior rights. It includes future generations. It includes  
7 future residents of homes that need water, and they don't want  
8 those homes to not have enough water. So that is part of that  
9 mosaic of powers that the State Engineer has.

10 And that's where it gets -- in 534.120, sub 1, it  
11 says that in an area, right, you asked about this, in the  
12 judgment -- or in the judgment of the State Engineer, the  
13 groundwater basin is being depleted.

14 Well, I think you found that as a fact question. He  
15 determined that, that State Engineer in his or her  
16 administrative capacity may make rules and regulations and  
17 orders that as deemed essential for the welfare of the area,  
18 okay. So 534.030, it talks about basin. This talks about  
19 basin and area. I think there's a fair -- you know, Courts  
20 will look at that language and have to interpret what that  
21 language means.

22 THE COURT: Whether the area is outside or inside the  
23 basin?

24 MR. TAGGART: Right. Right.

25 And I think it's a fair -- I think you can fairly

1 interpret that to mean that the area is bigger than the basin.  
2 Or is it -- or does the legislature use the same word to mean  
3 the same thing? That's not a legislative -- that's not a rule  
4 of legislative interpretation. If they use a different word,  
5 they mean something different.

6 And so I think this can be considered a larger area,  
7 and that the State Engineer, when he thinks that the area is in  
8 need of more protection, he can adopt the rules for that.

9 So here's the other interesting point is that in  
10 those six basins that already have designated -- that have been  
11 designated, the State Engineer could've entered six separate  
12 orders. I don't think anybody can dispute he could enter six  
13 separate orders, and each one of those six basins, based on  
14 534.120, and in each one of those orders say you are all going  
15 to live together as neighbors. I'm going to treat you all the  
16 same. I'm going to -- I think you're all connected. And so  
17 everybody in your -- I'm going to issue six separate orders  
18 because I can issue an order in each one of these basins.

19 And what he did was he issued one order instead of  
20 six. I think that's -- if there's any mistake, if that can be  
21 considered a mistake, it would be that. That's form over  
22 substance in my view, and certainly he could -- he could have  
23 done that through the power he has in designated basins.

24 And so I want to clarify this too, is that if you  
25 read the language of 1309, it says delineate. If you read

1 the -- so if you read carefully 1303, 1303 was based upon  
2 534.0 -- 534 -- 534.120, and then in 1309, the State Engineer  
3 continued to use 534.120 and 532.120. And so in our view,  
4 that's enough authority for him to do what he did. That's  
5 where he gets the power to jointly manage.

6 THE COURT: You said he used 534.120 and continued to  
7 use --

8 MR. TAGGART: 532.120, right.

9 THE COURT: Okay.

10 MR. TAGGART: And to the extent Kane Springs isn't  
11 designated, he can't use 534.120 in Kane Springs because it's  
12 never been designated. So the authority for including Kane  
13 Springs is 532.120.

14 Now, there's more though. Because again, the broader  
15 picture, anything that happens in Kane Springs -- and my  
16 client's testimony was -- Colby Pellegrino (phonetic) -- who's  
17 here, her testimony was you don't need to change the boundary  
18 from 1303, but you need to recognize through management rules  
19 that there's pumping around the boundary that might impact this  
20 area. And so you should not change the boundary, but you  
21 should incorporate management rules that take into account  
22 potential for harm from areas outside the boundaries. That's  
23 sort of what the State Engineer did.

24 And even if the State Engineer didn't include Kane  
25 Springs under 532.120 or didn't have the authority to, he's



1 still going to consider what happens in Kane Springs and how it  
2 might impact Coyote Springs or the rest of the basin. If  
3 there's a new appropriation application in Kane Springs, and I  
4 think there is, whether this order exists, he can consider is  
5 it going to conflict? Is there water available for  
6 appropriation? I mean, he can do all the things that he talked  
7 about here.

8 And I sort of think it's odd because it's almost like  
9 the State Engineer is saying, hey, everyone, you're going to be  
10 treated this way now. They're all yelling they didn't get  
11 enough notice or they don't have enough notice of what's going  
12 to happen. Well, they know now, and instead of them hearing it  
13 through the denial of a water application in the future,  
14 they're seeing it here in an order from the State Engineer. So  
15 that I think is the basis of the State Engineer's authority to  
16 jointly manage and -- and that is that topic I wanted to cover.

17 Can we leave it there?

18 THE COURT: Yeah, we can.

19 MR. TAGGART: Until tomorrow.

20 THE COURT: That is fine.

21 So let me stop the clock.

22 So let me just ask, what is the order that we  
23 anticipate going in tomorrow? So I know, Mr. Taggart, you will  
24 be --

25 MR. TAGGART: Right. I will start, and then it

1 depends on which petitioners are going to also argue as  
2 respondent intervenor. So I'll kind of leave it to them. I  
3 just --

4 THE COURT: Okay. So what other petitioners are  
5 planning on arguing as respondent intervenors?

6 UNIDENTIFIED SPEAKER: Coyote Springs --

7 MR. ROBISON: Your Honor, this is Kent Robison on  
8 behalf of CSI. We will argue tomorrow.

9 THE COURT: Okay.

10 MR. ROBISON: In response to what we just heard and  
11 in response to the three intervenors' arguments that were given  
12 to you today.

13 THE COURT: Well, so, okay. So hang on.

14 So I think what we had whenever our last management  
15 type meeting that we talked about, we talked about at this  
16 portion where it was the responding intervenors, it would have  
17 to do with the support of the Nevada State Engineer.

18 So if you are talking about where you would be  
19 supporting the Nevada State Engineer, then you would be in  
20 this -- somehow I don't think that may be what you're thinking  
21 about. So I think -- I think we would be saving that for the  
22 reply portion.

23 So just to clarify, where are you between those two?

24 MR. ROBISON: Well, okay, Your Honor. I understand  
25 what you're saying. And if you expect CSI to argue in favor of

1 the 1309 order, I think I'll stay in Reno and sleep in. That's  
2 not going to happen.

3 THE COURT: Okay. So is there anyone else that is  
4 also planning on presenting argument in support, or are we then  
5 now moving to the reply portion after that?

6 MR. LAKE: Your Honor.

7 THE COURT: Yes.

8 MR. LAKE: I'd like to present in support.

9 THE COURT: Okay.

10 MR. LAKE: I don't anticipate taking a lot of time --

11 MR. DOTSON: Your Honor, I did not hear that. What  
12 was that?

13 THE COURT: Oh. All right. So that's Biological  
14 Diversity, Mr. Lake.

15 MR. LAKE: Yeah, this is Scott Lake, Center for  
16 Biological Diversity.

17 Yeah, I plan on taking some time. I feel like a lot  
18 of our points being covered today, but I do want to talk about  
19 the ESA tomorrow.

20 THE COURT: Okay. So we have Mr. Taggart. We've got  
21 Center for Biological Diversity. Is there --

22 MR. DOTSON: Yes, Your Honor. Rob Dotson on behalf  
23 of Muddy Valley Irrigation Company. I think right now I have  
24 seven slides.

25 THE COURT: Okay.

1 MR. DOTSON: Which I'll look at tonight, that were in  
2 support of the State Engineer.

3 THE COURT: Okay.

4 MR. DOTSON: I may remove some and add some of those  
5 based upon what I've heard today.

6 THE COURT: Okay. So so far we've got three,  
7 counting Mr. Taggart. Is there anyone else?

8 MR. FOLETTA: So this is Lucas Foletta.

9 We're not going to argue in support of the order, but  
10 I do want to clarify one point. So in our answering brief, we  
11 answered the brief in support of the Center for Biological  
12 Diversity --

13 MR. ROBISON: Your Honor, the people on BlueJeans  
14 cannot hear because of the microphone.

15 THE COURT: Oh, do want to come up. Sorry.

16 THE COURT RECORDER: Please identify yourself.

17 THE COURT: Oh, yes. That's Mr. Foletta.

18 MR. FOLETTA: Yes. Lucas Foletta here.

19 So, Your Honor, in our answering brief we answered  
20 the brief in support of the Center for Biological Diversity's  
21 Petition for Judicial Review. So technically we are -- but we  
22 filed an answering brief.

23 THE COURT: Okay.

24 MR. FOLETTA: I'm fine arguing a couple of points.  
25 It's not much in the reply section.

1 THE COURT: In the reply portion. Okay.

2 MR. FOLETTA: But technically it's answering their  
3 petition. So as long as it's okay with them, it's okay with  
4 me.

5 THE COURT: And then, Mr. Klomp, did --

6 MR. KLOMP: Yeah, I think this issue came up at our  
7 status conference about intervenors having to argue in support  
8 of the State Engineer. For example, we filed three separate  
9 answering briefs, and I don't think that we should be limited  
10 necessarily to arguing in support of the State Engineer in this  
11 portion of the oral argument. I think we should be limited to  
12 those, you know, the contents or the topics of those answering  
13 briefs, but I don't think that we would take very long in the  
14 intervenor portion.

15 THE COURT: So let me ask then, does it hamper you to  
16 make those points if we structure it for the reply?

17 MR. KLOMP: That's a good question.

18 THE COURT: So do you want to consult and see?

19 MS. PETERSON: No. I -- it doesn't hamper us, but it  
20 might the Center for Biological Diversity or SNWA because we  
21 filed answering briefs in response to their petitions. And  
22 then we go last, last, last in the reply.

23 THE COURT: Right.

24 MS. PETERSON: And they're not going to be able to  
25 reply to us.

1 MR. ROBISON: Perfect.

2 (Multiple parties talking, indiscernible speech.)

3 MR. KLOMP: So I think we're fine with that, Your  
4 Honor. We may have a couple of points in a couple minutes even  
5 in the intervention portion. We can make the rest of our  
6 points in reply, but I just wanted to raise that issue because  
7 this was discussed at the status conference.

8 THE COURT: Okay. So then let me ask, are there any  
9 other parties that are in sort of similar situations with  
10 Lincoln Vidler as far as answering other parties and those  
11 parties would not have an opportunity to present argument  
12 regarding those answering briefs?

13 MR. FOLETTA: Your Honor, that's --

14 THE COURT: Mr. Foletta.

15 MR. FOLETTA: Yeah, that's the same thing I was going  
16 to articulate is that exact same position.

17 THE COURT: Okay.

18 MR. FOLETTA: So we answered their brief. We also  
19 had a little content on SNWA's stuff, but not much, and I  
20 wouldn't even anticipate addressing it.

21 THE COURT: Okay. So then why don't -- so then what  
22 we could do is after Mr. Dotson, we could go Mr. Foletta, and  
23 then we would do Lincoln Vidler on those short points, and then  
24 we would go into the replies; is that correct?

25 MR. DOTSON: I think so, Your Honor. This is Rob

1 Dotson again for the record.

2 But that does raise an interesting point because  
3 there would be some things that would be in what I would've  
4 called like the rebuttal argument or the reply argument that  
5 relates to Coyote Springs. And in fairness, my joke aside, I  
6 probably shouldn't be saying that after Coyote Springs no  
7 longer has a chance to reply to anything I would say in that  
8 regard. So maybe I need to rejigger my -- because right now my  
9 presentation for tomorrow is only in support of the State  
10 Engineer.

11 THE COURT: I see what you're saying. So I guess --

12 MR. DOTSON: And so if the idea is to not leave  
13 somebody without a -- I mean, this is the privacy recency  
14 advantage that plaintiff has; right? You get to go last and  
15 sit down. That's why you always get a conviction, and you  
16 never lose, right, as a prosecutor.

17 THE COURT: I was going to say, as a former defense  
18 attorney, I don't know if I agree with that, but --

19 MR. DOTSON: I just stopped after that. That's  
20 right. (Indiscernible) I got one defense. I've got one  
21 criminal defense and only took one criminal case, but, yeah,  
22 that's -- that's why it's sometimes easier to be a prosecutor I  
23 say as a former prosecutor.

24 THE COURT: Sure. Absolutely.

25 MR. DOTSON: So anyway.

1 THE COURT: So, well, then I guess in fairness it  
2 would be those who support the Nevada State Engineer and also  
3 would be answering to other parties. So that way in the  
4 replies, those parties would also have an opportunity to  
5 address that.

6 So by a raise of hands, how many people do we have  
7 that we're talking about, okay. So Mr. Dotson, Mr. Foletta,  
8 Mr. Lake, and then so I think we're still at the same number.  
9 Okay. Is there anyone else that I missed?

10 MR. ROBISON: Your Honor, this is Kent Robison.

11 THE COURT: Yes.

12 MR. ROBISON: We did file a brief regarding the  
13 intervenor brief, and then we discussed the Muddy -- the  
14 decree. We discussed the Endangered Species Act and other  
15 things. But really, Your Honor, that is more reply to the  
16 arguments that you're going to hear this week, and we'd just as  
17 soon keep our powder dry and argue all of our points in reply  
18 because we, as you know, are not going to argue in favor of  
19 anything the State Engineer has put in this case.

20 THE COURT: Well, let me ask then, are any of your  
21 arguments touching upon any of the other petitioners?

22 MR. ROBISON: Yes. Yes.

23 THE COURT: So then I would say those arguments that  
24 are addressing the petitioners themselves and not necessarily  
25 the State Engineer is also you would be next in line in this



1 little batch of arguments.

2 MR. ROBISON: All right. We will be ready to go.

3 See you tomorrow.

4 THE COURT: Okay. So I guess I should figure out the  
5 order that we're going in.

6 MR. TAGGART: Can I just clarify one thing though?

7 THE COURT: Sure.

8 MR. TAGGART: So, I mean, to put some -- because I'm  
9 confused, but we challenged the conflicts decision of the State  
10 Engineer. We did that in our opening argument. If anyone is  
11 against us on that, we need to hear that. I think that's what  
12 Ms. Peterson is talking about.

13 THE COURT: Right.

14 MR. TAGGART: If Mr. Robison has something to say on  
15 that, we need to hear that now.

16 THE COURT: Sure. So that you can address it in your  
17 reply.

18 MR. TAGGART: Exactly.

19 THE COURT: Right. So that's --

20 MR. TAGGART: So that's what I'm anticipating. So if  
21 somebody gets up after me when I'm done in reply and starts --

22 THE COURT: Blasting you.

23 MR. TAGGART: -- taking me on and I hear my name, I'm  
24 not -- you know, that's not -- I don't think that's proper  
25 form.

1 THE COURT: And I would agree. And so that's why,  
2 you know, the point is that everyone is aware of what all of  
3 those arguments that are affecting their own position is and be  
4 able to respond to that.

5 So with that in mind, are there any other parties  
6 that need to, you know, make their argument in this next batch?

7 MR. FLAHERTY: Your Honor, this is Frank Flaherty. I  
8 apologize. I too am now confused.

9 THE COURT: So it's basically supporting the State  
10 Engineer or addressing all of the other petitioners and that  
11 kind of thing.

12 MR. FLAHERTY: That part I get.

13 THE COURT: Yes.

14 MR. FLAHERTY: Just I got confused after  
15 Mr. Taggart's comments. So, I mean, I've been making notes  
16 here. He got up and spoke as an intervenor in support of the  
17 State Engineer's decision.

18 THE COURT: Right.

19 MR. TAGGART: Right.

20 MR. FLAHERTY: My understanding is when I get up in  
21 reply, I can reply to what the State Engineer or Mr. Bolotin  
22 said.

23 THE COURT: You can reply to anyone.

24 MR. FLAHERTY: Right. Okay.

25 THE COURT: That you have in your -- yeah, that you

1 have in your briefing.

2 MR. FLAHERTY: Okay. All right. Thank you. My  
3 confusion is resolved. Thank you. Okay.

4 THE COURT: So, yes, Mr. Lake, do you want to come  
5 up?

6 MR. LAKE: Well, I just wanted to clarify something.  
7 This is Scott Lake for Center for Biological Diversity for the  
8 record.

9 As far as our arguments go, I feel like the issues  
10 that we will be arguing in support of the State Engineer  
11 coincide with arguments against other petitioners as well. So  
12 I personally don't have a concern about the order in which  
13 things go tomorrow, but I just wanted to clarify if other  
14 parties do. Are we still following the same order that we  
15 followed?

16 THE COURT: Well, that's what I was going to talk  
17 about right now.

18 MR. LAKE: Okay.

19 THE COURT: So if we want to follow the same order  
20 that we did with like the petitioners or -- which makes logical  
21 sense, I guess, to me. So let me just look to see what the  
22 order is. All right. So we would be looking at -- well,  
23 Mr. Taggart, you're already halfway on. So then we would be  
24 looking at CSI. And then we would look at Center for  
25 Biological Diversity.

1 MR. ROBISON: Apex.

2 THE COURT: Well, I don't think Apex has anything to  
3 say.

4 MR. BALDUCCI: Yeah, we don't have any answering  
5 comments for the --

6 THE COURT: I mean, I don't want to speak for you,  
7 but I -- since you didn't raise your hand, I figured --

8 MR. BALDUCCI: No. Apex and Dry Lake have no  
9 answering comments for this portion of the case.

10 THE COURT: Okay. Then we'd be looking at Muddy  
11 Valley with Mr. Dotson. And then, let's see, I think  
12 Mr. Foletta, Georgia Pacific.

13 MR. FLAHERTY: No, Nevada Cogen, Your Honor.

14 THE COURT: Oh. Do you have -- wait.

15 MR. FLAHERTY: I'm sorry. We're talking about  
16 replies now; correct?

17 MR. TAGGART: No.

18 THE COURT: No. We're not talking about --

19 MR. FLAHERTY: Oh, I apologize. I'm sorry.

20 THE COURT: No, we're not talking about replies.  
21 We're talking about just this --

22 I know, Mr. Foletta, you had some, right? And you're  
23 with Georgia-Pacific?

24 MR. FOLETTA: Yes.

25 THE COURT: Okay. So Mr. Foletta with

1 Georgia-Pacific. And then Lincoln and Vidler. Okay. So  
2 that's all clear as mud. Does everyone --

3 And then we would be looking at going into the  
4 replies, and the replies would be again in the order that I  
5 think we started.

6 All right. Is everyone clear on that?

7 MR. TAGGART: I guess I'll ask this. I'm sorry. Am  
8 I interrupting?

9 (No audible response.)

10 MR. TAGGART: Is -- does that mean like tomorrow  
11 (indiscernible) get done, that's my kind of question. Because  
12 then I might have to go again tomorrow. If we get through all  
13 of the list you just came up with tomorrow, then I'm back up  
14 again, and I'd rather not be back up again until Thursday, but  
15 I also don't want to -- I think we're going to maybe get done  
16 Thursday. I'm hoping.

17 THE COURT: Maybe.

18 MR. TAGGART: So I guess we'll see how it goes, but  
19 I'd rather start all the replies on Thursday.

20 THE COURT: Well, I guess --

21 MR. TAGGART: If we can do that.

22 THE COURT: I guess here's a question for everyone.  
23 How -- well, I guess we can -- how much time does each party  
24 think that they would be taking up for the replies? Because  
25 you all have -- not all. Not all, but, you know, many of you

1 have hours left. So I think that really kind of dictates. I  
2 mean, I know that the majority of you have come from out of  
3 town, and you probably want to get back sooner rather than  
4 later, but, you know, I also don't want to deprive anyone of  
5 their opportunity to be fully heard.

6 So, I mean, I'm -- it sounds like, just to be frank,  
7 Mr. Taggart, it sounds like the points that are going to be  
8 made in the intervenor portion sound like they're going to be  
9 pretty short. So I think you might be up again.

10 MR. TAGGART: Okay. I'll be ready.

11 THE COURT: Just to give you a heads up.

12 MR. TAGGART: Okay. I'll be ready then tomorrow to  
13 do that as well.

14 THE COURT: I mean, if you need a longer break, you  
15 know, if we could do it like -- if we can manage everything in  
16 the morning as far as the intervenor comments, and you want to  
17 take a little additional time over the lunch break to start up  
18 again, we can certainly do that, but, you know, I'd like to  
19 keep it moving as much as possible.

20 MR. TAGGART: Yeah, okay. That's fine. I'll be  
21 ready. I'll make sure I'm ready tomorrow to do my other reply  
22 argument as well.

23 THE COURT: Sure. And, you know, I would also say,  
24 you know, Coyote Springs, you're next in line after him. So,  
25 you know, just make sure that you are ready to be making --

1 MR. ROBISON: We are ready right now, but we'll wait.

2 THE COURT: You were ready three years ago I think.

3 MR. ROBISON: Bring it on. Let's go.

4 THE COURT: Okay. All right. So with that in mind,  
5 are there any other housekeeping matters that need to be taken  
6 care of today?

7 MR. ROBISON: We lost you.

8 THE COURT: Oh. Are there any other housekeeping  
9 matters that you have before we break for the day?

10 MR. ROBISON: Not for CSI. Thank you, Your Honor.

11 THE COURT: Okay. Great. Thank you. We will see  
12 you all tomorrow at 8:30.

13 (Proceedings recessed for the evening at 5:02 p.m.)

14 -oOo-

15 ATTEST: I do hereby certify that I have truly and correctly  
16 transcribed the audio/video proceedings in the above-entitled  
17 case to the best of my ability.

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Dana L. Williams  
Transcriber

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	<b>4</b> <b>4 inches [1]</b> 131/2 <b>40 percent [1]</b> 113/3 <b>4400 [1]</b> 154/18 <b>45 [1]</b> 117/15 <b>477 [1]</b> 229/19 <b>4:00 [1]</b> 239/8 <b>4:00 o'clock [1]</b> 239/7	<b>5</b> <b>5 above [1]</b> 36/14 <b>5 and [4]</b> 34/1 35/21 36/4 138/24 <b>5 is [1]</b> 259/10 <b>5,290 [1]</b> 164/21 <b>50 [5]</b> 202/25 235/4 247/13 256/3 259/17 <b>50 percent [2]</b> 164/15 164/17 <b>50,000 [4]</b> 166/15 166/19 167/4 167/16 <b>51 [11]</b> 16/1 49/9 112/18 122/2 122/14 122/16 203/19 205/5 205/9 255/25 256/1	<b>8</b> <b>8,000 [49]</b> 28/17 29/11 44/16 49/14 77/3 81/16 81/19 81/22 82/13 84/15 85/3 85/3 85/5 86/20 151/6 151/19 151/22 159/22 160/20 168/19 168/19 171/21 171/25 190/12 191/13 191/22 191/25 192/1 192/8 192/12 192/15 201/24 206/6 207/21 207/24 208/13 212/3 212/4 212/9 215/24 231/18 231/21 232/6 236/24 239/15 239/16 248/22 248/24 250/13 <b>8,000 acre-foot [1]</b> 151/13 <b>8,000-foot [1]</b> 151/10 <b>8,050 [1]</b> 164/17 <b>8000-acre [1]</b> 127/17 <b>810 [1]</b> 129/16 <b>810 feet [3]</b> 129/16 130/22 132/18 <b>826 [1]</b> 218/8 <b>8300 [1]</b> 192/5 <b>85 [1]</b> 34/4 <b>8500 [1]</b> 230/2 <b>8:29 [1]</b> 5/1 <b>8:30 [1]</b> 282/12 <b>8th [1]</b> 69/7	<b>9</b> <b>9,720 inches [1]</b> 132/21 <b>909 [1]</b> 41/17 <b>9200 [1]</b> 154/21 <b>948 [2]</b> 165/23 218/9 <b>95 [2]</b> 125/1 245/24 <b>970 feet [1]</b> 130/9 <b>973 [1]</b> 37/2	<b>A</b> <b>a.m [3]</b> 5/1 92/24 92/24 <b>AB [1]</b> 205/5 <b>AB51 [6]</b> 23/15 241/16 250/18 253/7 253/20 255/5 <b>abandoned [1]</b> 120/17 <b>abeyance [4]</b> 109/16 109/20 163/24 170/10 <b>ability [16]</b> 30/15 55/19 55/24 88/12 138/12 138/13 169/1 181/6 184/10 212/23 213/9 213/17 221/19 225/6 227/1 282/17 <b>able [15]</b> 8/9 11/7 21/22 59/2 92/7 101/7 159/19 176/15 213/11 233/16 245/21 246/2 258/6 272/24 277/4 <b>about [323]</b> <b>about-face [1]</b> 137/23 <b>above [4]</b> 36/14 37/12 140/7 282/16 <b>above-entitled [1]</b> 282/16 <b>absence [3]</b> 49/6 76/5 113/10 <b>absent [1]</b> 121/23 <b>absolute [1]</b> 139/23 <b>absolutely [3]</b> 80/6 253/18 274/24 <b>abstract [2]</b> 95/16 254/17 <b>abundant [1]</b> 40/24 <b>abuse [1]</b> 34/25 <b>academic [1]</b> 47/5 <b>accept [2]</b> 128/8 162/21 <b>accepted [1]</b> 53/5 <b>accompanied [1]</b> 34/24 <b>accomplish [3]</b> 251/13 251/22 263/15 <b>accomplishes [1]</b> 39/2 <b>according [1]</b> 98/4 <b>accordingly [4]</b> 171/20 180/23 184/12 216/20 <b>account [2]</b> 215/8 267/21 <b>accountability [1]</b> 47/21 <b>accounted [1]</b> 150/23 <b>accurate [4]</b> 210/6 233/22 250/10 250/11 <b>accurately [2]</b> 67/25 261/22 <b>accuse [2]</b> 193/2 211/2 <b>acknowledge [5]</b> 16/9 17/6 27/9 86/22 89/7 <b>acknowledged [3]</b> 17/4 29/22 49/11 <b>acknowledges [6]</b> 19/8 79/21 137/10 137/21 147/15 199/14

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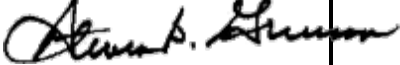
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<p><b>W</b>  <b>which...</b> [103] 59/23  61/8 62/15 63/16 67/17  67/18 67/21 70/8 70/9  70/15 70/25 71/14  71/15 71/18 71/20  74/25 75/4 77/17 77/18  78/6 79/4 87/2 88/21  94/22 96/2 96/16 99/20  100/10 100/11 104/2  106/7 109/6 110/12  111/6 112/4 113/16  118/4 118/5 118/8  118/24 118/25 119/15  120/14 121/14 122/20  128/18 131/23 131/25  136/19 139/3 139/14  141/7 142/5 144/19  144/24 148/7 149/6  149/15 149/20 154/18  154/21 158/5 158/11  159/14 159/25 162/19  163/23 164/16 165/8  165/19 166/6 167/5  169/7 169/15 174/7  179/14 188/25 192/22  194/8 194/19 205/18  208/22 210/22 215/15  218/14 221/4 222/7  224/20 224/21 227/1  228/7 228/16 230/22  231/11 234/7 244/8  246/6 254/19 265/2  269/1 271/1 278/12  278/20  <b>while</b> [25] 15/18 16/2  18/20 38/17 44/10 61/1  69/21 80/16 91/14  121/20 138/3 159/12  162/12 163/24 164/15  170/11 182/19 182/23  195/21 205/22 208/10  215/3 215/14 251/23  255/7  <b>White</b> [79] 28/13 33/10  41/13 44/13 45/3 45/4  45/7 49/13 49/24 57/1  66/5 67/10 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[46] 18/23 20/14  20/16 27/19 32/1 38/6  45/6 59/12 64/9 64/9  72/13 75/13 75/13  77/24 79/18 83/14 92/3  92/11 96/9 96/9 138/17  139/7 155/3 160/14  162/7 168/22 202/23  205/23 209/6 209/19  209/20 210/23 217/1  223/14 226/22 230/4  230/4 238/19 253/10  256/19 260/23 262/25  273/21 274/15 274/22  277/1  <b>wide</b> [4] 25/20 44/9  95/21 197/21  <b>width</b> [1] 132/25  <b>wildlife</b> [14] 77/21 78/8  83/3 100/16 102/2  119/7 152/3 152/3  152/7 152/14 152/16  152/17 153/4 164/7  <b>will</b> [55] 5/14 8/8 20/3  20/3 34/25 50/22 67/17  67/25 68/1 68/1 71/15  71/15 80/7 88/10 88/24  88/25 92/6 101/17  104/25 111/7 118/4  156/1 166/12 172/10  195/12 201/12 202/3  205/24 212/20 212/22  221/15 227/1 228/16  230/23 234/1 239/16  239/20 240/10 242/7  242/9 242/14 244/18  245/14 249/19 250/3  250/8 262/19 263/4  265/20 268/23 268/25  269/8 276/2 278/10  282/11  <b>WILLIAM</b> [1] 3/1  <b>Williams</b> [1] 282/20</p>	<p><b>willing</b> [1] 46/13  <b>Wilson</b> [1] 211/12  <b>Windows</b> [1] 245/24  <b>wings</b> [1] 23/16  <b>winners</b> [1] 35/14  <b>WINSTON</b> [2] 3/3 7/18  <b>wish</b> [1] 104/21  <b>withdrawals</b> [7]  114/23 147/10 183/21  195/12 249/22 250/1  250/2  <b>withdrawn</b> [2] 49/15  232/7  <b>within</b> [49] 12/10 16/9  26/10 27/11 27/21  33/21 36/4 45/9 46/3  49/16 57/11 57/12  78/13 81/6 85/16 85/25  86/17 93/11 97/20 98/1  98/2 111/8 111/15  114/8 114/9 126/22  126/23 129/8 145/6  160/19 160/20 169/21  176/23 177/23 178/18  179/20 201/11 203/5  212/21 213/5 216/2  218/15 229/17 230/25  231/23 233/15 234/20  237/4 237/4  <b>without</b> [27] 23/5 25/5  26/8 28/15 44/18 46/14  48/24 49/16 49/18  64/10 87/21 87/22  87/25 102/24 113/9  113/25 145/2 146/3  166/23 168/15 170/21  171/22 191/19 207/15  208/14 236/13 274/13  <b>witness</b> [11] 111/12  137/25 140/13 140/17  142/21 143/19 143/21  144/13 151/11 220/19  256/9  <b>witness's</b> [2] 144/12  162/23  <b>witnesses</b> [3] 128/3  197/3 236/7  <b>won't</b> [6] 23/3 68/5  103/9 195/11 217/17  247/17  <b>wonderful</b> [1] 47/4  <b>word</b> [15] 19/21 27/3  31/20 98/22 137/12  138/1 139/7 186/6  193/17 200/1 204/11  221/19 233/22 266/2  266/4  <b>worded</b> [1] 76/7  <b>words</b> [15] 17/6 42/6  42/14 47/23 78/2 81/7  98/5 137/14 243/13  243/14 243/15 243/16  243/18 263/8 264/25  <b>work</b> [7] 23/12 62/16  88/25 91/19 92/8 153/1  221/6  <b>worked</b> [2] 157/3 176/8  <b>working</b> [6] 8/10 23/8  23/12 23/20 38/12</p>	<p>190/2  <b>works</b> [2] 65/10 262/23  <b>workshops</b> [1] 247/21  <b>world</b> [3] 25/24 197/16  197/17  <b>worried</b> [1] 248/15  <b>worries</b> [1] 9/19  <b>worry</b> [2] 88/23 89/10  <b>worse</b> [1] 194/17  <b>worst</b> [2] 194/19  194/19  <b>worth</b> [1] 224/9  <b>would</b> [189] 14/11 18/1  20/11 20/21 23/10  23/11 25/10 25/21  30/14 31/4 35/20 43/14  45/9 45/9 45/10 46/2  46/3 47/17 47/18 51/19  56/24 57/4 57/7 57/7  57/25 62/13 62/19 63/1  63/3 63/10 63/13 63/22  64/3 64/3 67/8 70/2  73/14 75/6 75/22 76/25  78/24 84/8 89/22 89/23  90/3 90/9 91/3 92/1  92/7 92/8 92/18 92/21  99/7 99/9 100/13  106/15 106/19 106/21  106/23 106/25 107/5  118/24 119/1 124/23  124/24 126/11 126/11  133/24 134/2 144/4  144/22 144/25 146/23  147/2 147/16 147/24  148/18 148/19 152/4  152/9 152/23 152/24  154/9 155/15 156/2  162/21 164/12 164/17  167/13 167/15 168/1  169/9 170/5 170/18  176/22 176/24 177/1  180/24 181/17 185/24  190/12 190/15 194/19  194/20 196/16 198/1  198/22 200/9 200/10  200/11 200/13 201/3  201/4 202/6 202/11  204/19 204/23 207/12  209/6 210/3 210/6  210/17 210/24 212/14  213/2 213/4 214/12  214/16 215/13 215/15  216/9 224/4 224/19  225/20 228/9 228/9  229/8 229/14 235/8  235/25 236/4 236/11  236/13 238/7 243/24  244/13 248/22 254/3  254/5 254/9 256/10  256/10 256/13 257/5  257/16 258/25 259/9  259/11 259/11 259/16  259/24 260/2 260/6  262/10 266/21 269/16  269/18 269/19 269/21  272/13 273/11 273/23  273/24 274/3 274/3  274/7 275/2 275/3  275/4 275/23 275/25</p>	<p>277/1 278/22 278/23  278/24 280/3 280/4  280/24 281/23  <b>would've</b> [2] 100/13  274/3  <b>wouldn't</b> [8] 91/8  91/18 126/9 151/24  152/6 244/20 263/20  273/20  <b>wow</b> [1] 111/1  <b>wrap</b> [3] 48/19 85/21  133/16  <b>wrapping</b> [1] 11/4  <b>write</b> [1] 250/24  <b>writing</b> [4] 30/14 44/22  166/1 251/2  <b>written</b> [2] 171/9 248/1  <b>wrong</b> [6] 30/16 82/25  160/23 190/17 210/10  240/25  <b>wrote</b> [2] 240/3 245/10</p> <hr/> <p><b>Y</b>  <b>YEAGER</b> [1] 1/12  <b>yeah</b> [58] 5/17 8/16  12/23 18/6 21/11 27/9  27/10 31/13 39/16  39/20 40/12 40/14  41/21 45/18 46/7 52/24  62/11 62/12 102/9  103/12 105/1 132/10  134/6 135/18 159/11  159/11 168/4 168/6  168/10 173/11 178/11  178/20 185/8 188/5  188/7 188/9 190/5  229/13 237/22 238/17  246/20 246/22 246/24  248/16 254/16 255/22  255/24 259/20 261/11  268/18 270/15 270/17  272/6 273/15 274/21  277/25 279/4 281/20  <b>year</b> [8] 23/8 31/23  77/3 115/19 164/17  192/4 192/5 248/21  <b>years</b> [20] 10/16 11/6  12/17 13/6 13/22 22/2  23/12 112/18 117/15  117/16 146/13 164/3  164/18 165/1 179/13  221/21 241/3 243/9  247/13 282/2  <b>yelling</b> [1] 268/10  <b>yellow</b> [2] 136/23  154/16  <b>Yep</b> [2] 42/2 182/12  <b>yes</b> [60] 9/4 9/24 12/22  17/14 17/14 17/24  17/24 18/22 20/7 20/10  20/19 22/12 25/7 25/7  26/16 37/16 37/19  38/10 40/11 41/16  45/14 51/22 52/1 92/14  95/9 96/4 96/4 96/15  98/13 116/16 120/25  128/19 129/11 129/11  130/4 140/20 148/23  148/23 156/23 168/2</p>
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<p><b>Y</b></p> <p><b>yes... [20]</b> 175/16 177/14 177/25 180/17 186/11 236/13 236/20 243/13 246/18 261/10 270/7 270/22 271/17 271/18 275/11 275/22 275/22 277/13 278/4 279/24</p> <p><b>yesterday [14]</b> 7/8 31/3 45/16 55/2 62/7 65/2 92/5 92/16 99/10 108/22 123/12 123/15 228/6 254/1</p> <p><b>yet [20]</b> 22/1 22/1 29/4 49/13 56/6 76/19 88/22 99/4 146/2 147/14 147/18 155/12 160/21 177/2 195/11 195/15 212/2 235/19 249/1 262/25</p> <p><b>yield [18]</b> 82/4 114/23 122/25 124/18 124/19 124/25 125/5 126/21 147/11 160/21 166/13 166/18 167/15 171/24 185/1 191/12 193/12 201/24</p> <p><b>yields [4]</b> 124/2 184/23 202/21 202/24</p> <p><b>you [656]</b></p> <p><b>you'd [2]</b> 46/18 56/4</p> <p><b>you'll [4]</b> 36/24 37/3 154/13 154/16</p> <p><b>you're [78]</b> 6/24 8/23 9/11 16/15 16/22 18/13 20/6 22/4 25/3 31/17 36/13 38/8 40/6 50/16 52/6 65/19 66/13 74/4 74/6 74/8 74/13 78/22 78/23 87/14 89/15 89/16 98/17 103/11 107/7 107/24 116/21 125/10 125/11 126/16 126/17 126/20 130/17 133/6 133/25 135/14 141/4 142/24 155/22 156/12 159/10 161/3 161/4 161/19 161/19 161/24 168/8 173/6 174/7 175/5 184/8 185/9 207/9 217/4 226/1 226/20 227/15 229/2 238/20 238/23 240/25 243/11 244/11 257/5 262/1 266/16 268/9 269/20 269/25 274/11 275/16 278/23 279/22 281/24</p> <p><b>you've [26]</b> 11/16 12/2 13/2 13/10 18/7 32/3 35/18 39/12 39/16 52/11 71/13 81/20 82/7 102/9 102/9 107/2 127/25 149/23 221/13 230/11 239/1 245/5 258/10 261/22 262/14 264/4</p>	<p><b>your [209]</b> 5/8 5/12 5/20 5/25 6/6 6/10 6/16 7/3 7/16 8/4 8/9 8/11 8/17 8/19 9/2 9/4 9/6 9/8 9/13 9/17 9/17 9/24 10/1 10/8 11/17 13/8 14/17 15/11 16/7 16/13 16/25 17/13 17/24 18/13 18/23 19/9 20/8 20/17 20/20 21/11 21/16 22/11 22/19 23/22 24/3 24/20 24/21 25/4 26/20 26/24 26/24 27/3 27/25 28/6 30/1 30/2 31/1 31/10 31/24 32/7 32/13 32/22 32/23 33/9 33/12 33/20 33/23 35/10 35/19 36/5 37/1 37/21 38/2 38/18 39/8 41/6 41/19 42/15 43/2 43/19 45/1 45/8 45/20 46/1 46/8 47/3 48/19 49/12 50/16 51/2 51/2 51/13 51/16 51/18 51/21 52/8 62/6 74/13 83/10 87/9 89/13 90/8 90/17 91/24 92/13 93/2 96/19 98/23 99/14 99/14 102/4 102/17 103/10 104/21 105/4 108/17 108/20 120/2 122/10 123/3 125/10 125/14 126/3 128/3 128/11 130/2 135/8 144/15 148/15 150/6 152/10 153/8 154/10 155/24 156/5 156/16 156/20 156/24 158/16 161/7 161/12 167/19 167/23 168/2 168/8 177/11 178/4 178/5 178/21 181/4 181/10 181/14 181/14 181/14 184/9 184/14 184/15 185/6 186/2 190/12 192/23 193/25 197/22 200/13 203/20 204/14 207/4 207/16 209/12 212/12 215/17 217/8 217/15 220/4 225/20 225/22 226/5 226/6 237/7 237/12 238/10 238/22 239/5 241/2 254/11 256/2 263/3 264/7 266/17 269/7 269/24 270/6 270/11 270/22 271/13 271/19 273/3 273/13 273/25 275/10 275/15 275/20 276/16 277/7 277/25 278/1 279/7 279/13 282/10</p> <p><b>yourself [3]</b> 24/5 226/20 271/16</p> <p><b>yourselves [1]</b> 11/3</p> <hr/> <p><b>Z</b></p> <p><b>zebra [1]</b> 74/18</p> <p><b>zero [4]</b> 43/2 79/24</p>	<p>191/17 191/25</p> <p><b>Zollen [1]</b> 235/19</p> <p><b>zone [3]</b> 131/21 137/7 138/10</p>		
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TRAN

DISTRICT COURT  
CLARK COUNTY, NEVADA  
\* \* \* \* \*

SOUTHERN NEVADA WATER )  
AUTHORITY, )  
 )  
Plaintiff, )  
 )  
vs. )  
 )  
NEVADA STATE ENGINEER, )  
DIVISION OF WATER RESOURCES, )  
 )  
Defendant. )  
 )  
AND RELATED CASES & PARTIES )

CASE NO. A-20-816761-C  
DEPT NO. I

**TRANSCRIPT OF  
PROCEEDINGS**

BEFORE THE HONORABLE BITA YEAGER, DISTRICT COURT JUDGE

WEDNESDAY, FEBRUARY 16, 2022

**PETITION FOR JUDICIAL REVIEW - DAY 3**

SEE NEXT PAGE FOR APPEARANCES

RECORDED BY: LISA LIZOTTE, COURT RECORDER  
TRANSCRIBED BY: JD REPORTING, INC.

**A P P E A R A N C E S**

FOR LAS VEGAS VALLEY WATER DISTRICT, AND SOUTHERN NEVADA WATER AUTHORITY:	PAUL G. TAGGART, ESQ.
FOR NV STATE ENGINEER, DIVISION OF WATER RESOURCES:	JAMES N. BOLOTIN, ESQ. Sr. Deputy Attorney General MICHELINE N. FAIRBANK, ESQ.
FOR LINCOLN COUNTY WATER:	WAYNE O. KLOMP, ESQ.
FOR VIDLER WATER COMPANY:	KAREN A. PETERSON, ESQ.
FOR NV COGENERATION ASSOCIATES NOS. 1 AND 2:	FRANCIS C. FLAHERTY, ESQ.
FOR MUDDY VALLEY IRRIGATION:	ROBERT A. DOTSON, ESQ. STEVEN D. KING, ESQ. SCOTT MIDDLETON, ESQ.
FOR CENTER FOR BIOLOGICAL DIVERSITY:	SCOTT LAKE, ESQ. LISA T. BELENKY, ESQ.
FOR REPUBLIC ENVIRONMENTAL TECH., AND GEORGIA-PACIFIC GYPSUM:	LUCAS M. FOLETTA, ESQ.
FOR DRY LAKE WATER, LLC, AND APEX HOLDING COMPANY:	CHRISTIAN T. BALDUCCI, ESQ.
FOR BEDROC LIMITED, LLC, WESTERN ELITE ENVIRONMENTAL, AND CITY OF NORTH LAS VEGAS:	NO APPEARANCES NOTED
FOR MOAPA VALLEY WATER DISTRICT:	GREGORY H. MORRISON, ESQ.

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FOR COYOTE SPRINGS INVESTMENT:

KENT R. ROBISON, ESQ.  
EMILIA K. CARGILL, ESQ.  
BRADLEY J. HERREMA, ESQ.  
HANNAH E. WINSTON, ESQ.

FOR SIERRA PACIFIC POWER CO.,  
AND NEVADA POWER COMPANY:

JUSTINA A. CAVIGLIA, ESQ.

FOR THE CHURCH OF JESUS CHRIST  
OF LATTER-DAY SAINTS:

SEVERIN A. CARLSON, ESQ.

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1 **LAS VEGAS, CLARK COUNTY, NEVADA, FEBRUARY 16, 2022, 8:30 A.M.**

2 \* \* \* \* \*

3 THE COURT: All right. So starting with the  
4 Las Vegas Valley Water District and Southern Nevada Water  
5 Authority.

6 MR. TAGGART: Good morning, Your Honor. Here on  
7 behalf of the District and the authority, Paul Taggart.

8 THE COURT: Thank you.  
9 Nevada State Engineer?

10 MR. BOLOTIN: Good morning, Your Honor. Senior  
11 Deputy Attorney General James Bolotin for the Nevada State  
12 Engineer. And once again Micheline Fairbank from The Division  
13 of Water Resources.

14 THE COURT: Okay. Great. Thank you.  
15 Lincoln Valley Water District.

16 MR. KLOMP: Good morning, Your Honor. Wayne Klomp on  
17 behalf of Lincoln Water District with Wade Poulsen. That's the  
18 general manager with me.

19 THE COURT: Okay. Thank you.  
20 Vidler Water Company.

21 MS. PETERSON: Thank you, Your Honor. Karen Peterson  
22 from Allison MacKenzie law firm. And Ms. Palmer is here. She  
23 is in the hallway right now on a phone call, but Mr. Bushner  
24 and Mr. Hurth are here also.

25 THE COURT: Great. Thank you.

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1 Nevada Cogeneration Associates No. 1 and 2.

2 MR. FLAHERTY: Good morning, Your Honor. Frank  
3 Flaherty, Dyer Lawrence, LLP, here on behalf of NCA.

4 THE COURT: Okay. Thank you.

5 Muddy Valley Irrigation Company.

6 MR. DOTSON: Good morning, Your Honor. Rob Dotson.  
7 Doubling on tech support again here today.

8 THE COURT: Thank you.

9 MR. DOTSON: For Muddy Valley Irrigation District  
10 along with Steve King, and we have Scott Middleton and maybe  
11 members of the board online.

12 THE COURT: All right. Thank you.

13 Center for Biological Diversity.

14 MR. LAKE: Good morning, Your Honor. Scott Lake for  
15 the Center for Biological Diversity. I also have Patrick  
16 Donnelly and Lisa Belenky on BlueJeans.

17 THE COURT: Okay. Thank you.

18 Republic Environmental Technologies.

19 MR. FOLETTA: Good morning, Your Honor. Lucas  
20 Foletta for Republic Environmental Technologies and  
21 Georgia-Pacific.

22 THE COURT: Thank you.

23 Let's see. Dry Lake Water and Apex?

24 MR. BALDUCCI: Good morning, Your Honor. Christian  
25 Balducci appearing on behalf of Apex and Dry Lake. Also

1 appearing on BlueJeans is a client representative and  
2 consultant is Lisa Cole.

3 THE COURT: Thank you.

4 Let's see. Did we ever get anyone from Western Elite  
5 and Bedroc?

6 UNIDENTIFIED SPEAKER: No.

7 THE COURT: No. All right.

8 Let's see. Moapa Valley Water District.

9 MR. MORRISON: Good morning, Your Honor. Greg  
10 Morrison on behalf of Moapa Valley Water District.

11 THE COURT: Okay. Thank you.

12 Coyote Springs.

13 MR. ROBISON: Good morning again, Your Honor. Kent  
14 Robison, Emilia Cargill, Brad Herrema and Hannah Winston, and  
15 our technician Mark Ivie (phonetic) for CSI.

16 THE COURT: Okay. Thank you.

17 Let's see. Sierra Pacific Power Company --

18 MR. HERREMA: Brad Herrema for CSI on the BlueJeans  
19 as well.

20 THE COURT: Great. Thank you.

21 Sierra Pacific Power Company and Nevada Power  
22 Company?

23 MS. CAVIGLIA: Good morning, Your Honor. Justina  
24 Caviglia on behalf of Sierra Pacific Power Company and Nevada  
25 Power Company.

1 THE COURT: Thank you.

2 Church of Jesus Christ of Latter-day Saints?

3 MR. CARLSON: Good morning, Your Honor. Sev Carlson  
4 on behalf of the Church.

5 THE COURT: Okay. Thank you.

6 Have I missed anyone?

7 (No audible response.)

8 THE COURT: All right. So I think we were in the  
9 middle of Mr. Taggart's answering.

10 (Pause in the proceedings.)

11 THE COURT: Ready.

12 MR. TAGGART: Good morning, Your Honor.

13 THE COURT: Good morning.

14 MR. TAGGART: I just want to say I appreciate the  
15 timekeeping. I think that's worked really well. We've had to  
16 handle it different ways at different times. This has worked  
17 out really well.

18 THE COURT: Okay. Well, I'm glad. You can get it  
19 right on Amazon if you need to.

20 MR. TAGGART: Yeah.

21 **ARGUMENT FOR SNWA AND LVVWD**

22 MR. TAGGART: So yesterday I concluded the day for us  
23 by starting my argument on behalf of the District and the  
24 authority. That is our respondent intervenor's argument, which  
25 is in favor of the State Engineer's decision. So these are the

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1 arguments that we're presenting on the points that the decision  
2 that we agree with, which is mostly all of the decision. And  
3 anything related to the conflicts determination I will talk  
4 about in a reply, and also I'll reserve some time for that, but  
5 not a lot.

6 So just so people, you know, who want to -- I'm going  
7 to go probably an hour and a half, right, this morning.

8 THE COURT: Okay.

9 MR. TAGGART: Okay.

10 THE COURT: It's your time. Do with it what you  
11 will.

12 MR. TAGGART: All right. And I just want Kent to  
13 know so that he doesn't get anxious after five minutes and  
14 wonder why I'm still talking.

15 So, yeah, I covered some points yesterday. And so  
16 today I'm going to get back into that. We have a presentation.  
17 And as you know, there's two main points that we're getting  
18 into here, and that is the authority to delineate the Lower  
19 White River Flow System and then the finding that the area  
20 within that Lower White River Flow System is hydrologically  
21 connected and has a single source.

22 The first is a legal. The second is a factual  
23 question. Different standards of review with respect to those  
24 two I'm not going to go into detail there on what those are  
25 because I think we've talked about that enough. So the first

1 one I'm going to talk about is the delineation again.

2           So the first thing I just wanted to bring up, and if  
3 you just bear with me, I'm trying to respond to a lot of  
4 different arguments, and I've tried to coordinate as much as I  
5 could.

6           So one of the first I think questions that you asked  
7 CSI had to do with, you know, how should the State Engineer  
8 have done it and so fourth, and out of that came some  
9 discussion about where does it end? Where does the basin  
10 boundaries and if you're going to find these are connected, and  
11 I think it was even said that these criteria the State Engineer  
12 used, if you applied them, the whole state would be one basin.  
13 I think you asked questions about where does it end. Does this  
14 mean all water rights in Nevada don't have finality because the  
15 State Engineer could apply this rule across the State. I  
16 think --

17           THE COURT: Well, you know, that he could redraw or  
18 redelineate the lines of the basins.

19           MR. TAGGART: Right. Right. And I think that that  
20 was amplified a little bit by Vidler's arguments about the  
21 extent of the carbonate aquifer. They put up a slide that  
22 showed, you know, a large area that's called a carbonate  
23 aquifer; I think intending to imply that that could be -- it  
24 could be that large. I think that Mr. Klomp put up the Max  
25 Eakin 1966 report I keep talking about, that statement out of

1 that report.

2 I've got here on the Slide 10. I cited to this  
3 earlier in argument, but he showed you a map of the White River  
4 Flow System. We're in the Lower White River Flow System here.

5 So I think it's a fair question of, well, where does  
6 it end? And I think the science controls what's connected, and  
7 not everything is connected scientifically. And if you look at  
8 the water levels and you look at the effect of water levels  
9 from testing, from pump testing, if you look at the effect on  
10 water levels from time after that, if you look at the effect of  
11 climate on water levels and you see similarities or you see  
12 differences, that tells you what's connected and what's not  
13 connected.

14 So --

15 THE COURT: So I guess my question is, you know,  
16 science -- I guess I should say the technical aspects of  
17 science can change, meaning, you know, being able to figure out  
18 what water is connected. I assume, you know, in the future  
19 that will get more accurate or that kind of thing, that there  
20 will be different ways to measure or that kind of thing. So I  
21 guess my question is if the science is dictating where these  
22 boundaries should be, where is the finality for those water  
23 right holders who, at the time that they get their water rights  
24 are getting those water rights with the understanding that they  
25 are within this delineated basin and not knowing that they

1 could then get lumped in based on the science as it evolves and  
2 changes as a later date?

3 MR. TAGGART: Well, I'm going to talk a little later  
4 about what you do when the science changes and how the State  
5 Engineer can act, and there's a process that he has to follow.  
6 And I think that it's important to look at the specific  
7 situation we're involved in here as opposed to the general kind  
8 of abstract notion of if someone were to get something and not  
9 be at notice, to these people in this case --

10 THE COURT: Sure.

11 MR. TAGGART: -- know that this might happen in the  
12 future. I think that's --

13 THE COURT: True, but, I mean, I think everyone said  
14 this is a matter of first impression at this point, whether or  
15 not there is conjunctive management or joint management powers  
16 that the Nevada State Engineer has; right?

17 MR. TAGGART: But it's not.

18 THE COURT: Okay.

19 MR. TAGGART: And I'm glad I got to sleep on it.

20 THE COURT: Okay.

21 MR. TAGGART: Because when I thought about this, and  
22 I mentioned this this morning to some people is that the last  
23 20 years of my career, basically every case has been either  
24 conjunctive management or it's been joint management.

25 We didn't call it that, but we were forced to look at

1 multiple groundwater basins and the flow between those basins,  
2 and in many, many cases, and I'm going to talk about those.

3 THE COURT: Okay.

4 MR. TAGGART: And we also have had case after case  
5 after case of groundwater impacting surface water. And I've  
6 had cases that have gone on for the last 15 years, and there's  
7 Supreme Court decisions about them that involve groundwater and  
8 surface water conjunctive management.

9 THE COURT: Okay.

10 MR. TAGGART: And then we have other cases where  
11 we've been required to look at the impact of developing water  
12 in one basin on a series of basins in the Lower White River  
13 Flow System.

14 So you might be aware of the -- the groundwater  
15 project that SNWA tried to develop from Eastern Nevada down  
16 here to Las Vegas. And in that case, we went up to District  
17 Court, and Judge Estes remanded it --

18 THE COURT: I see -- I see --

19 MR. TAGGART: -- it went to the Supreme Court in a  
20 published decision.

21 THE COURT: I see Mr. Robison.

22 MR. ROBISON: Your Honor, we have to object. This is  
23 not in the record. Mr. Taggart's history with other cases is  
24 not in the record. And to be arguing his involvement in  
25 another case and what was done in those other cases, which is



1 not covered by the briefs, is improper.

2 THE COURT: I appreciate you're trying to help me  
3 with that issue, and I see Ms. Peterson is also making an  
4 objection for the record for the same --

5 MS. PETERSON: Yes. Thank you.

6 THE COURT: -- for the same purpose, and I will  
7 sustain that objection.

8 So I realize that you're trying to help me, but I do  
9 think that I need to probably stick to the record and what's  
10 been in the briefs.

11 MR. TAGGART: Well, I appreciate that, and let's keep  
12 a clean record.

13 THE COURT: Sure.

14 MR. TAGGART: But the Court shouldn't be misled.  
15 This is not an issue of first impression. 1976, the *Cappaert*  
16 case came out from the United States Supreme Court and told the  
17 State Engineer if groundwater pumping affects the surface water  
18 right, Justice Burger said you cannot allow that. And that was  
19 in 1976. And so to say today that we've never dealt with  
20 conjunctive management in Nevada is just wrong. The  
21 legislature's policy declaration recognized that point.

22 I think of those policy declarations as essentially a  
23 reboot of the water law. We have to assume that when the  
24 legislature made those policy declarations it was aware of the  
25 entire set of laws in the water code, and it was saying that,

1 you know what, in 1955, in 1939, we created a statute, and it  
2 may not have been clear about conjunctive management at that  
3 time. It may not have been clear about best available science,  
4 but we're today saying that when those statutes are  
5 interpreted, when those statutes are executed, they need to be  
6 done with those things in mind.

7 So and even -- so if the State Engineer doesn't want  
8 to, you know, manage conjunctively, then *Cappaert* tells us the  
9 United States Supreme Court will knock him down. The Supreme  
10 Court -- our State Supreme Court in a number of cases that  
11 we've cited in our briefs have done the same thing, and so it's  
12 just not accurate to say that this hasn't been done in Nevada.  
13 It has been, and it's what we're all dealing with.

14 We cited in our briefs to the *Tikaboo* and *Three Lakes*  
15 rulings. Those are four valleys kind of north of Nellis down  
16 here, and that's what we started with in with the groundwater  
17 project in 2003, 2004, 2005. There were four separate  
18 groundwater basins. In order for us to develop water in one  
19 groundwater basin, we had to look at the water budgets for all  
20 four basins, and we went to the State Engineer twice on those  
21 cases, and we've cited to those rulings in our brief.

22 MR. ROBISON: Your Honor, this is not on the record.  
23 He's arguing other cases.

24 MR. TAGGART: I cited those rulings in our brief.

25 MR. ROBISON: But not what he argued in those cases,

1 Your Honor. This is way beyond the record.

2 THE COURT: I will make sure that I am very familiar,  
3 before I issue any order, with all of the cases that have been  
4 cited in the briefs. So...

5 MR. TAGGART: Okay. So when --

6 (Pause in the proceedings.)

7 MR. TAGGART: Like I said, we can go the traditional  
8 route.

9 THE COURT: Okay.

10 MR. TAGGART: So what I want --

11 THE COURT: Oh, is it not working?

12 MR. TAGGART: What I want to bring up, and if we can  
13 get it up, we'll talk about it, is that this is not a slippery  
14 slope. If, you know, we base our decisions on science and  
15 fact, we don't create an entire flow system across the State of  
16 Nevada. And the point I want to make and the point that the  
17 slide has on it, it's a page from our expert report, and it  
18 talks about a thing called the Pahrnagate shear zone. And the  
19 Pahrnagate shear zone is -- and the State Engineer knew about  
20 this when he made his ruling because he had -- all this  
21 information was in the record.

22 And it is an area to the north of Coyote Spring  
23 Valley, again where Pahrnagat Valley is to the north of that.  
24 And at that location, there's a water level measurement north  
25 of that, and there's a water level measurement south of that.

1 There's 1500 feet. I mean, that ruler that Ms. Peterson had  
2 with the 6 inches, there's 1500 feet of water level difference  
3 between those two wells in those two locations. That's  
4 something significant in the ground. That's what the witnesses  
5 testified about, that that is a -- it's an underground dam  
6 basically.

7 And most of the water that comes to the Lower White  
8 River Flow System, according to the experts, comes through  
9 that. But because there's so much water behind it, and there's  
10 so much potential it's called, it's forcing some water through.  
11 Well, that kind of barrier creates a barrier. So the Lower  
12 White River Flow System is separated from the Upper White River  
13 Flow System because of a barrier like that.

14 And so these things exist and have been measured and  
15 tested and determined to exist. So we're not going to end up,  
16 you know, with the slippery slope of running these basins  
17 throughout the State. We're looking at the specific evidence  
18 the State Engineer used to find that it exists here, and that's  
19 where it exists and not forever.

20 (Pause in the proceedings.)

21 THE COURT: So do you want to take -- you want me to  
22 stop the clock for a minute while you get that up and running?

23 MR. DOTSON: We got it back.

24 THE COURT: Oh, you got it?

25 MR. DOTSON: Yeah. I just need to know what page.

1 We've got to find the page.

2 (Pause in the proceedings.)

3 MR. TAGGART: Yeah, so we're on page 60. That's ROA  
4 48396, and this was our report, and this is where we're talking  
5 about a 1550-foot difference.

6 There was some discussion of a 75-foot difference or  
7 a 50-foot difference between parts of Kane and parts of Coyote  
8 Spring Valley. And this is a much, you know, (indiscernible)  
9 magnitude larger difference that really does establish what a  
10 barrier is. And that's the kind of evidence the State Engineer  
11 relied upon.

12 So now I'd like to talk again about the basin.

13 And, Rob, if you could go to Slide 22, please.

14 (Pause in the proceedings.)

15 MR. TAGGART: So again we talked about this a little  
16 bit yesterday too, and --

17 Can you go to the next slide, please.

18 So this compares the two statutes on the Slide 23.  
19 This compares the two statutes we were talking about yesterday.  
20 So 534.030 is the designation statute. That's not at issue  
21 here. The State Engineer is not claiming that he designated  
22 any basins. He's claiming that he has rules in six designated  
23 basins, and then in Kane he has a rule in a nondesignated  
24 basin. That's what Order 1309 is.

25 THE COURT: So I just want to make sure. He had

1 previously designated those basins in 1303; right?

2 MR. TAGGART: Well, no. In all -- they were  
3 individual orders in each one of those six basins like back in  
4 the -- I'm not sure, I think the '80s.

5 THE COURT: Okay.

6 MR. TAGGART: But it's listed in that order in 1309.  
7 They go through that in the beginning. That's like the first  
8 page, but they -- so they initially designated all those basins  
9 except for Kane. And so 534.120, that is the statute that says  
10 in a designated basin you can do more. That is essential for  
11 the welfare is the key language we focus on there.

12 532.120 is the more broad police power of the State  
13 Engineer that authorizes him to do what he did with Kane  
14 Valley, Kane Spring Valley even though it's not officially  
15 designated.

16 But in those designated basins, which is really the  
17 meat of this area, I mean, really it's the main part of the  
18 Lower White River Flow System. It's the part that was part in  
19 1303 and then is again in 1309. In those basins, this language  
20 about area and about basin appears -- I'd like to just kind of  
21 compare .030 to 534.120, and 030 has this language, Any  
22 particular basin or a portion thereof. And the arguments have  
23 been made that that's the language that says he can't manage  
24 beyond basins. I mean, quite frankly I think the notion that  
25 we're going to parse out words so specifically when we really

1 know the purpose of what the legislature wanted the State  
2 Engineer to do was to effectively manage groundwater, and that  
3 should be how we interpret everything in the statutes.

4 But that seems to -- any particular basin or a  
5 portion thereof, that seems to indicate a basin or smaller  
6 area. But in 534.120, it says within an area that's been  
7 designated or for the essential -- for the welfare of the area  
8 involved. That seems to be broader. So I think it's a fair  
9 reading that one ratchets up. One ratchets down in terms of  
10 size from a basin.

11 So -- so that's -- that's it for that. I think that  
12 we cited in our brief about there is a legislative rule that  
13 the legislature has adopted that tells us how to interpret  
14 statutes. It says that when they use a singular that it can be  
15 interpreted to be plural. When they use plural, it can be  
16 interpreted to be singular. That's NRS 0.030. And also we  
17 know that we cannot interpret statutes in a fashion that will  
18 lead to absurd results.

19 So if the State Engineer is required to abide by bad  
20 science or old science, that's an absurd result. And so that  
21 shouldn't be the way we interpret these statutes.

22 We've also cited to the Water Words Dictionary, which  
23 is a document in the State Engineer's files. And I clipped out  
24 a piece of it that I think is the most applicable, and it says  
25 that a basin is a discrete hydrologic unit for water planning

1 and management purposes. It's a broad -- I think it's a broad  
2 statement. It could be --

3           You asked about the 14 areas. What does that mean?  
4 I think that the -- it -- it's whatever is meant -- it shares a  
5 common source, and has a -- it has an area that can be managed  
6 together as one, as this says, discrete hydrologic unit for  
7 water planning and management purposes. So I think that's the  
8 clearest definition we get that applies in this case, and we  
9 get that from the Water Words Dictionary.

10           I talked a little bit about joint management before.  
11 And without getting into items that I'll get an objection for,  
12 I want to refer to Water for Nevada Number 3. It's a 1971  
13 report.

14           And this is the last page that crashed it the last  
15 time. So can you (indiscernible), please.

16           And what this is, and I think this is really  
17 important, is water for Nevada Number 3 is when the Nevada  
18 State Engineer took all of the reconnaissance reports --

19           THE COURT: Is this a slide that -- this is a map?

20           MR. TAGGART: Yes.

21           THE COURT: Okay.

22           MR. TAGGART: So this is the plate, the big foldout  
23 map at the back of the report. And what the report did is it  
24 brought together all of the prior reports that had been done in  
25 individual areas. So we talked yesterday about the



1 reconnaissance reports that went throughout the State. So they  
2 had little pieces of the jigsaw puzzle. And then they put the  
3 puzzle together in Report Number 3.

4 And what's important to understand is when they did  
5 those individual pieces of the jigsaw puzzle, they would create  
6 a water budget, and a water budget is a, like we said  
7 yesterday, a reconnaissance. It's an estimate of water that  
8 comes in and water that leaves the system. How much water is  
9 in the system. That's ultimately what the State Engineer is  
10 supposed to figure out. Is there water available for  
11 appropriation. That's like one of the key points he has to  
12 decide whenever he's giving out more water. Is there water  
13 available for appropriation? That's what these reports were --  
14 that was the effort.

15 And so they recognize that some water was leaving  
16 basins, and some water was coming into basins. But once they  
17 pieced all these pieces of the jigsaw puzzle together, they had  
18 to reconcile these waters going in and out. And so --

19 I don't know, Rob, can you blow up the area that  
20 we're talking about now.

21 Because what you'll see on this map, and this is in  
22 the record, you'll see these arrows, and I guess my point is  
23 joint management between groundwater basins has been happening  
24 and recognized since this time. And, I mean, I'll fast-forward  
25 to, you know -- well, I won't because, you know, it's in the

1 record. It's what we cited to, and these are the types of  
2 things we had to recognize is that there's flow in and out of  
3 basins.

4 So you remember -- so this is -- what I'm pointing at  
5 is the last slide in our presentation, and it's page number --  
6 I don't know. I'll tell you in a second. Because I don't --

7 (Pause in the proceedings.)

8 MR. TAGGART: But you can see where 210 is. And you  
9 can see where there's an arrow coming in to 210 from Kane  
10 Springs. Do you see that?

11 THE COURT: I do.

12 MR. TAGGART: And you can see arrows all kind of in  
13 the area we're talking about towards the river. Some of those  
14 arrows are about groundwater. Some of them are about surface  
15 water. There's a legend I'll let speak for itself.

16 But the point is throughout this map you see these  
17 arrows. So even at that time they were recognizing that basins  
18 share water at some level. I think it's -- I don't know if  
19 this is easy or hard to -- if water didn't go somewhere, we'd  
20 have lakes everywhere. If the snow melt melted and went into  
21 the groundwater and it couldn't go anywhere, it would fill up  
22 the groundwater basin, and it would become a lake. It has to  
23 be going somewhere. And so these maps were what the State  
24 Engineer developed in 1971 and has been what has been the  
25 guiding principle for how they manage groundwater basins and

1 how they determine how much water is available in a groundwater  
2 basin.

3 So I'll leave it at that.

4 UNIDENTIFIED SPEAKER: (Indiscernible) for the record  
5 the cite.

6 MR. TAGGART: Yeah, the cite is ROA 9295. It's  
7 page 62 of the PowerPoint slide -- I'm sorry, 63.

8 Okay. All right. So the --

9 Could you go to Slide 30, please.

10 So now we're going to talk about the substantial  
11 evidence to support the finding of the hydrologic connection  
12 and a sole source of supply. So it's our -- you know, our  
13 argument is, that those are the two factual findings that  
14 underlie 1309 and that the Court has to focus on. Were those  
15 correct? We know what the standard of review is. We know what  
16 the deference is and all of that, but those are the two  
17 questions: Is there close hydrologic connection? Is it the  
18 same source of supply?

19 So what I wanted to say here is that a couple points  
20 have been made by counsel for other parties here about evidence  
21 and arguments have been made that appear, I think, to be  
22 blurring the line between the standard of review here.

23 So the first one is -- and this is an example of why  
24 factual findings should be deferred to the State Engineer. I  
25 think there's enough that the Court has to take on *de novo*

1 here.

2 THE COURT: No, I'm not turning into any sort of  
3 hydrologist or whatever any time soon.

4 (Pause in the proceedings.)

5 MR. TAGGART: And what I'm going to show, this is  
6 just an example of --

7 So this is page 62, and this Ms. Peterson talked  
8 about, and she said this is -- this is CSVN-4. So this is a  
9 monitor well at the north end of Coyote Spring Valley. The  
10 State Engineer has it on his chart too, and she said the  
11 transducer was bad, and it showed an error. And that was part  
12 of her argument.

13 Well, if you look at this hydrograph, it shows up in  
14 the legend two things: Continuous measurements and periodic  
15 measurements. The State Engineer understands what these things  
16 mean. One of those is an automated system that reads a  
17 transducer. It reads regularly the level of water. One of  
18 them is a human who goes out and puts a tape down into the hole  
19 and sees how deep the water is.

20 So if you have both, it doesn't matter if the  
21 electronic measurement device is a little bit off if you've  
22 got -- if you check it with a periodic measurement from a  
23 person. The State Engineer knows that. So if this gets in  
24 front of him and someone complains about the transducer, he's  
25 going to be able to decipher what that means. You know, I

1 think my point is, let him do that.

2           And here's another example. Okay. So this is a  
3 slide that Vidler had up on the screen yesterday, and their  
4 argument was that when there was a pump test there was no  
5 change in the monitor well. The pump test is the blue. The  
6 monitor well is the red. And I looked at this a little closer,  
7 and the State Engineer got this, and he got to look at this,  
8 and he got to decide, and he found it wasn't persuasive, and he  
9 should -- and then their question is should he be deferred to  
10 on that.

11           But first of all, if you look at the scale on each  
12 side of this, they're not the same. And maybe that's not  
13 significant; maybe it is, but they're not.

14           But what else is interesting is that on the red line  
15 there's no data point from right after the pump test. You can  
16 see that first red line right after the blue line comes back up  
17 again. There's no data point between that and the one at the  
18 far end of the line. So the line can then go straight. If  
19 there was data in between those two -- I mean, I don't know why  
20 there wasn't data in between those two, but that's what we want  
21 to see, to see if there was a response, and there's no data  
22 plotted on that chart.

23           So my point isn't to say that -- my point is just to  
24 say the State Engineer looked at all of this. He had all of  
25 this. Everyone had a chance to cross-examine witnesses.

1 Everyone had a chance to challenge what the experts had said,  
2 and he heard all of that, and he saw them. He saw how they  
3 responded, just like you do in trial. He saw how they  
4 responded, how the witnesses responded under cross-examination,  
5 what their demeanor was, whether they admitted to making  
6 errors.

7           And before I forget, I'll say, you know, some  
8 witnesses change their view of the facts as a result of the  
9 hearing. That's been criticized by some here as a due process  
10 violation. That's not a due process violation. That's the  
11 process of testing the mettle of expert testimony in trial.  
12 That's what that is. And witnesses, good witnesses should be  
13 prepared to change their opinion if they learn new evidence  
14 that is persuasive. And so some -- if witnesses did that,  
15 that's not any form of a due process violation.

16           So with respect to deference, I think that's my point  
17 there is that leave that to the State Engineer because he  
18 understands the types of things that happen when you see  
19 hydrographs like this.

20           Now, there's a -- the evidence that the State  
21 Engineer relied upon in finding the connectiveness and the same  
22 source --

23           Rob, if you could go to slide 34, please --

24           The first -- well, we list all of the different  
25 evidence. I think the first question the Court should ask is

1 okay, you want me to do a substantial evidence review. What  
2 was the evidence that you had. So we listed it here. And he  
3 had evidence going back to hearings on the water rights in  
4 Coyote Spring Valley back in the '90s. He had the 2001  
5 hearings. He had the aquifer test. He had the expert reports  
6 after the aquifer test. And then he had 1309 -- or the 1303  
7 reports.

8           What I wanted to point out now is what I said earlier  
9 is that the question and probably the question not for us today  
10 to decide -- I think there's a process by which this question  
11 will be answered, but who will get water? When there's 8,000  
12 only or less, who will get water? That will be determined  
13 later. And when it is determined, parties will be able to  
14 present arguments that I relied or I didn't rely or I knew or I  
15 didn't know that this might happen. And other parties will be  
16 able to come in and say, wait, you did know or you didn't know  
17 that this might happen. You were on notice. It's not  
18 reasonable reliance to say that you just thought the State  
19 Engineer was going to always have water for you.

20           And when you look at the record, the actual record of  
21 events in this case, you see that many parties knew that all of  
22 this was possible. And again, not for us to decide today, but  
23 I think when folks get up and say that we had a green light to  
24 develop, I think it needs to be made clear there was a lot of  
25 yellow lights, and maybe -- I mean, in Boston people run red

1 lights, but, I mean, I think there were red lights, and for  
2 instance, and we've cited this in our brief. So I won't go  
3 into it into much more detail, but we've cited to what CSI said  
4 to the Clark County Commission when their project was approved  
5 about it was their obligation to make sure that they had water  
6 secured for their project, that they were taking on that  
7 obligation, that development takes care of itself, that they  
8 weren't expecting the public agency to get them their water.  
9 They were going to get that themselves.

10 Then in the ruling, in Ruling 625, and I don't recall  
11 the one for Coyote Spring, but there was that series of rulings  
12 that came out after Order 1169. And in those rulings they said  
13 that all new applications were denied. And there's this  
14 perception that those rulings didn't deal with existing rights  
15 at all, that they only dealt with new appropriations. It's  
16 true that they only denied new appropriations. That's what the  
17 point of that was.

18 And if you recall, there were hundreds of thousands  
19 of acre-feet of water of applications in Coyote Spring Valley.  
20 Hearings were held in 2001 on those applications. The State  
21 Engineer at our -- at SNWA's request ordered the pump test  
22 because SNWA had -- I'm sorry, Las Vegas Valley Water District  
23 at the time had those -- had a lot of those water rights in  
24 that queue, and after the pump test, after the pump test  
25 reports were submitted, the State Engineer denied all of the



1 new applications, but he also said, It remains unclear. That's  
2 the language. It remains unclear whether there's water  
3 available for new development from existing rights. And we  
4 have --

5 I'm sorry, Rob, but that's towards the end too.

6 (Pause in the proceedings.)

7 MR. TAGGART: Yeah, this is it. So this is Record on  
8 Appeal 780. And this is the State Engineer's finding that,

9 The amount and location of groundwater that  
10 can be developed without capture of and conflict  
11 with senior rights on the Muddy -- and Muddy  
12 River and Springs remains unclear, but the  
13 evidence is overwhelming that unappropriated  
14 water does not exist.

15 So that's not necessarily a red light, but I think  
16 it's -- I think it's orange or at least yellow. So that's our  
17 point there.

18 So getting back to the evidence that was relied upon  
19 by the State Engineer, there was a lot of points made about  
20 this already.

21 The -- oh, before I do though, the Water Authority  
22 and the District lost water rights in those rulings. We  
23 understood that, and we accepted that. More importantly, the  
24 water authority has water in the Lower White River Flow System.  
25 Mr. Robison mentioned it yesterday. We have thousands of

1 acre-feet that may be considered junior, that we may lose. I'm  
2 not going to say we will because we haven't got there yet. But  
3 we have 1989 water rights that are, you know, dangerously close  
4 to what that cutoff line would be. So we understand what that  
5 means and the authority has understood, well, that's part of  
6 just living with the world the way it is, that there was no  
7 water available for everyone.

8           So I just want to make that clear.

9           So Rob, could you go to Slide 39.

10           We talked about the hydrographs already and what the  
11 State Engineer looked at, and I think he -- his counsel did a  
12 good job of explaining it from this poster board of how those  
13 hydrographs were looked at and how they were compared to each  
14 other.

15           So the -- you know, this page 41 in my slides is ROA  
16 41982, and this is the panels of hydrographs in each basin, and  
17 it's laid out to be a comparison visually during that pink  
18 shaded area, which is the aquifer test.

19           So again, this is the primary sort of evidence that  
20 was used. The State Engineer is showing it all on the map  
21 there.

22           And what is important to understand too is that after  
23 the 1169 pump test and after the reports were submitted and  
24 then after the new applications for more water were denied, we  
25 had a period of time that went by, and we call this the

1 recovery period where we look to see what the aquifer did.

2           Sometimes when a well is pumped and you stop pumping  
3 it, the water comes back to the same level it was at when you  
4 started pumping it. You kind of wonder. That's what they do  
5 when they do a pump test. You know, how much -- how quickly is  
6 this thing going to recharge after I pump it? Otherwise it  
7 will just go dry.

8           So when they -- so looking at the recovery of the  
9 system after the pump test was the new information that the  
10 State Engineer had in 1303 hearing, and so when people say,  
11 well, what's new? They didn't have any new evidence; this is  
12 all arbitrary. That is what was critical. That was, you know,  
13 seeing that 3.2 at Warm Springs West Gage was not far off of  
14 where the flows were at the gage, and it wasn't increasing.  
15 These are the types of things of the additional time that  
16 occurred after the pump test that raised concerns and that the  
17 State Engineer looked at. So that was the additional  
18 information that he had.

19           And in his ruling, he indicates that the recovery did  
20 not occur and has not come back to pretest levels. That was  
21 kind of the language that he used. And that's critical to how  
22 the system can respond to additional pumping. I think that was  
23 his point is if additional pumping occurs, you can -- I might  
24 not have the ability to cut it off and get that water level  
25 back. That's the problem.

1           If he could just cut off water use and bring the  
2 water back -- Mr. Dotson's client wants the water back -- that  
3 would be one thing, but I think they learned that they did the  
4 pump tests. If it lowers even a half foot, even a half a foot  
5 across 1100 miles that, you know, that 6 inches on that ruler  
6 you saw yesterday, that's 1100 miles. That's twice the size of  
7 the Las Vegas Valley is what we're talking about.

8           And how much water disappears when a half a foot only  
9 decline occurs, and if it occurs everywhere. It's telling us  
10 something. It's telling us it's the canary in the coal mine  
11 about what happens if you really pump it, if you start to  
12 really pump this system.

13           So the State Engineer found that the aquifer test  
14 data was the most persuasive, and I think we've talked about  
15 why that was reasonable for him to make that conclusion. There  
16 was a lot of information put in about geology and mainly CSI,  
17 Lincoln County and Vidler put in a lot of geophysical and  
18 geologic information based upon studies that they completed.

19           And their position was that these created a  
20 compartment or some sort of barrier so that they could pump,  
21 and it wouldn't effect the area outside that compartment.

22           And in the State Engineer's ruling, he said that he  
23 wasn't persuaded that the compartments exist.

24           And so two points on that. One is, he did consider  
25 their evidence, and he found it not to be persuasive. Two is

1 that they knew that geology would be one of the factors the  
2 State Engineer looked at, those criteria we talked about  
3 yesterday. And so there was no due process problem. They knew  
4 exactly what the State Engineer would be looking at, and they  
5 submitted what they submitted.

6 What the criteria is, again, I talked about this  
7 yesterday, but I'll just say this quickly is if someone were to  
8 say I want all of you to go out and measure how high  
9 Mt. Charleston is, and you might have five experts all go out  
10 and do it a different way. And one might, you know, use a  
11 pedometer, walking up there. One might use a GPS. You know,  
12 there might be four or five different methods of how to do it.  
13 And then when they all come back, someone might say, well, I'm  
14 going to tell you what I think the most reliable of those five  
15 methods you just applied are to finding out what the true  
16 height of Mt. Charleston is. That's all the criteria are is  
17 just the State Engineer ranking what the most persuasive  
18 evidence is that he received from the experts.

19 So there's groundwater budget data. There's climate  
20 evidence. This has all been discussed. I think it's the State  
21 Engineer. I won't go through this in detail except to say that  
22 the State Engineer in his order mentioned this evidence, which  
23 indicates that he reviewed this evidence, and explained why he  
24 felt that it was not persuasive.

25 So one of the arguments is that he didn't look at our

1 evidence. Well, that's not true. What he did is he judged it.  
2 He weighed it, and he found it to not be persuasive. So  
3 climate evidence, for instance, the State Engineer reviews this  
4 in his order, and indicates that, you know, many parties argued  
5 about climate.

6 And we had a lot of testimony about this. We had a  
7 lot of analysis of it. We had experts from the federal  
8 government who looked at climate throughout the area outside  
9 the Lower White River Flow System and looked at climate and saw  
10 what it was doing and then looked at over climate. We debated  
11 which climate data should we look at, which weather station  
12 should be considered. Are some too far away? Are some the  
13 right ones to use? And then the hydrographs were analyzed.

14 And I don't know if I can get back to -- back here,  
15 this is Slide 41. That lower panel, and this is all those  
16 hydrographs, that's what that lower panel is. It's climate.  
17 It's showing what the precipitation is, the average  
18 precipitation in the area is based on that expert's review.  
19 That's climate.

20 And then the expert would get up and testify, well,  
21 here's what we see in the hydrographs. Here's what we'd expect  
22 to see based on the climate, but here's what we see. So it  
23 must not be climate, or maybe it is climate. That's what they  
24 did. And that's what the reports are full of all of that. So  
25 the State Engineer looked at all of that, and his judgment can

1 be upheld based on that because it's reasonable what he came up  
2 with.

3           Okay. All right. So again, I'm going to talk about  
4 Kane Spring. I think we have a -- again, I said it earlier.  
5 The primary area of the Lower White River Flow System are  
6 the -- is Coyote Spring, Hidden and Garnet, Muddy River Springs  
7 area, California Wash. We're ending up to talking a lot about  
8 Kane, and they -- and we should because it's a big concern with  
9 Vidler, but, you know, it's a bit overshadowing the bigger  
10 issue with what we're trying to do with the Lower White River  
11 Flow System. But a lot has been said about it. I think that  
12 the first thing I want to say is like this picture here, which  
13 is Slide Number 53, this is the monitor well for Kane Spring,  
14 and it's next to their production well. It's right on the  
15 boundary between Kane Spring and Coyote Spring Valley.

16           That's just the fact that it's located right there.  
17 If they got as close as they could to Kane Spring Valley  
18 without being in it for a reason --

19           THE COURT: You mean to Coyote Spring Valley?

20           MR. TAGGART: To Coyote Spring Valley. I'm sorry.

21           And then they developed a biological opinion with the  
22 Fish and Wildlife Service to address potential impacts of the  
23 Moapa dace. And I'm sure they don't believe that any pumping  
24 in Kane Spring will affect the Moapa dace. And they may have  
25 entered the agreement believing that, but the Fish and Wildlife

1 Service certainly believed that pumping in Kane Springs might  
2 affect the Moapa dace and to the point of requiring them to go  
3 through all of those exercises under the Endangered Species  
4 Act.

5           We've heard that, well, there was no pumping in Kane  
6 Spring Valley under -- during the pump test. Well, that  
7 doesn't -- I mean, that's true, but the water levels were  
8 monitored. So the water levels in Kane Springs were monitored  
9 based on the pumping that did occur in the pump test. So  
10 that's significant. That's significant information that was  
11 collected.

12           A question --

13           THE COURT: Meaning even though there was no pumping  
14 going on in the Kane Springs well, the level of the water in  
15 the Kane Springs well was still getting monitored?

16           MR. TAGGART: Right. Right. So they were monitoring  
17 what was happening in Kane Springs as a result of pumping  
18 elsewhere.

19           And so arguments have been made there was no notice  
20 that Kane Spring might get added. Well, I think they were  
21 there at the hearing arguing it shouldn't be, and hard to  
22 believe that they didn't know that it might get added if they  
23 were putting on evidence that it shouldn't be in.

24           And there were arguments about how the use of the  
25 word attenuated was in the State Engineer's order.



1 Well, it's farther away from the pumping center than  
2 other places where the monitoring of impacts was greater. So  
3 it just stands to reason that as you get further away the  
4 impacts would be less attenuated. And I think that's what the  
5 State Engineer meant. That doesn't mean they don't exist  
6 there. It just means that they are less at distance, and I  
7 think the State Engineer acknowledged that.

8 And ultimately there's a hydrograph that was reviewed  
9 from the wells in Kane Spring versus the wells in Coyote  
10 Spring, and it was the State Engineer's judgment from those  
11 hydrographs that there was a significant enough connection to  
12 add them.

13 There's a case called *Eureka County v. State*  
14 *Engineer*. And again, this is a case that has been cited to.  
15 This wasn't raised. It was raised in the briefs, but it wasn't  
16 raised in argument, but I think I need to address it in case it  
17 gets reraised later. That the State Engineer essentially can't  
18 bifurcate the proceeding. You also heard argument that its  
19 segmentation, like the CEQA in California would prohibit.

20 Well, isn't dividing up the basins and not looking at  
21 them in isolation, wouldn't that be segmentation? If you were  
22 going to ignore what the aggregate impact is of the five  
23 together because of their separate -- their original separate  
24 nature if, you know, that sounds like segmentation to me.

25 But the argument is that the *Eureka County* case,

1 *Eureka County versus State Engineer*, and this case was about a  
2 groundwater project that was going to dry up a spring, okay.  
3 Again, this is not a case of first impression that we're in  
4 here. Groundwater, major mining project, going to dry up a  
5 small spring in Kobeh Valley.

6 And the question was, and the State Engineer said, I  
7 understand that there's going to be an impact to that spring  
8 from groundwater pumping, and I am going to require a  
9 mitigation plan, and the Supreme Court -- but I don't -- but I  
10 haven't seen the mitigation plan yet, but I'm going to require  
11 one. And the Supreme Court said that's not good enough. You  
12 can't make a decision that a mitigation plan will avoid a  
13 conflict if you don't have the mitigation plan in front of you  
14 first. You have to have presently known substantial evidence,  
15 presently known substantial evidence.

16 And I think -- and I'm going to get to this in a  
17 second, Mr. Lake for Center for Biological Diversity talked  
18 about this case too and how it relates to the steady-state  
19 finding of the State Engineer.

20 But this other point, so can the State Engineer  
21 bifurcate? The argument is he can't bifurcate because if he  
22 does facts first it's going to -- it's based on -- it's not  
23 based on presently known evidence. This is completely  
24 different.

25 This is a traditional method of making the factual

1 findings first and then doing the policy decisions later. And  
2 the State Engineer is deferring management decisions to a later  
3 time. He didn't authorize a conflict -- well, assuming that --  
4 I mean, we've argued that his conflict decision was incorrect,  
5 but assuming we're right on that, he did not rely on evidence  
6 in the way that occurred in Eureka County.

7 Now, I think Mr. Lake's point though is that the  
8 State Engineer heard evidence about the steady state, and maybe  
9 I should -- you know, I'm going to get to that, but the point  
10 there was some witnesses said, you know, it looks like a -- and  
11 I hope -- let me put it into context is we're talking about  
12 Warm Springs West Gage. We're talking about the 3.2 flow rate  
13 at Warm Springs West Gage, and whether or not that was  
14 stabilizing, whether or not that was continuing to decline or  
15 not. Some people thought that that was continuing to decline.  
16 The State Engineer said it's approaching steady state. That's  
17 the finding that he made. Witnesses testified about this.

18 And one witness said, well, I need to see a few more  
19 years of evidence before I could say that it's reached steady  
20 state. That was Mr. Felling (phonetic), but you asked, well,  
21 when is enough enough? I mean, when should -- you know, can't  
22 we just be asking for more data all the time? We get that  
23 question all the time. More data is always better, according  
24 to the experts. More models, more, you know, more well data,  
25 but I think it's -- I think you have to think in context to the

1 actual decision.

2           If you have ten years of flow data and something is  
3 doing something on a trend versus two years, ten is going to be  
4 more valuable than two. So I don't think it's an indefinite  
5 period of time, but I think -- I mean, I think even  
6 Mr. Felling's testimony wasn't he needed forever. He needed a  
7 little bit more time to really conclude that it was equalizing.  
8 And I think that's why the State Engineer said it's  
9 approaching. They didn't definitively say it is. They said  
10 it's approaching. And so that's a little bit about that.

11           So the next point that I want to make is about  
12 conjunctive management. So -- so conjunctive management, what  
13 is that? So we talked about this before. There's been  
14 statements that well, the groundwater and the surface water  
15 have always been managed separately in Nevada because they have  
16 two separate chapters. Well, that's pretty simple of an  
17 argument. The reason we have two separate chapters is because  
18 LCB decided to make them two separate chapters for whatever  
19 reason LCB decided to do that back in 1939, and LCB has, you  
20 know, interesting rules about why it does things, why it uses  
21 certain words in certain places at certain times. So that's  
22 the first point.

23           The second is that the water law surface water was  
24 adopted in 1905, and then through 1905 through 1913 it was  
25 litigated. And so we think of it as kind of between 1905 and

1 1913 the water law was adopted, the surface water.

2 Then in 1939, the groundwater law was adopted. So  
3 that's Chapter 534, surface; 533 was the initial one surface.  
4 Then 534.

5 534 is just a bolt on to 533. The reason we know  
6 that is that in -- so the reason we know that is NRS 533.370.  
7 So this is in the surface water chapter, 533.370.

8 THE COURT: And this is slide 57?

9 MR. TAGGART: Yes, it is. Thank you.

10 And this is the law that applies to all applications  
11 that are filed in the State of Nevada, all water right  
12 applications, ground and surface. So if I wanted to -- if I  
13 file -- every application that was ever filed by any of these  
14 parties in this case was filed under Chapter 533, under  
15 533.370. And it says the State Engineer has to see if there's  
16 water available for appropriation, see if it conflicts with  
17 existing rights and see if it threatens to prove detrimental to  
18 the public interest. So those are the three main things the  
19 State Engineer has to look at under 533.370, sub 2. And so  
20 when the legislature adopted 534 for groundwater, it said State  
21 Engineer use the service water statute 533 to approve  
22 applications. So they're connected. They have some, you  
23 know --

24 THE COURT: Interaction.

25 MR. TAGGART: -- interaction.

1           But what's even more important is, and I think  
2 Mr. Carlson said this yesterday too is that one of the first  
3 statutes in 534 says that everything that's issued is issued  
4 subject to existing rights. What were they talking about,  
5 right? They had to be.

6           And then under 533.370, it says that you cannot  
7 approve an application if it conflicts with existing rights,  
8 and 533 must have been talking about surface and ground. So  
9 there's always been this interaction, this interplay between  
10 those two chapters.

11           And this is a slide here, Slide Number 58, and  
12 actually that should say authority for conjunctive management.

13           THE COURT: Conjunctive management.

14           MR. TAGGART: I'm sorry. We worked on some of these  
15 last night.

16           But this is a series of cases that we cited to in our  
17 brief, maybe not all of them. So I'm going to -- you know, so  
18 if somebody wants to object, they can, but if you survey our  
19 water law, like that Orr Ditch, *U.S. v. Orr Ditch* in 2010,  
20 that's the case I talked about yesterday where the Ninth  
21 Circuit said a surface water court, a surface water decree  
22 court has jurisdiction over groundwater right that might  
23 interfere with the surface water.

24           *Eureka County versus State Engineer*, that's what we  
25 talked about a minute ago. The, you know, again, there's a lot

1 here. *Griffin v. Westergard* was from the 1980s, and it was  
2 ground -- that was the one I talked about. It was Smith  
3 Valley, not Mason Valley, but it was Smith Valley, Nevada. It  
4 was *Groundwater Pumping versus the Walker River*.

5 *Cappaert*, right, I talked about that already in 1976.  
6 1976. *Pyramid Lake Paiute Tribe versus Ricci*. That was  
7 groundwater being appropriated in Dodge Flat, and it  
8 involved -- you read the case. It talks about water quality in  
9 the Truckee River, making sure that that's -- there's enough  
10 water for that.

11 So this isn't new. This has been going on for some  
12 time. You know, these issues needing to address conjunctive  
13 management.

14 So I guess I don't know whether this is the right way  
15 to look at it, but if the State Engineer doesn't have the  
16 authority to do conjunctive management, he's going to get in a  
17 lot of trouble from the courts, because the courts have told  
18 him he better. The courts don't care if I have a client, and I  
19 do, who have surface water rights that are being taken away by  
20 groundwater pumpers. I have one here, and I have one in other  
21 parts of the State, and, you know, it doesn't really matter  
22 whether it's coming -- whether a groundwater well is taking the  
23 water or somebody went up and put a ditch in up gradient from  
24 me and took my water. It doesn't really matter. It doesn't  
25 matter where the headwaters are. It doesn't matter whether

1 they're in Clark or Lincoln. It just matters that somebody's  
2 taking my water. So that's the last I'm going to mention of  
3 conjunctive management.

4 So we think there's clear evidence that the State  
5 Engineer relied upon to come up with the connection between the  
6 basins and the same source of water.

7 So now I want to talk about -- now I'm going to talk  
8 about the 8,000 acre-foot cap. Okay. So a number of questions  
9 came from the bench to parties here about -- I think the Court  
10 asked, you know, is it your position that no water can -- water  
11 can never be taken away? I think one of the answers was the  
12 State can take it -- or the State giveth, the State taketh  
13 away. I think I've said that in other cases too.

14 But the answer back was, there has to be a process.  
15 He can't overrule. He has to administer. That was an answer  
16 that you got as well.

17 So and I agree. There's a residual power that the  
18 State Engineer has over all water rights that he's granted.  
19 And it is -- it is part of the water law, and it's also part of  
20 the public trust doctrine now. And that's this Mineral County  
21 case that we talked about over and over again.

22 So the procedure that the State Engineer must follow  
23 to curtail existing law, and there is a process. So most of  
24 the parties conceded that, yes, the State Engineer can take  
25 water away, but he has to follow a process.



1           And so you asked, and I think you asked Mr. Bolotin,  
2 so is the State Engineer going to decide what the rules are?  
3 No. The process is decided by the legislature, and the Courts  
4 will review what the State Engineer does if someone appeals.  
5 My money is on someone appealing.

6           So that's -- so now I'm going to talk about what that  
7 process is, and it starts with understanding what is the supply  
8 of water that's available. That's the first step that the  
9 State Engineer has to do is understand how much water is  
10 available. That's what he has to do when he grants new water  
11 right applications. That's what the statutes say he's supposed  
12 to do here. 534.110 sub 6 I'll talk about in a second which  
13 talks about that.

14           How much water is available -- or first, what's the  
15 supply? How much is available for -- because there could be a  
16 lot more water in a basin, groundwater than can be pumped on an  
17 annual basis, on an annual sustainable long-term basis. So how  
18 much, you know, what's the aquifer? How much can be pumped?  
19 Is there a shortage? How do you deal with the shortage through  
20 curtailment? So there's -- that is the process. And  
21 unfortunately, there will be winners and losers, but it has to  
22 happen. It can't be avoided.

23           So I think my client urges that we not start this all  
24 over again. I mean, I think the State Engineer did a good job  
25 with 1309 except for what we've argued against, and this is our

1 starting point, and we need to move to the next level and start  
2 to deal with the policy questions that we talked about a little  
3 bit yesterday.

4 So the -- so Slide Number 6 of this new presentation,  
5 which is my third, and it's --

6 THE COURT: And do we have a copy of it?

7 MR. TAGGART: Not yet, but I think I have a copy  
8 here. And it is -- it's the 8,000 acre-foot cap presentation.

9 The -- my point here is that we know how curtailment  
10 happens because it's always happened, maybe not this complex  
11 and maybe not this dramatic, but on river systems when there's  
12 not enough water every year, it goes into curtailment, or it  
13 goes into regulation it's sometimes called. And priorities are  
14 cut off. The youngest priorities are cut off as the year goes  
15 by, and there's water commissioners who run rivers and decide  
16 who's going to get water, and they have a system on how they do  
17 that. The State Engineer oversees that work for Courts in  
18 Nevada who have entered decrees and acts as the water  
19 commissioner to those Courts and does that. And so there's a  
20 system.

21 And like I said yesterday, I think that that's the  
22 color that we have to use whenever we're looking at statutes  
23 that codify that common law system.

24 Here is the list of -- this is Slide 7. Here's the  
25 list of statutes that apply. There's more than this, but I

1 think these are the critical ones. We talked about 532.120 and  
2 534.120 already.

3 532.167, sub 3, he has a duty to perform an estimate  
4 of the amount of all groundwater that is available in a basin.  
5 That was like my first point. First he has to decide what the  
6 supply is. He has to determine the specific yield of aquifers.  
7 That's a term that means how much water is in an aquifer on a  
8 cubic meter basis usually, like how much of that area is filled  
9 with water.

10 Then he had --

11 THE COURT: Well, let me just ask a quick question.  
12 So the perennial yield has to do with a basin, but that is  
13 different than the yield of an aquifer?

14 MR. TAGGART: It is. Well, a specific yield is a  
15 term, a hydrologic term that I just did the best I could on  
16 explaining what it is.

17 THE COURT: Okay.

18 MR. TAGGART: It's not perennial yield.

19 THE COURT: It's not the same as perennial yield?

20 MR. TAGGART: It's different.

21 THE COURT: Okay.

22 MR. TAGGART: And perennial yield is this notion of  
23 how much can you develop on an annual basis and maintain  
24 equilibrium. But I can tell you that that discussion has been  
25 years and years and years too have we fought over what that

1 exactly means, but really what it is, is what's the  
2 sustainable -- I like sustainable yield because it kind of  
3 conveys the idea better of what the goal is, but it's the  
4 amount of water that on an annual basis can be pumped and be  
5 there, you know, forever or, you know, out into time.

6 And so -- but specific yield is more of a -- it's  
7 more of a hydrologic term about how they figure out how much  
8 water is in an aquifer.

9 THE COURT: Okay.

10 MR. TAGGART: And then 534.110, sub 6, that's what  
11 we're going to talk about a lot more here, because that's the  
12 curtailment statute, and it says the groundwater supply may not  
13 be adequate for the needs of all permittees. I have a couple  
14 slides on that.

15 We talked about subject to existing rights, and we  
16 talk about the conjunctive management -- and I'm sorry -- yeah,  
17 the manage conjunctively legislative declaration. So now we've  
18 got an -- I mean, that's a water law right there on one slide.

19 But public trust doctrine, I want to talk about that  
20 while I can.

21 And so the public trust doctrine is a what we -- I  
22 used to call it the wildcard of western water law. It  
23 didn't -- it started in -- well, California adopted it in the  
24 water law first, and then in Nevada, there was a case in the  
25 '80s -- in the '90s, and it's Mineral County. I'm blanking

1 on the name, but it was the first case about Walker Lake. And  
2 there's a -- there's a concurrence in that opinion by Justice  
3 Rose, and he said that if we don't have the public trust  
4 doctrine in this case in this state we should. And -- but he  
5 wasn't in the majority.

6 And then fast-forward to last year or the year before  
7 when we got the Mineral County case, Walker Lake again. It  
8 bounced back and forth between the Federal courts and the State  
9 courts because it's a federal court decree that governs the  
10 surface water on the Walker River. And the Supreme Court was  
11 being asked, and this has been talked about already a bit.

12 The Supreme Court was being asked by the Ninth  
13 Circuit on a certified question is -- is it possible for the  
14 water rights in the Walker River decree to be reallocated for  
15 the benefit of Walker Lake and the environmental needs of  
16 Walker Lake. And the Court said no. It said that there is a  
17 public trust doctrine in Nevada, but decrees on river systems  
18 can't be changed.

19 And so it really had some tough decisions to make,  
20 but it also told the State Engineer that this public trust  
21 doctrine thing really matters. It's -- there was a Lawrence  
22 (phonetic) case that came before it, and it established the  
23 public trust doctrine in Nevada for land underneath submerged  
24 waters, but the Mineral County case said the State Engineer  
25 better take into account the needs of the public trust. What

1 does that mean? That means that the water is owned by the  
2 public, and the State Engineer is the trustee of that water.  
3 And when he gives it out, he has to make sure it's being used  
4 according to that trust obligation that he has to the public.

5 And it also involves retaining powers that the State  
6 Engineer -- that's why call it the wildcard. We know what the  
7 statutory retained powers are of the State Engineer over  
8 groundwater right. They're mentioned in the permit terms.  
9 What the -- what the public trust doctrine retains is, you  
10 know, is not as clear.

11 So, but we know now that the State Engineer has to  
12 keep that in mind. Why is it important in this case? We think  
13 that if there, you know, if he -- if he could some -- I mean,  
14 how could someone argue that the State Engineer cannot take the  
15 Moapa Basin into account? I don't know that anyone has  
16 actually argued that, but that was a really, you know, hard  
17 position I think to take in today's day and age.

18 So the question is, and I'll just jump to that now on  
19 the ESA stuff, is that --

20 THE COURT: So let me --

21 I think what has been argued is that -- well, that he  
22 made that determination under the Endangered Species Act as  
23 opposed to public trust doctrine.

24 MR. TAGGART: Right.

25 THE COURT: I think that's what that argument was

1 about that it was improper for him to determine that there  
2 could be the potential of a take under the Endangered Species  
3 Act because of that, that that was faulty logic, I guess.

4 MR. TAGGART: Right. Uh-huh.

5 THE COURT: I think that's what the argument was.

6 MR. TAGGART: Yes. And that he -- I think even some  
7 have argued that he made a determination that take will occur,  
8 and only the federal government can do that.

9 So public interest, public trust, those I think are  
10 separate ideas. Public trust doctrine is what I kind of just  
11 talked about. Public interest is mentioned in the statute; it  
12 says something the State Engineer has to account for, but they  
13 blur into each other.

14 So when the State Engineer wrote 1309 and --

15 THE COURT: So just so that I am clear, the public  
16 interest is the public interest that's referred to in the  
17 statute under the declaration?

18 MR. TAGGART: Yes.

19 THE COURT: And the public trust doctrine is  
20 something separate that was adopted by our State through case  
21 law?

22 MR. TAGGART: Right.

23 THE COURT: Okay.

24 MR. TAGGART: And public interest is not public  
25 trust, public interest is one of the factors the State Engineer

1 has to consider when he approves an application. He has to  
2 look at whether it threatens to prove detrimental to the public  
3 interest.

4 And so arguments have been made that the decision  
5 that's made by the State Engineer when he approves an  
6 application that something that doesn't threaten to prove  
7 detriment to the public interest, that after he approves it, he  
8 can't go back --

9 THE COURT: And change it.

10 MR. TAGGART: -- and change that, right.

11 THE COURT: Because the objection and all that kind  
12 of stuff has to happen at the time when it is issued.

13 MR. TAGGART: Right. Now, what I call that is it's  
14 an argument that the public interest inquiry does not survive  
15 the approval of the application. You know, does it or doesn't  
16 it survive that approval, and I think it has to because the  
17 State Engineer doesn't know everything about what's going to  
18 happen when he grants a water right. And many times he grants  
19 a water right based upon a mitigation plan, a monitoring plan.  
20 And if those things -- if things turn out to be different than  
21 he thought when he granted the water right, then he has to have  
22 the ability to go back.

23 Now, the other part of how he approves the water  
24 application is whether it conflicts with another water right.  
25 So what happens if it does? What happens if he makes a finding



1 when he approves the water right that it won't conflict with  
2 anyone, but then it does?

3 THE COURT: But then wouldn't he go through the  
4 statutory process at that point to do that?

5 MR. TAGGART: Well, when he issues permits, he says  
6 in them subject to existing rights.

7 THE COURT: Right.

8 MR. TAGGART: And he has a statute that says all  
9 water rights are issued subject to existing rights.

10 THE COURT: Right.

11 MR. TAGGART: So on that one it's clear that it  
12 survives the approval of the water right.

13 And while I'm on that, I'm going to say I think of  
14 curtailment in two different ways. One is conflict  
15 curtailment, and one is priority curtailment. So conflict  
16 curtailment is if CSI's pumping impacts another groundwater  
17 right, the State Engineer can regulate CSI's pumping, or  
18 anyone, for that conflict. That's conflict curtailment. And  
19 that's I think what you said. There's a process for that.

20 THE COURT: Right.

21 MR. TAGGART: Priority curtailment is what we're  
22 dealing with here where if there's not enough water in the  
23 system for all the water rights, then you start to cut people  
24 off who are the most junior.

25 So whether the -- you know, whether the public

1 interest inquiry survives the approval, like the conflicts  
2 obviously does, is an open question. And I would hope, and I  
3 think of Justice Rose's concurrence in that case again, I would  
4 hope the State Engineer has the power to go back and fix a  
5 problem if he authorizes pumping that impacts a fish or  
6 something like that.

7 But in 534.120, sub 1, in a designated basin, he has  
8 the power to enter an order that's essential for the welfare of  
9 the area. And that is a lot like public interest. So in our  
10 view, that 534.120 authorizes orders that are essential for the  
11 welfare. So to the extent he can't take into account, you  
12 know, the ESA, he can take into account the needs of the fish  
13 because it's in the well -- it's essential to the welfare of  
14 the area. And I think that's what we want the conclusion to be  
15 because the State Engineer has to take the environment into  
16 account.

17 Now, so that's the point there. Oh, yes. So also I  
18 think it's clear when you read the State Engineer's decision  
19 that he did refer to the public interest. He did not try to  
20 enforce the Endangered Species Act. He pointed out that there  
21 was the potential for take. There was the potential for State  
22 liability. And he should take that into account. And the  
23 potential for liability is listed in all of those cases that we  
24 have cited, that Center for Biological Diversity has cited, and  
25 in particular, the *Strahan* case about -- let me make sure I get

1 this right. One of them had to do with lobster traps and  
2 whales.

3 But the point being that if the State Engineer  
4 authorizes a groundwater permit that ends up threatening an  
5 endangered species, he may have direct liability. He may have  
6 liability through proximate cause analysis.

7 THE COURT: Right.

8 MR. TAGGART: And --

9 THE COURT: Even though he's not the one -- is this  
10 the third party --

11 MR. TAGGART: Right.

12 THE COURT: Right. Where even though the third party  
13 is actually doing the harm, that because they issued out  
14 whatever the regulation, then they would be liable?

15 MR. TAGGART: Right.

16 THE COURT: Okay.

17 MR. TAGGART: So, yeah. So we have -- this is Slide  
18 Number 53. *Strahan* was the case about the whales in  
19 Massachusetts. Massachusetts issued licenses for lobster,  
20 gillnets.

21 There's the Hawaii case, and then there's also this  
22 case *Aransas Project vs. Shaw*, which was cited in the reply  
23 briefs. So what that case is important about is it's a  
24 question of proximate cause. And if it's too attenuated, the  
25 State's nexus, the State action in the nexus of that action to

1 the actual take, then if it's too attenuated, then it's not a  
2 proximate cause. There's intervening causes, as I'm  
3 remembering from law school and torts.

4 There's other -- if there's other reasons, he might  
5 not be liable.

6 So the question to ask is could the State Engineer --  
7 is pumping a direct enough effect on the water flow for fish to  
8 be considered a proximate cause, or are there a lot of other  
9 intervening factors? And in this particular case which did not  
10 find the State to be liable, there were many other intervening  
11 factors. I think it was a crane, and the State action was  
12 affecting the feeding area, the crane. They were having to go  
13 to other places, and so how the crane populations were  
14 decreasing, there were a lot more intervening causes about why  
15 that was happening.

16 So I think it was fair for the State Engineer to take  
17 this into account, the potential for liability, shouldn't stick  
18 his head in the sand when it comes to that, particularly when  
19 this case was out there.

20 So now I'm on Slide Number 9. So people talked about  
21 what's the process that you can -- that the State Engineer can  
22 take water away if he follows the process, if he administers  
23 and doesn't overrule. And so how is he going to do that here?  
24 534.110 talks through this process. 534.110(2)(b) says he can  
25 conduct pumping tests to determine if pumping is -- if

1 overpumping is indicated to determine the specific yield of  
2 aquifers and determine the permeability characteristics. He  
3 did that, Rule 1169. And then he -- I got all of the data from  
4 it and made findings based upon that data.

5 And then 534.110, Sub 6.

6 The State Engineer may limit withdrawals --  
7 that's curtailment -- where it appears that the  
8 average annual replenishment to the groundwater  
9 supply may not be adequate to the needs of all  
10 permittees and vested right claimants. This is  
11 pretty explicit.

12 All permittees or all the water right owners for  
13 groundwater, all vested right claimants would be the Muddy  
14 River decree right holders in this case, and the -- and the  
15 State Engineer looked at whether the annual replenishment  
16 perennial yield to the groundwater supply is enough for all of  
17 those permittees and vested right claimants, and he found it's  
18 not.

19 So it says "may," and so that's the next step. You  
20 know, without belaboring critical management area, I mean,  
21 that's a whole other level. There's one of them in Nevada. At  
22 Steinman Valley was talked about, but in that he has a 10-year  
23 clock on when he must curtail. This may becomes a must after  
24 10 years in a critical management area. So that's the  
25 procedure.

1           Okay. Now, the 8,000 acre-foot cap was called rough  
2 justice, and that the State Engineer backed into a number. I  
3 think it was clear that there was an evidentiary basis for the  
4 8,000. There's on Slide Number 15 again, the first question  
5 that should be asked is what data did he have, and this is a  
6 list of the data that he had to make a determination that the  
7 8,000 is the proper cap. That's on page 15.

8           So the first was actual data of measured declines and  
9 groundwater levels and springs. That's Slide 16. He had this  
10 actual data from 1169. The District, Water District installed  
11 a lot of those monitor wells and maintained the annual reports  
12 on those wells and still to this day submits those reports to  
13 the State Engineer.

14           The record on appeal includes monitoring reports for  
15 this area for back a couple decades. So that's -- I mean,  
16 those are reams of paper, you know, with lines and numbers that  
17 are the data of water levels in all of these wells. That data  
18 is far more reliable than estimates and the types of water  
19 budgets that were used back when reconnaissance reports were  
20 done.

21           This is the map we've talked about before, but it  
22 just shows where all of those monitor wells are located. So  
23 throughout all the basins, they cited monitor wells, and there  
24 was some discussion about 1169 wasn't well thought out. Well,  
25 my client worked really hard and spent a lot of money getting

1 the Order 1169 approved by the State Engineer. So after he  
2 ordered it, you'll find other orders in the State Engineer's  
3 office about how the pump test would be done, where the monitor  
4 wells need to be located, how often they needed to be measured,  
5 how often the measurements need to be reported to the State  
6 Engineer. All of that was thought out and completed before the  
7 pump test began.

8 THE COURT: And this is Slide 17?

9 MR. TAGGART: Yes. On slide -- and now on Slide 18,  
10 I talked about this before, about the uniform water levels  
11 throughout the area. That was kind of point Number 1.

12 Slide 19 is that same slide with all the panels of  
13 the hydrographs.

14 Slide 20, he also had measurement data showing less  
15 flow in the Muddy River. So he used that. This has been  
16 described earlier about what the flows are now at 30,000 and  
17 when predevelopment flows were 36 or 37.

18 An expert testified about the reasons for declining  
19 flows in the Muddy River. Many believed it was the Lower White  
20 River Flow System. I think nearly all, and that pumping --  
21 pumping can be at a one-to-one impact to the river depending on  
22 how close the pumping is to the river.

23 There was evidence put on like this slide here, this  
24 is Slide 21, and this was an estimate of how much water was  
25 taken out of the river by groundwater pumping.

1           This is slide Number 22. Slide Number 22, which is  
2 another graph from the expert report that demonstrated -- that  
3 showed how the decrease in river flow corresponded to pumping  
4 in the Lower White River Flow System. He had analysis of water  
5 level and spring flow changes, and he reviewed those  
6 hydrographs. He was able to look at preaquifer test  
7 measurements, during the aquifer test measurements and post  
8 aquifer test measurements.

9           There was a statement made that, you know, why did  
10 the pump test have to return back to the number that it was  
11 at -- to the level that it was at before the start of the pump  
12 test, that that was arbitrary. Well, no, that's actually  
13 scientifically what the State Engineer determined was  
14 appropriate. You want to check to see if recovery gets back to  
15 the pretest levels. So he had that information.

16           This one here I don't think you've heard about yet.  
17 A correlation between water level and spring flow. Slide  
18 Number 25. So this particular -- this is the correlation  
19 between water level and flow at the spring. So yesterday I  
20 showed you that there was this monitor well called EH4, and  
21 it's really close to the Warm Springs area where the fish are,  
22 and they compared the water levels at that area, groundwater  
23 level to how much water flowed out of the spring, and checked  
24 to see whether those two things are correlated. So if water  
25 level changes, does flow change.



1           And so they used statistical methods to understand  
2 that correlation, and they found strong evidence that the  
3 groundwater pumping -- well, they found a correlation.

4           So let me point -- that's what this on Slide 27 looks  
5 like. So this little graph on the side is a plot that  
6 correlates. It's a statistical method that correlates the flow  
7 data points to the water level data points. And the closer  
8 they're aligned, the more correlation there is.

9           And the State Engineer looked at this, and this is  
10 the strongest evidence that changes in water level affect flow  
11 in the spring. So then -- so that was at the -- really close  
12 to the spring. That's why that monitor well was put there,  
13 EH4. It was put right real close to the spring to measure  
14 that.

15           Then they looked at, well, what happens between  
16 groundwater pumping in Coyote Spring Valley and EH4, and they  
17 checked that correlation. And that's what this chart -- that's  
18 what this chart shows. This is Slide 29, and they found a  
19 correlation between -- well, hold on a second.

20           Yeah, what I said is correct. My slides are a little  
21 backwards.

22           So this particular side, Slide Number 29 shows the  
23 correlation between the monitor well and the Warm Springs West  
24 Gage.

25           Then on Slide 27, that's the correlation between --

1 THE COURT: Oh, that's Coyote Springs, okay.

2 MR. TAGGART: Yeah, between Coyote Springs and EH4.

3 So the State Engineer looked at this.

4 Now, you know, is .93, our squared .93, is that a --  
5 well, is that a close enough correlation. That's a judgment  
6 for the State Engineer, but he thought it was.

7 And so that's what -- what he had too.

8 Again, this little map that I have on Slide 28, it'll  
9 show you where Warm Springs West is, and there's EH4. So down  
10 on the bottom in the middle there is a little EH4. So that's  
11 how close they are.

12 So he had that.

13 So that's uncontroverted evidence that the  
14 groundwater levels are directly tied to spring flows, and  
15 that's what he said. The high correlations also confirm that  
16 the hydrologic head in the aquifer is the main driver of spring  
17 discharge for the Springs, changes in groundwater level  
18 resulting in changes in flow.

19 So it was reasonable for him to conclude that  
20 groundwater pumping affects the spring flow.

21 Then there's the lack of the recovery data. I  
22 covered that earlier. So I won't go into that again.

23 And then we get to how did he come up with 8,000, and  
24 so 8,000 is how much water is approximately being pumped now,  
25 and he compared that to how much the flow is in Warm Springs

1 West Gage, and it didn't come out of -- he didn't back into it.  
2 It's not rough justice. It's the number of current pumping and  
3 what current pumping is causing to the spring. And his  
4 determination was the spring can handle that much pumping, but  
5 nothing more, and it may be less. And so it's really tied  
6 directly to what the existing amount of pumping is and what  
7 the -- and what's happening at the spring as a result of that.

8           Then he set a condition on the 8,000.

9           So -- so he said -- and this has been pointed out by  
10 parties that he said that the data is of an insufficient  
11 duration to make a determination with absolute assurance. This  
12 is slide number -- Slide Number 33. He said that continued  
13 monitoring is necessary to determine if this trend continues or  
14 if water levels are continuing to decline slowly. He noted  
15 that climate and recharge efficiency may dictate lower pumping,  
16 and monitoring will be used to measure if additional impacts  
17 occur.

18           So on this Slide 34, I say -- or I indicate that  
19 everyone -- I think it's pretty clear that 40,000 is too much.  
20 So he knew that. He knew 14 and a half thousand is too much  
21 because that's what was done during the pump test and led to  
22 significant declines.

23           So given that had to be less than 14 a half, then he  
24 had what existing pumping is and what it was causing. So he  
25 used that. That's reasonable.

1 By the key for my client is this commitment to  
2 continue to monitor and to -- and to reduce that if the Warm  
3 Springs West Gage continues to decline.

4 I think you're aware by now that we wanted a lower  
5 cap, but we're willing to accept the 8,000 acre-foot cap with  
6 that conditional lowering dependent upon additional evidence.

7 So on that we trust the State Engineer to monitor and  
8 take action if the flow continues to decline.

9 Okay. Just a reminder though that we don't think  
10 that that amount -- just because we accept that the 8,000 is a  
11 proper cap to stop the declines, that doesn't mean that we're  
12 conceding to conflicts. We already covered that, but that  
13 argument was made in the State Engineer's brief that -- or  
14 that's how we interpreted it. So there you have it.

15 The dace, that's already been talked about quite a  
16 bit. So I'm going to kind of skip over those slides.

17 Yeah. We -- just to quickly summarize in this Slide  
18 Number 39, small little areas of water coming up out of the  
19 ground. They accumulate into bigger channels. Those channels  
20 meet into each other. So that's what Pederson, Abcar  
21 (phonetic), Jones, that's what those are, plumber. They all  
22 come together to an eventual Gage, but they're really  
23 sensitive. They're high elevation. There's not a lot of flow.  
24 That's where the fish are, and, you know, small changes can be  
25 really significant.

1           So the State Engineer relied -- I went on earlier  
2 about why he could look at the dace, why he could take that  
3 into account. Our view is he has a couple of different  
4 reasons. We think the public interest concern survives the  
5 approval of an application. We think that 534.120 says  
6 essential -- he can enter rules that are essential for the  
7 welfare. That includes the fish. We think the public trust  
8 doctrine says that he has to consider environmental issues that  
9 are related to water development. So for all those reasons, it  
10 was proper for him to consider it. So now did he consider it  
11 properly?

12           He heard, you know, what evidence did he have?  
13 Again, that's where we start. He had the MOA among the  
14 parties. We've already talked about that. He had the  
15 biological opinion about the MOA. He had modeling that was  
16 done during that biological opinion. He had expert opinion at  
17 the hearing, and he had the test recovery data. So you already  
18 heard about the memorandum of agreement, that experts got  
19 together and determined what the proper triggers were to  
20 protect the fish, and they set those into the MOA.

21           Biological opinion was done to see whether or not  
22 those triggers were correct, whether the Fish and Wildlife  
23 Service would agree with that.

24           When the Fish and Wildlife Service did the biological  
25 opinion, it -- it ran an eco-hydrologic model, and that model

1 looked at the change in habitat as a result of change in flow.  
2 And it came up with quantitative conclusions about the  
3 percentage in linear footage of habitat that would be affected  
4 by changes in flow. So that's serious detailed evidence, and  
5 it was -- I think it was covered well before.

6 Two witnesses testified on behalf of the Southern  
7 Nevada Water Authority. One was Bob Williams, who was the  
8 former State Director of the Fish and Wildlife Service. That's  
9 on Slide 45.

10 Mr. Williams had been part of the MOA discussion. He  
11 talked about the needs of the fish and the point -- and the  
12 3.2.

13 Zane Marshall, who is a -- who is an expert in  
14 biology and has been studying fish in that area for decades, he  
15 testified regarding the flow rate of 3.2 and the critical  
16 nature of that flow rate to the fish. So that's Slide 46.

17 And then there was testimony from experts in the Fish  
18 and Wildlife Service. It's important to point out that the  
19 witnesses who testified for the Fish and Wildlife Service were  
20 biologists. They were not compliance employees. So there's  
21 been a lot said that, oh, well, these guys didn't say it was a  
22 take. Well, these guys wouldn't say it's a take. That's not  
23 what they do. They're in a whole different shop inside Fish  
24 and Wildlife Service about compliance and who enforce the  
25 endangered species act.

1           These individuals are more in charge of kind of  
2 managing populations and making sure that existing populations  
3 are properly -- the habitats are properly maintained and so  
4 forth.

5           Then -- then the State Engineer had the post aquifer  
6 recovery data that I talked about before.

7           So we think that the 8,000 acre-foot cap is also  
8 supported by the needs for the dace independent of the ESA  
9 completely, but then you can add to that the ESA.

10           And so I talked about that a bit already. State  
11 agencies -- so this is Slide Number 51. State agencies can be  
12 liable under the ESA. Groundwater pumpers can be liable under  
13 the ESA. We already know that.

14           *Cappaert* was specific to groundwater pumping in  
15 Nevada. The U.S. Supreme Court said you can't impact a fish  
16 like the desert -- the Devils Hole pupfish in that particular  
17 case. So these are the cases I flipped up to earlier about  
18 proximate cause. So that's Slide Number 55 -- 53 and 54, and  
19 then I want to talk about on Slide 55. Again, our point is  
20 that the State Engineer could consider the potential liability  
21 under the ESA. He didn't make a finding of take, and he should  
22 consider the potential liability under a federal statute like  
23 that.

24           The -- anyway, I've got a case I would tell you  
25 about, but I didn't cite to it. So I'm going to -- I'll keep

1 it there.

2           So then when we got *Cappaert*, and I know this has  
3 been talked about a little bit, but Devils Hole is a fish  
4 there. It's a waterhole that is warm, and the fish is  
5 endangered. And the State Engineer authorized groundwater  
6 pumping near that hole that had an effect on the level of that  
7 hole.

8           The State Engineer got enjoined by the Court, by the  
9 federal courts to prevent grave danger to the Devils Hole  
10 pupfish that could be destroyed. So that was conjunctive  
11 management. That was controlling groundwater to protect  
12 surface water, and so that the State Engineer doesn't take the  
13 fish into account, he's doing it at his own peril.

14           And also, interestingly in *Cappaert*, so this is on  
15 Slide 57, the Supreme Court, Justice Burger (phonetic) speaking  
16 said that Nevada itself may recognize the potential  
17 interrelationship between surface and groundwater. That was in  
18 1976. And then they recognize that groundwater and surface  
19 water are physically interrelated as integrated parts of the  
20 hydrologic system.

21           During Order 1303, the State Engineer heard testimony  
22 from a former Deputy State Engineer, Rick Felling, who was  
23 testifying on behalf of Nevada Energy. He said that -- so I'll  
24 slow down because I think this is more -- this is important.  
25 He says,



1 I think it's very important to honor the  
2 3.2 CFS trigger at Warm Springs West, and it's  
3 very much like the Devils Hole issue. Water  
4 levels in Devils Hole dropped. The habitat at  
5 Devils Hole pupfish were imperiled, and a  
6 Federal District Court Judge decided how much  
7 water needs to be in Devils Hole. We could very  
8 easily have the same situation in the Muddy  
9 River Springs area if flows in the Muddy River  
10 Springs dropped and imperil the dace, and then  
11 we would have a Federal District Judge managing  
12 water in Nevada and not the State, and I think  
13 it's for the benefit of all the users that the  
14 State continue to manage these water resources  
15 and not a Federal Court Judge.

16 So that's pretty serious. If that fish, if that 3.2  
17 gets breached and that -- and there starts to be habitat  
18 problems, and the Fish and Wildlife Service decides that  
19 they're going to use the ESA as a hammer, then all bets are off  
20 on where all of this goes.

21 And so that was what Mr. Felling was warning the  
22 State Engineer about at the hearing.

23 Okay. Let me just see if I have anything else to  
24 say, Your Honor.

25 THE COURT: Okay.

1 MR. TAGGART: So in summary, we think that Ruling  
2 1309 should be upheld, subject to the conflicts determination,  
3 and we think that because the State Engineer has to have the  
4 ability to upgrade and update the management system in Nevada  
5 based upon new evidence.

6 A lot of the concerns that have been raised here are  
7 valid, but are not right. There'll be things that are decided  
8 later, the who of who gets curtailed is not at issue for now.  
9 What's at issue now are the factual determinations that were  
10 made. I think it's clear that the State Engineer was correct,  
11 that there's a common source of water in all of these areas and  
12 that there is not enough water for all the permits in the  
13 decreed water in the river system.

14 So those two findings have to be upheld, and then we  
15 will move on to the next phase to answer some of those more  
16 difficult questions.

17 But at this stage, we think that the evidence is  
18 clearly substantial, and he certainly had authority to do what  
19 he did in 1309. Thank you.

20 THE COURT: All right. Thank you.

21 All right. So I think now would be a good time to  
22 take a break.

23 What is -- is 12 minutes enough? So we're back at  
24 10:30.

25 All right. Let's do that.

1 (Proceedings recessed at 10:18 a.m., until 10:30 a.m.)

2 THE COURT: Whenever you're ready.

3 MR. ROBISON: Ready, Your Honor.

4 On behalf of Coyote Springs, Kent Robison.

5 I just wanted to point out that our brief and  
6 intervention covered several topics, statutory authority, but  
7 more importantly, with respect to where we are right now in  
8 these proceedings with the Southern Nevada Water Authority  
9 saying 1309 is void in part for our interest and not void, and  
10 it is valid to jeopardize other petitioners, particularly  
11 Coyote Springs.

12 But what we want to talk about right now, Your Honor,  
13 with respect to intervention is the Endangered Species Act and  
14 the Muddy River Decree.

15 Mr. Dotson talked about the law of primacy and the  
16 law of recency yesterday. I submit to you, Your Honor, the law  
17 of logic and reason trumps that, and even a greater force is my  
18 partner who is a very involved in this case and wrote the  
19 briefs and is pregnant with knowledge and otherwise.

20 THE COURT: Pun intended.

21 MS. WINSTON: Hello, Your Honor.

22 THE COURT: Hello.

23 MS. WINSTON: Hannah Winston on behalf of Coyote  
24 Springs. Sorry, I was so busy snacking that I didn't set up my  
25 papers here.

**ARGUMENT FOR COYOTE SPRINGS**

1  
2 MS. WINSTON: As Mr. Robison just noted, there's  
3 three primary topics that I want to address today. The first  
4 are some of the arguments raised about the Endangered Species  
5 Act. The second is some of the arguments related to the Muddy  
6 River Decree, and the third are the issues raised by SNWA  
7 through Mr. Taggart this morning.

8 Beginning with the ESA, there are three important  
9 points. The first is the Center for Biological Diversity  
10 argues in their brief that no pumping can occur in the Lower  
11 White River Flow System. There is nothing in the record to  
12 support that, and one of the reasons that the -- I'll call them  
13 CBD -- that CBD makes that argument is that there could be some  
14 sort of liability under the ESA from any pumping in these  
15 basins.

16 The ROA does not support that argument. Mr. Taggart  
17 pointed out that the Fish and Wildlife experts who testified at  
18 the 1303 hearing were not compliance experts. They were  
19 biologists. And the center for CBD argues that those experts  
20 confirmed that any company in the Lower White River Flow System  
21 could harm the dace, and that simply isn't true.

22 Those experts, Sue Braumiller, Dr. Michael Schwemm  
23 testified that pumping and the rehabilitation of the dace can  
24 coexist. The Fish and Wildlife Service actually articulated  
25 that over 9,000 acre-feet was a sustainable amount to be pumped

1 throughout all of these basins. So that first issue that no  
2 pumping can occur is just not supported at all by the record,  
3 and certainly not by the Endangered Species Act.

4 Second, if CBD, if the State Engineer, if any water  
5 rights user is concerned about liability under the ESA, there  
6 are specific steps that those individuals or entities can take  
7 to avoid that liability, and that's exactly what CSI did by  
8 entering the 2006 MOA.

9 It's important to note that in the MOA there is a  
10 triggering point for flow, and the Fish and Wildlife Service  
11 has approved that number. So for the State Engineer or for the  
12 Center of Biological Diversity to say that there's this  
13 potential liability and that that decrease, that trigger rate  
14 isn't sufficient to avoid liability is quite disingenuous given  
15 that Fish and Wildlife Service has approved that amount in the  
16 MOA.

17 THE COURT: So let me just ask. So, you know, as far  
18 as the MOA, that really just has to do with those entities that  
19 are within that MOA; correct?

20 MS. WINSTON: That is correct, Your Honor.

21 THE COURT: Okay. So if we are presupposing, you  
22 know, if the State Engineer has the ability to delineate a  
23 larger area as a basin, then that MOA really only applies to  
24 that portion of that basin that those entities have entered  
25 into. It doesn't actually account for any of the other

1 entities that are pumping within that larger system; is that  
2 correct?

3 MS. WINSTON: Well, I think your question raises two  
4 important points. To briefly answer --

5 THE COURT: Sure.

6 MS. WINSTON: Short answer would be yes.

7 THE COURT: Okay.

8 MS. WINSTON: Long answer is it's complicated.

9 THE COURT: It depends; right?

10 MS. WINSTON: It depends.

11 THE COURT: I'm a lawyer.

12 MS. WINSTON: It depends. So your question raises  
13 two important points. The first is that yes, only certain  
14 parties are -- or petitioners are parties to the 2006 MOA;  
15 however, to get to that MOA there was a lot of research done  
16 and a lot of work with Fish and Wildlife Service. And it's not  
17 necessarily that it's a precedent, but if the Fish and Wildlife  
18 Service approves, which is a federal agency, approve certain  
19 triggering points or, you know, pumping or things like that,  
20 then that can certainly be viewed for that entire area of  
21 pumping.

22 The second issue is, of course we only looked at  
23 pumping in a certain basin because that's how basins have  
24 always been managed.

25 So I think your question does raise an important

1 point because we've relied on this basin by basin management  
2 approach in many different areas that are related to this case,  
3 one of which being the 2006 MOA.

4 In 1309 the State Engineer makes these kind of vague  
5 references to the Endangered Species Act, and I won't harp on  
6 him too much that he references provisions that don't apply to  
7 State agencies, but what's really telling about his references  
8 are that he uses the ESA to sort of have this scare factor.  
9 We're going to be liable under the ESA. Of course, that's a  
10 possibility if there was actual evidence and if a taking was  
11 occurring. We don't have that here.

12 What the State Engineer ignores is that there's  
13 50,000 acre-feet annually that flows into Coyote Springs Basin.

14 And, Mark, I'll ask if you can pull up Order 1169,  
15 page 6.

16 MR. ROBISON: CSI 53 and 54.

17 THE COURT: Slides, okay. Is this from a previous  
18 slide presentation, or is this the new one that --

19 MR. ROBISON: These additional slides to CSI 1.

20 THE COURT: Okay. So and then you'll get us a copy  
21 of that?

22 MR. ROBISON: Absolutely.

23 THE COURT: Okay. Great. Thank you.

24 MS. WINSTON: And this is just Order 1169, Your  
25 Honor.

1           So here the State Engineer is recognizing all of the  
2 inflows and outflows that are related to these basins. We know  
3 that 50,000 acre-feet annually comes into Coyote Springs Valley  
4 Basin. 53,000 flows out, okay. So there's that three -- and  
5 these are approximate numbers. There is about 3- to 5,000 of  
6 recharge from the Sheep Mountain Range.

7           37,000 acre-feet annually flow to the Muddy River  
8 Springs area, but 16- to 17,000 bypasses the Muddy River  
9 Springs area, and that is what the State Engineer recognized in  
10 1169.

11           Now, in Order 1309, the State Engineer says all  
12 pumping throughout the entire Lower White River Flow System  
13 could equally affect the dace. And therefore we need to limit  
14 pumping to avoid liability under the ESA. So it really  
15 addresses the fact that obviously the pump test did not account  
16 for this amount that bypasses the Muddy River Springs area.

17           So the pump test provided an incomplete picture. The  
18 State Engineer's reliance on an incomplete picture and reliance  
19 on the endangered species act really just demonstrate how  
20 arbitrary that 8,000 acre-feet cap is.

21           The Muddy River Decree is the next issue I'm going to  
22 address. The main issue that we have with the discussion of  
23 the Muddy River Decree is that SNWA, and even the State  
24 Engineer attempt to quantify a volume of water that is  
25 appropriated under the Muddy River Decree, and I'm not a



1 hydrologist, but I have practiced this.

2           So the Muddy River Decree assigns a rate or duty of  
3 water to those water users. So a farmer in the upper north  
4 area of the stream might have the right to divert a certain  
5 cubic feet per second of water.

6           What SNWA tries to do is add up all of those assigned  
7 duties or rates and say that that's the volume that's allocated  
8 under the decree. And it gets confusing because when we think  
9 of volume, we're thinking of acre-feet annually. How much  
10 volume of water does Coyote Springs get to pump? We look at  
11 acre-feet annually.

12           The Muddy River Decree doesn't have a volume because  
13 when water is diverted for irrigation on a farm, for example,  
14 not all of that water is going to be used by that farmer.  
15 Diversion rates, which is what the decree uses, can account for  
16 losses and additions to the groundwater table.

17           So to illustrate, if we have that farmer that I  
18 referenced who gets 3.2 cubic feet per second of water to  
19 divert, and the farmer diverts water to his crops, some of that  
20 water is going to be lost due to evaporation. Some of it isn't  
21 going to be used. There's just too much water for what those  
22 crops need. That water is going to go back into the  
23 groundwater table and continue to flow. Then a farm lower or  
24 at a more southern point in the river can capture that water  
25 and divert that water.

1           So when SNWA discusses the water that's allocated or  
2 decreed in terms of volume, it's really inaccurate because that  
3 water that returns to the groundwater table would be counted  
4 twice. So I think that's just an important distinction to  
5 make, that, you know, we can't look at it in terms of a volume  
6 of water, and I think that this Court recognized that early on.  
7 In Mr. Taggart's opening, you asked him, you know, cubic feet  
8 per second is different than volume of water. And I think  
9 that's a very important distinction.

10           During Mr. Taggart's argument this morning, I was  
11 very struck by his comment that we don't need to be parsing out  
12 specific words of statutes. That is what we do. We are  
13 lawyers. I remember in law school my favorite professor told  
14 me he won a \$15 million judgment based on a missing T. The  
15 word was either thereof or hereof, and he won it because there  
16 was no T in front of hereof. We parse out words. We don't get  
17 to say, yeah, there's words in a statute, but the legislature  
18 clearly intended that the State Engineer have the authority to  
19 do this. That's not how statutory interpretation works.

20           I think it's very telling that the State Engineer and  
21 SNWA do not actually want to conduct a statutory interpretation  
22 analysis. Because when you do and when you combine that with  
23 the past practices of the State Engineer and the Nevada Supreme  
24 Court, you find that there is no authority to combine basins.

25           The first place I want to start is NRS 534.030.

1 Mr. Taggart argued this morning that that statute really is  
2 inapplicable. And the truth is Order 1169 doesn't reference  
3 NRS 534.030. I'm going to come back to that.

4 What's important about NRS 534.030 is that it  
5 provides the process, the procedural steps to designate a  
6 basin. And we've gone through the different meanings of  
7 designate and delineate, right.

8 MR. TAGGART: Your Honor, can I just, with all due  
9 respect, is this an answering argument, or is this -- I mean,  
10 she's attacking our positions, not defending the State Engineer  
11 right now. She's --

12 MS. WINSTON: It was my --

13 THE COURT: No. No. But it's -- they are allowed to  
14 in their answering also. Because in their answering brief they  
15 also -- so it would be supporting the State Engineer or, I  
16 don't know how to say this in a nice way, taking pot shots at  
17 everyone else's -- everyone else's openings.

18 MR. TAGGART: But she's talking about joint  
19 management. She's talking about all -- I mean, we support the  
20 State Engineer on that, and now she's challenging what we said  
21 about whether he properly did joint management or not, that  
22 they can reply. They raised that in their opening brief. They  
23 challenge the State Engineer in their opening brief. I  
24 would -- I guess I expected that anybody with the  
25 (indiscernible) argument Muddy River Decree and our position

1 with respect to the Muddy River Decree, because that's what we  
2 raised in our opening brief, and that's what they'd be  
3 answering when it comes to me and my client.

4 THE COURT: So for my -- okay.

5 MR. TAGGART: I mean, I guess I don't mind, but --

6 THE COURT: No, no. But so does --

7 MR. TAGGART: Because they only have four hours.

8 THE COURT: Let me just qualify. So from my  
9 recollection of your answering brief, the majority of the  
10 answering brief had to do with the way that SNWA was  
11 quantifying their water.

12 So if you are talking about the process to -- I don't  
13 remember if that was in the actual answering brief.

14 MS. WINSTON: We did join in the statutory authority  
15 arguments of some of the other petitioners. My understanding  
16 of our time this morning was to address other arguments raised  
17 by other --

18 THE COURT: The opening briefs. Yes.

19 MR. TAGGART: -- intervenors or opening briefs,  
20 especially to give Mr. Taggart that chance to rebut --

21 THE COURT: The opportunity in the reply, yes.

22 MS. WINSTON: -- in his reply.

23 THE COURT: Yes. Yes. That is correct.

24 So that way you will be able to reply to their  
25 criticisms of your -- of the arguments that you brought up in

1 your opening brief. That's what we talked about yesterday.

2 MR. TAGGART: Okay. All right.

3 THE COURT: Okay. Thank you.

4 MS. WINSTON: Thank you, Your Honor.

5 So let's get back to where we were.

6 534.030 provides the process to designate basins or  
7 areas, and I know that there's been discussion about the words  
8 delineate versus designate. And designate is really to -- it  
9 begins with 534.030. That's the process. To look at basins  
10 that do not have adequate perennial yield to meet the needs of  
11 all the permitted water rights users. And what's important  
12 about that statute here is that that is not how 1169 began.

13 And if we'll go to page or just lower on this page,  
14 please. Oh, sorry, page 6 of 1169. That's the ROA 664. The  
15 State Engineer references the statutory authority to conduct  
16 the pump test, the statutory authority to enter 1169, and we  
17 see in Nevada Revised Statute 533.368. So that is where the  
18 pump test began. That is the statute that authorized 1169. It  
19 was not 534.030, which provides the process for designating a  
20 basin for additional or further management.

21 So 534.030 is relevant in the sense that that is not  
22 why we are here today, which I think has been a bit muddied by  
23 the conversation about these areas.

24 What I think is most important is to go to pretty  
25 much any opinion by Justice Pickering. She loves statutory

1 interpretation. We start with the plain language of the  
2 statute. The State Engineer in the answering brief, SNWA, they  
3 really muddied the waters, no pun intended, about what a basin  
4 is, and today Mr. Taggart pulled up a clip from the Water Words  
5 Dictionary.

6 MR. BOLOTIN: Your Honor, respectfully, I think any  
7 reference to the State Engineer's answering brief is definitely  
8 in the reply, Your Honor.

9 THE COURT: Would be in the reply. I would agree.

10 MS. WINSTON: I just -- okay.

11 UNIDENTIFIED SPEAKER: Yeah, I --

12 MR. TAGGART: Your Honor, I don't understand this.  
13 Because I would expect that if they want to address my Muddy  
14 River arguments, then that's what I need to hear now so that  
15 when I come back and reply -- when I come back and reply, all  
16 I'm going to be able to talk about is the Muddy River -- my  
17 Muddy River arguments.

18 THE COURT: The Muddy River arguments.

19 MR. TAGGART: So I just don't understand what we're  
20 doing here. I mean, I guess it doesn't really matter. I mean,  
21 they only have so much time, but it's just odd that we're --  
22 are they going to get up and again and reply and make the same  
23 arguments?

24 THE COURT: No.

25 So I would ask that you stick to what you briefed in

1 the answering brief.

2 MS. WINSTON: Okay, Your Honor. Well, then --

3 MR. ROBISON: Excuse me. You mean the brief in  
4 intervention or the answering brief?

5 THE COURT: The -- I believe it was the answering  
6 brief.

7 MR. ROBISON: Okay. Thank you, Your Honor.

8 MS. WINSTON: Well, okay. So now, sorry. I'm a  
9 little confused. So I should not be addressing anything that  
10 Mr. Taggart --

11 THE COURT: Hold on. Let me just -- let me just  
12 think about this.

13 MS. WINSTON: Okay.

14 THE COURT: So when we were talking yesterday, it was  
15 that the -- I wanted to make sure that all of the entities had  
16 an opportunity to basically have their last word on whatever  
17 else was being criticized by the other entities. So this would  
18 be that opportunity.

19 MS. WINSTON: Well, and that's what -- yesterday  
20 Mr. Taggart said if I hear my name, I want to be able to stand  
21 up and reply to that.

22 THE COURT: Sure. So and I think --

23 MS. WINSTON: So that's why we --

24 MR. TAGGART: Well, wait. I mean, come on. I mean,  
25 this is just twisted. I mean, it's appellate argument. It's

1 not complicated. We raised an issue in our opening brief.  
2 They get to address it in their answering brief. I get to  
3 address it in my reply.

4 THE COURT: Right.

5 MR. TAGGART: The only issue is the Muddy River that  
6 I raised in my opening brief. That's all I raised. I  
7 didn't -- and the State Engineer didn't file an opening brief.  
8 So they couldn't have answered the State Engineer.

9 THE COURT: So, yeah. So anything that has to do  
10 with the State Engineer would have -- would be something that  
11 you would address in the reply.

12 MS. WINSTON: Okay.

13 THE COURT: And truthfully, you know, I have to tell  
14 you I have read so many briefs that I can't even recall who  
15 said what in which brief. But I would -- I would ask that you  
16 limit your argument at this point to any criticisms that you  
17 had regarding -- because this also is the brief in  
18 intervention. So any arguments that you made in that second  
19 portion of your pleadings, which would be whatever you filed  
20 during that time. So I don't know if you need to clarify.

21 MR. ROBISON: We filed opening briefs, and in  
22 November the State filed and the intervenors filed.

23 THE COURT: Yes.

24 MR. ROBISON: We filed intervention briefs.

25 THE COURT: Right.



1 MR. ROBISON: Because we intervened in each other's  
2 cases.

3 THE COURT: Correct.

4 MR. ROBISON: And in addition briefed to the issues  
5 for our brief in intervention.

6 THE COURT: Right.

7 MR. ROBISON: Which is Muddy River, ESA, the  
8 statutory authority, due process, prior appropriation. Then we  
9 all filed our reply briefs on January 11th replying to each  
10 other's arguments.

11 THE COURT: So is your brief in intervention the same  
12 as the answering brief?

13 MR. ROBISON: No. It's separate. It covers some  
14 topics.

15 MS. WINSTON: Ours is the same. We didn't call it an  
16 answering brief. We just called it a brief in intervention.

17 THE COURT: Okay. Just let me just look. Let me be  
18 precise.

19 MR. TAGGART: Well, and in that brief they basically  
20 reargued what they already argued in their opening brief in  
21 some regard. We didn't make a big deal out of it, but, again,  
22 you know, I don't think it's that complicated. The issues that  
23 were raised by people in opening briefs get to be responded to,  
24 and nobody --

25 THE COURT: Okay. Let me find it.

1 MR. DOTSON: Yeah, I don't want to disturb you, Your  
2 Honor, but I thought about this last night. I actually might  
3 be able to help.

4 THE COURT: Okay. Go ahead.

5 MR. DOTSON: Can I?

6 THE COURT: I always welcome --

7 MR. DOTSON: All right. This is Rob Dotson on behalf  
8 of Muddy Valley Irrigation Company.

9 And you'll recall yesterday afternoon -- and I'm  
10 getting old, and so I'm not as sharp in the afternoon -- we  
11 were talking about getting your last shot at somebody.

12 THE COURT: Right.

13 MR. DOTSON: And I think I said something, well, I  
14 think I had nine slides, but I might have to add something.  
15 And then when I actually went to do it, Your Honor, what I  
16 recognize is anything I would say in response to anyone's  
17 opening argument has to be in defense of the State Engineer  
18 because I'm opposing their criticism of the order that I  
19 actually agreed to; right? And so what I figured out in the  
20 end was, well, actually what I said was wrong yesterday.  
21 Because anything -- technically wrong -- because anything I'm  
22 saying today that I've added, and I really didn't add much, is  
23 really in defense of the order.

24 THE COURT: Oh. Well, I mean --

25 MR. DOTSON: Do you see what I'm saying?

1 THE COURT: I do. And I guess, you know, if I --

2 MR. DOTSON: And so it just might help us.

3 THE COURT: So, I mean, I will tell you that in  
4 looking at Vidler and Coyote Springs brief and intervention,  
5 which in our Odyssey is titled answering brief; that's why I  
6 was a little bit confused, a majority of those arguments had to  
7 do with the quantification of the water that SNWA and Moapa  
8 Valley Irrigation Company and how the Moapa Valley Decree. I  
9 mean, to simplify --

10 UNIDENTIFIED SPEAKER: Muddy.

11 THE COURT: Muddy Valley Decree.

12 -- to simplify it is basically -- what they're saying  
13 it says isn't really what it says. It isn't like a full  
14 appropriation because of X, Y, and Z. So I would ask that, you  
15 know, in fairness to all the parties, you know, they are  
16 expecting that you would be arguing what's contained in that  
17 brief in intervention or the answering brief. So I would ask  
18 that you limit your arguments to that.

19 MS. WINSTON: Okay.

20 THE COURT: And then anything else would be in the  
21 reply.

22 MS. WINSTON: Okay.

23 THE COURT: Is that clear?

24 MS. WINSTON: Yes, Your Honor.

25 MR. BOLOTIN: And, Your Honor, the State Engineer is

1 the same, that they don't -- as a petitioner, they get the last  
2 shot at their petition. We're not saying that that's not the  
3 case, but --

4 THE COURT: No. No. But they do that in the reply.

5 MR. BOLOTIN: Yeah. We filed our answering brief the  
6 same time the same they filed their answering brief. It  
7 doesn't make sense to respond to our answering brief in the  
8 answering brief.

9 THE COURT: I agree with you on that.

10 MS. WINSTON: I totally understand, Your Honor. I  
11 honestly was trying to avoid the situation where I saved  
12 everything about Mr. Taggart's argument this morning for reply,  
13 and then he says I don't get a chance to rebut that now. So I  
14 just --

15 THE COURT: Well, you get a chance to rebut it in the  
16 reply.

17 MS. WINSTON: I meant that he doesn't get the chance.  
18 That's all.

19 MR. TAGGART: But the last chance I got to raise all  
20 that stuff I talked about today was today. And, I mean, to be  
21 clear, I think Mr.-- so he raised an issue in his opening brief  
22 that the number is too high, 8,000. Rob Dotson raised an issue  
23 that the number is too high. I have raised the issue. Those  
24 are the issues that were raised in the opening briefs that are  
25 beyond just defending the State Engineer that he chomps it.

1 And they are. And they are. And that's what they should.

2 But on the other stuff, yeah, I won't get another  
3 time to argue about what I said this morning.

4 MR. ROBISON: He just spent an hour 40. He could  
5 have saved some time for reply.

6 MR. TAGGART: Yeah, but I don't need it. That's the  
7 point.

8 THE COURT: Well, what he's saying is, he doesn't  
9 really need it because in the answering or in briefs and  
10 intervention, what was really covered was more about the claim  
11 issue. It was really more about, you know, and Lincoln Vidler  
12 had their own calculation of how it should be calculated, and  
13 Coyote Springs had their own calculation of how it should be  
14 calculated. You know, that issue, and I think that's what he's  
15 relying upon when he made his arguments. So and that's what  
16 was contained in the briefs. So that's what I would ask that  
17 you would limit your argument to.

18 MS. WINSTON: Okay. Well, then I think I'm finished.  
19 I'll pass the torch to Mr. Robison, and I'll see you in the --

20 THE COURT: In the reply.

21 MS. WINSTON: Yes.

22 THE COURT: That sounds good.

23 MS. WINSTON: Thank you, Your Honor.

24 MR. ROBISON: Your Honor, I don't have -- I think I  
25 just heard a order granting in limine argument. We are stuck

1 with the Muddy River Decree and the Endangered Species Act.

2 THE COURT: For this portion.

3 MR. ROBISON: Correct. We mentioned, you know,  
4 statutory authority. We mentioned prior appropriation. Is it  
5 your request that we reserve that for our reply?

6 THE COURT: Yes, please.

7 MR. ROBISON: Thank you, Your Honor.

8 THE COURT: Okay. So is that the sum of Coyote  
9 Springs -- so you're not going to talk about the appropriation  
10 calculation or any of that kind of stuff?

11 MR. ROBISON: Well, that's part of the prior  
12 appropriation. Yes, I'd be happy to argue that right now.

13 THE COURT: Okay. Wait. So let me -- okay. So let  
14 me -- maybe I'm clear as mud. But so in your brief in  
15 intervention, you had criticisms regarding the way that I think  
16 both Southern Nevada Water Authority and Moapa Valley -- Muddy  
17 Valley. Sorry.

18 MR. ROBISON: Too many valleys.

19 THE COURT: Yeah, there is. Muddy Valley had  
20 interpreted the Muddy Valley Decree.

21 MR. ROBISON: Correct.

22 THE COURT: As far as what rights they were entitled  
23 to?

24 MR. ROBISON: Right.

25 THE COURT: And also the way they came with their

1 calculation as far as the volume of water that they were  
2 entitled to that your colleague just talked a little bit about.

3 MR. ROBISON: Right.

4 THE COURT: Is there other argument regarding those  
5 issues that you would like to further expound upon?

6 MR. ROBISON: Just very briefly.

7 THE COURT: Okay.

8 **ARGUMENT FOR COYOTE SPRINGS**

9 MR. ROBISON: And I would like to show CSI Number  
10 2, please.

11 Your Honor, the 1169 analysis talks about the  
12 estimated charge, recharge discharge. And as Ms. Winston  
13 indicated, the quantity of water that bypasses Warm Springs is  
14 around 17,000 acre-feet per year. Not affecting the dace one  
15 way or the other but available for groundwater pumping.

16 The pumping of the water that bypasses Warm Springs,  
17 that's right by Coyote Springs. That does not affect the dace.  
18 But the science is that there's additional water coming off of  
19 the sheep range, and that's in the evidence by our expert and  
20 that the fault, we call the highway fault, that water that  
21 comes off the sheep range goes south. So there's additional  
22 water to be used that has no effect whatsoever on the Moapa  
23 dace. And there's no test that substantiates that the pumping  
24 from the water that flows to the southern border of the Coyote  
25 Springs Valley will in any way affect the habitat of the dace,

1 and we think that that analysis then is skewed to blend those  
2 things even though 1169 says they are distinctly different, and  
3 that's what I have to add to that argument, Your Honor.

4 THE COURT: Okay. Thank you. All right.

5 So next I think is --

6 UNIDENTIFIED SPEAKER: Apex I think is up next.

7 THE COURT: Is it Apex?

8 UNIDENTIFIED SPEAKER: Yeah, I think so.

9 MR. BALDUCCI: Your Honor, on behalf of Apex and Dry  
10 Lake, we have nothing to add during this portion of the  
11 proceeding although we will reserve all of our time, although I  
12 don't anticipate needing every second of it, for the reply  
13 portion of argument.

14 THE COURT: Okay. Thank you. Let's see. So let me  
15 just get my list.

16 MR. ROBISON: Center.

17 THE COURT: Center for Biological Diversity?

18 MR. LAKE: Yes, Your Honor. We have an answering  
19 presentation.

20 THE COURT: Okay. Do you need a minute to set up?

21 MR. LAKE: I don't. I don't have a presentation for  
22 this.

23 THE COURT: Okay.

24 MR. LAKE: So we're just going to keep it simple this  
25 time.



1                   **ARGUMENT FOR CENTER FOR BIOLOGICAL DIVERSITY**

2           MR. LAKE: And like Mr. Morrison, I was sitting over  
3 there crossing things off as the other parties are talking.

4           I intended to talk about three things today. One is  
5 the Endangered Species Act. The other one was Kane Springs  
6 Valley, and finally the State Engineer statutory authority.

7           I think we've covered the latter two ad nauseam at  
8 this point. I'm happy to talk about them. We briefed them.

9           THE COURT: If you want to highlight, certainly I  
10 don't want to preclude you, but if you feel like it's been  
11 adequately covered by Mr. Taggart, I'll leave that to your  
12 discretion.

13          MR. LAKE: Thank you. And if the Court has any  
14 questions, please ask.

15          With that in mind, I'd like to focus today on the  
16 Endangered Species Act. There's been a lot of discussion about  
17 this, and I think, you know, one of the really important parts  
18 of this case is to understand the interaction between  
19 groundwater pumping and the Endangered Species Act, both in  
20 terms of the impact on the dace and in terms of potential  
21 liability for the State Engineer.

22          And I'd actually like to step back a moment and talk  
23 about, you know, why we're here in the first place. Why am I  
24 here at all talking about the Endangered Species Act? And it's  
25 because they -- you know, we have this groundwater system, this

1 regional groundwater system, and there are maps of it all over  
2 the courtroom now. There are thousands, tens of thousands of  
3 acre-feet of water rights already awarded in the system. And  
4 the reason we're all here in court fighting about it is because  
5 there are limits on it, and we have to figure out how to deal  
6 with those limits.

7           One of those limits is, as Mr. Dotson was talking  
8 about, the Muddy River Decree, and we have these water -- we're  
9 in Nevada. It's a prior appropriation state. Water rights are  
10 first in time, first in right. And if there's an impact on  
11 those water rights, it has to be dealt with, and that's spelled  
12 out in the statutes. That's in NRS 533.0245. It's also -- it  
13 flows from the idea that all of the rights granted are subject  
14 to existing rights. So that's one limit on the system. We've  
15 talked about it a lot.

16           Now, the other limit on the system is the Endangered  
17 Species Act. And again, this is not inconsistent with the  
18 State Engineer's duties. It's not outside the State Engineer's  
19 duties. I think Mr. Taggart did a very good job of explaining  
20 why the idea that the State Engineer has to provide for the  
21 public interest survives the initial granting of the  
22 application.

23           And this is part of the public interest.

24           The State Engineer is acting as a trustee of the  
25 State's water resources. The State Engineer doesn't own the

1 water in the State. The individual appropriators don't own the  
2 water. The water belongs to the public, and the State Engineer  
3 has an ongoing duty to provide for the public interest in the  
4 administration of those water rights.

5 And this has two primary implications here. And one  
6 is that, as Mr. Taggart pointed out, the dace, looking at, you  
7 know, providing for the dace and its conservation is in the  
8 public's interest. I mean, that public interest has been  
9 articulated in the Endangered Species Act itself. It's  
10 articulated at the State level with Nevada State protections  
11 for endangered species, the work The Nevada Department of  
12 Wildlife has done. The (indiscernible) has already and  
13 continues to do.

14 And we also have the potential for liability. So I'd  
15 like to talk about both of those things kind of in concert, but  
16 I'd really first like to give the Court a roadmap of how the  
17 ESA works and how it comes into play in this situation.

18 And I'd like to start by reading some testimony that  
19 was before the State Engineer. Because I think there's this  
20 idea that is -- the State Engineer's conclusion that there's  
21 potential liability here sort of came out of nowhere, but it  
22 didn't. This is an ongoing issue. As Mr. Taggart also  
23 mentioned, the Fish and Wildlife Service protested applications  
24 in Coyote Springs Valley all the way back in the 1980s. Even  
25 back then they were talking about looking at the system and

1 realizing that if you pump water in Coyote Springs Valley, and  
2 at that point we didn't know the full extent of the system, but  
3 at least if you pump water here, it's going to affect Springs  
4 (video interference).

5 So, you know, this plays out over a few decades, and  
6 you get to the Order 1303 hearing. And Fish and Wildlife  
7 Service participated in the Order 1303 hearing. And a lot has  
8 been said about their testimony, and I'm going to read some of  
9 that testimony right now. I'm reading from record on appeal  
10 53,117. This is the testimony of Dr. Schwemm from the Fish and  
11 Wildlife Service.

12 Dr. Schwemm is not a regulatory officer. He's  
13 actually the head of aquatic biology for the Las Vegas office,  
14 which means he's responsible for the analysis that goes into  
15 things, like a biological opinion.

16 THE COURT: Can you spell his name for me.

17 MR. LAKE: Sure. Let me make sure I get this right.  
18 So, S-c-h-w-e-m-m.

19 So the Fish and Wildlife Service makes a conclusion  
20 to say that a species deserves to be on the endangered species  
21 list or that some action is going to jeopardize the existence  
22 of a certain species, but that's the kind of analysis that  
23 Dr. Schwemm conducts. And this is his testimony from the Order  
24 1303 hearing.

25 The examiner is Patrick Donnelly (phonetic), the

1 Center for Biological Diversity's Great Basin Director.

2 Okay. The question is, Dr. Schwemm, are you -- you  
3 state that flow and habitat are proportional to the Muddy  
4 River -- to the Muddy River Spring area; is that correct?

5 Answer: Yes.

6 Question: And that any reduction of flow will  
7 decrease the amount of habitat available?

8 Answer: Yes.

9 Question: In the general sense then --

10 And I guess he passed on that question. Sorry. I  
11 got lost here. I think I skipped one.

12 Question: Would a reduction in habitat reduce the  
13 number of individual dace present?

14 Answer: Yes.

15 So Dr. Schwemm admits there that pumping -- and then  
16 this is testimony that was before the State Engineer, something  
17 the State Engineer took into account, pumping from the  
18 carbonate aquifer reduces spring flow and thus reduces the  
19 amount of dace present. And I did cover this earlier.

20 Continuing, since this is true, does this imply that  
21 carbonate pumping would result in the reduction of the amount  
22 of individuals of the Moapa dace.

23 The respondent now is Sue Braumiller. She's the Fish  
24 and Wildlife Services Chief Hydrologist in Nevada. I would say  
25 that's highly likely, is her response.

1 THE COURT: We're on the record on appeal with this.

2 MR. LAKE: This is the following -- this is 53,117  
3 and going on to 53,118.

4 Now, it's been pointed out, and it's true that Fish  
5 and Wildlife Service never said we needed to stop all pumping.  
6 And I'd like to clarify that the Center's position has never  
7 been no pumping.

8 Our position has been that any groundwater pumping,  
9 and I think this is shared by several parties to this, any  
10 groundwater pumping reduces carbonate water levels and spring  
11 flows.

12 Our expert recommended that some amount of alluvial  
13 pumping could occur, and this is essentially due to the  
14 differences between the alluvial and the carbonate aquifer,  
15 that I don't think I need to get into here, but, you know, I  
16 think the important point here is that what we were offering  
17 below is a technical analysis of just what would happen if you  
18 pump, and it was a fact-finding exercise.

19 We do think 8,000 is too high, and the record shows  
20 that we're still seeing decreasing spring flows with 8,000, but  
21 I'm not going to stand up here and say that any and all pumping  
22 anywhere in the system results in take. You know, the fact is  
23 though that we have thousands of acre-feet of pumping occurring  
24 and continue to have thousands of acre-feet of pumping  
25 occurring if something isn't done. And that will in fact cause

1 take.

2 So what is take? Take comes from Section 9 of the  
3 ESA, and it comes from the definition of basically three terms,  
4 and I covered these on Monday. I was going to briefly come  
5 back to them now so our memory is all refreshed.

6 Section 9 is pretty short and simple. It says,

7 Any person is prohibited from taking any  
8 endangered species within the United States or  
9 the territory of the United States. It is also  
10 unlawful for any person to attempt to commit,  
11 solicit, cause to be committed any offense  
12 defined as take.

13 So it's a pretty inclusive definition there.

14 Take means to harass, harm, pursue, hunt,  
15 shoot, kill, trap, capture, collect or attempt  
16 to engage in any such conduct.

17 This is an intentionally broad definition as well.

18 The Senate report accompanying the final draft of the ESA said,

19 It's defined in the broadest possible  
20 manner -- I'm quoting now -- to include every  
21 conceivable way in which a person can, quote,  
22 "take," end quote, or attempt to, quote, "take,"  
23 end quote, any fish or wildlife.

24 And this was also acknowledged by the U.S. Supreme  
25 Court in the decision of *Babbitt versus Sweet Home Chapter of*

1 *Communities*, 515 U.S. 687.

2           In addition, we also have the definition of harm.  
3 This relates to habitat modification. So harm includes habitat  
4 modification to the extent that it actually kills or injures  
5 wildlife. So when you look at Dr. Schwemm's testimony, he's  
6 basically saying that yes, you will have habitat modification  
7 that actually kills or injures the Moapa dace, and that would  
8 qualify as take.

9           And finally, we'll get to person, and I think this is  
10 really important here because we're -- you know, Coyote Springs  
11 and other parties have been talking about, you know, who is and  
12 who is not liable under the ESA for various reasons.

13           Person is also defined extremely broadly, and I'm  
14 going to go through the cases in a minute, but if you look at  
15 this definition and you look at how it's been litigated, it  
16 becomes pretty obvious that the party most who generally gets  
17 dragged into court over this stuff is the State. And that just  
18 reflects the reasonableness of the State Engineer's  
19 consideration in this case.

20           So person is defined as,

21                   An individual, corporation, partnership,  
22                   trust, association, any other private entity or  
23                   any officer, employee, agent, department or  
24                   instrumentality of the federal government of any  
25                   state, municipality or political subdivision of



1 the state or of any foreign government of any  
2 state, municipality or political subdivision of  
3 the state and any entity subject to the  
4 jurisdiction of the United States.

5 So anyone we can legally call a person can  
6 essentially be liable for take is what they're saying here. So  
7 this is the mechanism for take, and Mr. Taggart mentioned the  
8 *Strahan* case. I'd like to discuss the *Strahan* case a little  
9 bit more. Some have pointed out that it's not strictly  
10 analogous because it involves lobster fishing and not water  
11 rights. I will get to that in a second. There are cases that  
12 involve water rights.

13 But *Strahan* I think, the reason it's been cited so  
14 much is it's just the clearest discussion and clearest  
15 articulation of the nature of the State's liability under the  
16 Endangered Species Act. And the holding of that case was that  
17 a governmental third-party pursuant to whose authority and act  
18 or directly exacts a taking is deemed to have violated the take  
19 provisions of the ESA. And this is under a proximate cause  
20 standard.

21 So what they said in *Strahan* was that licensing  
22 natural resource extraction, quote, specifically in a manner  
23 that is likely to result in a violation of federal law, end  
24 quote, is generally understood to constitute proximate cause.  
25 It's within that sphere of foreseeability.

1           And to put a little meat on those bones, it's like  
2 here we have all of this science showing that pumping from the  
3 aquifer is going to cause drawdown to the Springs. So it's  
4 foreseeable that you're going to have a habitat reduction if  
5 you pump to a certain level. And in most cases, Courts have  
6 found that where the State is issuing a license to foreign  
7 activity that impacts the habitat, that is within the zone of  
8 foreseeable injury that we generally understood to be proximate  
9 cause.

10           And so I'd like to now address some of the arguments  
11 that were made in *Strahan* by the government, by the State  
12 government because they really mirror some of the arguments  
13 being made in this case.

14           First, the State argued that they couldn't be liable  
15 for a take because they're not doing any take. It's the third  
16 parties. It's the lobster fishermen. You know, they tried to  
17 suggest that, you know, we're not telling them to use this gear  
18 in this way. We're just allowing it. It's their choice, and  
19 it's their conduct. You know, there's an intervening causal  
20 factor there. Well, the Court said no.

21           Even though strictly speaking the third-party  
22 fishermen, licensed by the Department, were causing the take of  
23 whales, you know, this was foreseeable. Like the -- the State  
24 just can't, and this is going to come up a lot, the State just  
25 can't just stick its head in the sand and say, you know, see no

1 evil. It has to take into account, and the Court will take  
2 into account the reasonably foreseeable consequences of issuing  
3 the permit.

4 Also, this idea, and I really want to discuss this  
5 today because I think this has been a huge source of confusion  
6 in this case, the idea that the State was somehow being  
7 co-opted to enforce the ESA. And the argument was made in  
8 *Strahan* that that's what was happening. Like they said, you  
9 know, First Circuit, if you decide in favor of the plaintiff  
10 here, then we will be forced to use our state regulatory  
11 apparatus to enforce the ESA.

12 And it's a little different here. Here it's being  
13 alleged that the State Engineer went ahead and took that step  
14 himself.

15 But what the First Circuit explained in *Strahan* was,  
16 well, that's not really what's happening here. There's a  
17 difference between acknowledging a legal requirement and  
18 enforcing it.

19 So I'd like to stick on this for a minute because  
20 there's been a lot of verbiage thrown around about the ESA  
21 using terms like jurisdiction and authority. And I don't think  
22 that's appropriate at all here. That's not what's happening.  
23 That's not what the State Engineer did here. The State  
24 Engineer read the law and understood what it meant.

25 And, you know, the argument that we should simply be

1 blind to this is kind of like saying, and I've been searching  
2 for an analogy for this all week, but it's kind of like saying  
3 that, you know, the speed limit doesn't exist until you get  
4 pulled over. It's like a motorist saying, okay, I don't think  
5 anybody can prove that I'm going over 65. So I'm going to go  
6 80. Or if a motorist says, you know, sees the speed limit sign  
7 and goes 65 because that's what the speed limit says, you know,  
8 does that somehow constitute enforcement on the motorist's  
9 part, or is it just prudent behavior.

10           You know, the same thing, to use maybe a more extreme  
11 analogy, are you enforcing the criminal law by refraining from  
12 murdering somebody? It's just a different kind of situation.

13           The State Engineer is entitled to recognize a  
14 potential liability of the State, which exists whether or not  
15 he chooses to acknowledge it or not.

16           So not only would this be contrary to law, but it's  
17 also contrary to the public interest. It's not in the State's  
18 interest at all and not in the interests of the people in  
19 Nevada for the State Engineer to be issuing permits to  
20 appropriate the people's water such that the State is getting  
21 sued left and right by people like me.

22           And this is borne out in the case law involving water  
23 diversion. I'm going to mention a few of these cases. I don't  
24 think we have to spend a lot of time on it. The *Cappaert* case  
25 has already been mentioned, and I think that is a very

1 instructive case in this instance. It's not directly  
2 analogous, but what the U.S. Supreme Court did recognize there  
3 is that when it comes to the management of endangered species  
4 there is a higher authority here, and again, that authority  
5 will intervene whether or not the State chooses to acknowledge  
6 it.

7           And as the former State Engineers testified at the  
8 hearing, that is probably not a desirable result for the State  
9 Engineer or the Department of Conservation of Natural  
10 Resources.

11           So the first case I'm going to talk about is *U.S. v.*  
12 *Glenn-Colusa Water District*. And the cite for that is 788 F.  
13 Supp. 1126. It's from the Eastern District of California. And  
14 this is an action, this is sort of a illustration of what could  
15 happen because in that case the United States brought an action  
16 for take against the operator of river diversion that was  
17 killing endangered fish.

18           And, you know, there was an argument made there that  
19 this is a State matter. You know, this is a matter of State  
20 water regulation, and the Court said no. You know, this --  
21 this is -- the State's water regulation scheme does not somehow  
22 override or nullify the legal mechanism in the ESA.

23           In another case now, *Natural Resources Defense*  
24 *Council versus Zinke*, again in the Eastern District of  
25 California from 2018, the cite for that one is 347 F. Supp. 3d

1 465. And this just found that water supply contracts could be  
2 the basis for Section 9 liability, that again issuing --  
3 issuing or approving a contract that allows a certain amount of  
4 water to be diverted for development from a river harboring  
5 endangered fish was within that zone of foreseeability that  
6 we're talking about proximate cause.

7           Similarly, the *Coalition for a Sustainable Delta*  
8 *versus McCamman*, 725 F. Supp. 2d 1162, similar result, finding  
9 that take may include the acts of a third party indirectly  
10 bringing about that take. Again in the context of water  
11 diversions. And I could go on, but I think I've made my point.  
12 There are several other cases here that basically say the same  
13 thing.

14           I would like to talk about the *Aransas Project* case  
15 that Lincoln and Vidler cited in their briefs. This is a Fifth  
16 Circuit decision. I'd just like to note at the outset that the  
17 Fifth Circuit tends to take a different view of these issues  
18 than the Ninth, and I think it would be risky to look at the  
19 Fifth Circuit precedent here given the difference between the  
20 circuits and the fact that the Ninth Circuit is the controlling  
21 jurisdiction.

22           But I think the more important point there is that,  
23 you know, this wasn't a case about take liability or the nature  
24 of take liability or the existence of it, I guess. This was a  
25 case about proximate cause. Everything I just talked about was

1 acknowledged in that case. But the Court was discussing, well,  
2 have the plaintiffs met their burden to show proximate cause  
3 here, and they hadn't.

4 But if you look at the facts of the case, this was a  
5 far more attenuated chain of causation than we're dealing with  
6 here. In that case plaintiffs allege that water withdrawals  
7 would raise the salinity of certain water sources. So there's  
8 like an estuary in the Texas coastline, which would change the  
9 availability of certain food sources for a bird species that  
10 uses this habitat, and the bird species was the one that was  
11 endangered. So, you know, changing the chemical composition of  
12 the water, affecting food sources, affecting the bird's  
13 behavior, leading all the way to actually killing or injuring  
14 wildlife.

15 And I think what the Court said was only a fortuitous  
16 consequence -- confluence of adverse factors could impact  
17 whooping cranes in that case. And this is not what we're  
18 dealing with here. In fact, this is one of the things that I  
19 think was pretty squarely resolved in the Order 1303 hearing.  
20 You know, what is this chain of causation? And it is clear  
21 pumping reduces groundwater levels. Spring flows depend on  
22 groundwater levels. Therefore pumping reduces spring flows.  
23 Reductions in spring flows, as both myself and Mr. Taggart have  
24 discussed here, lead to losses of habitat.

25 And now I'd like to turn to the MOA, and the MOA is

1 also something that we've discussed a lot. I kind of touched  
2 on earlier what the MOA does and doesn't do and what the  
3 biological opinion does and doesn't do.

4 And the short answer here is that the MOA does  
5 absolutely nothing. The MOA is a private agreement. The MOA  
6 is not regulatory. The MOA is not a liability shield for  
7 anybody. It simply recites the agreement between the parties  
8 that they were going to do various things in anticipation of  
9 the Order 1169 pump test. And there were conservation measures  
10 there that some of which were very beneficial to the dace.  
11 Nevertheless, it's not what you need to do to avoid Section 9  
12 liability. That comes through a different process, and that  
13 process is called formal consultation, which results in the  
14 preparation of biological opinion, which was done there, but  
15 it's limited, as I'm about to describe.

16 So this is going to get a little bit wonky, and I'm  
17 happy to clarify at any point.

18 But we need to draw a distinction between take under  
19 Section 9 of the ESA and jeopardy under Section 7 of the ESA.  
20 Because when you're talking about biological opinion, it's  
21 about jeopardy under Section 7 and not take under Section 9.  
22 And there is an interaction between the two, but it is -- I  
23 would say it's very fact dependent and limited to the facts of  
24 the particular case.

25 So Section 7 -- Section 7, A2 specifically, and the



1 cite for this is 16 USC § 1536(a) (2).

2 THE COURT: Can you say that one more time.

3 MR. LAKE: Yeah. 16 United States Code § 1536(a) (2).

4 THE COURT: Which is Section 7?

5 MR. LAKE: At Section 7. 1536 at Section 7, and this  
6 is a subpart of Section 7. This requires each federal agency.  
7 So right there you have a distinction. Take applies to  
8 everybody. Section 7 applies to the federal government, and it  
9 says, Every federal agency has to ensure that any action it  
10 takes or funds, authorizes, carries out is not likely to  
11 jeopardize the continued existence of any threatened or  
12 endangered species.

13 Now, notice that that doesn't use the same language  
14 as take. This is a broader, more general inquiry. Are we  
15 imperiling the conservation and recovery of this species, not  
16 are we going to kill individuals.

17 And so the Fish and Wildlife Service to implement  
18 this provision goes through a process called consultation where  
19 the federal agency that's doing the action, and I think it  
20 might be helpful to talk about this in some concrete context.  
21 So I'll use the context of a subdivision because I think that's  
22 going to be pretty familiar here in Vegas.

23 Say BLM wants to privatize a certain tract of land to  
24 build a subdivision. Well, BLM is taking an action there.  
25 It's a federal action. Say there's an endangered species on

1 that land that uses that land. Well, BLM at this point is  
2 going to have to enter into the consultation process to ensure  
3 that the land transfer doesn't impact, doesn't adversely affect  
4 the endangered species. So the Fish and Wildlife Service looks  
5 at the proposal and comes to a conclusion about the impact of  
6 the action. Where an action may affect a listed species, it  
7 triggers a process called formal consultation.

8           Formal consultation is basically a process of study  
9 that results in a biological opinion. The biological opinion  
10 is prepared by the U.S. Fish and Wildlife Service, and that's  
11 the summary of the findings that the Fish and Wildlife Service  
12 made during the study. So they're going to look at all of the  
13 environmental consequences of this and decide whether it's  
14 going to imperil the species or not.

15           And so at the end of that, it's going to -- the Fish  
16 and Wildlife Service is going to transmit the biological  
17 opinion to the action agency. So this would be Fish and  
18 Wildlife Service transmitting to BLM and giving their opinion  
19 on whether this is compliant with the ESA or not essentially.

20           Now, if the Fish and Wildlife Service makes a finding  
21 in that biological opinion that the action is not going to,  
22 like not going to jeopardize, and the technical finding that  
23 they will make is, you know, it could be likely to adversely  
24 affect, but it won't jeopardize the continued existence of the  
25 species.

1           Now, there's kind of a gap there; right? Like  
2 they're there allowing for some impacts if they make that  
3 finding, which leads to the question, well, what are we  
4 supposed to do, Fish and Wildlife Service, because there's --  
5 you know, we're liable for take. Everybody is liable for take.  
6 You know you kill one member of the species, and it's take.

7           So what Fish and Wildlife Service does in that  
8 context is they'll issue something called an incidental take  
9 statement. And this, this is the only thing that shields a  
10 party from take liability is the incidental take statement.  
11 The incidental take statement specifies how much take is  
12 allowed, and this can either be in terms of individuals. So it  
13 can say you can take X number of individuals of the species.  
14 After that it's exceeded. After that, no more liability  
15 shield.

16           Or it can be -- and the ones in the record here, and  
17 there are a few in the record here, are phrased in terms of  
18 habitat affected, and specifically spring close. So the  
19 incidental take statements in the record here and a lot of  
20 incidental take statements actually say you can take up to --  
21 you know, here it's a certain level of spring flow, like  
22 Lincoln-Vidler's incidental take statement for their Kane  
23 Springs project, for example, goes down to 3.0 CFS at Warm  
24 Springs West. So what that says is once -- if you reach 3.2  
25 CFS at Warm Springs West, there is -- that is the full extent

1 of take protection that's given to Lincoln-Vidler through that  
2 process. Take occurs below that flow level, unpermitted take.  
3 An unpermitted take is the thing that leads to liability.

4           So as I mentioned, there was a biological opinion  
5 attached to the MOA. So Fish and Wildlife Service as a  
6 signatory to the MOA did go through this consultation process,  
7 and full disclosure, my organization litigated that  
8 consultation process. And there was a decision, and it was a  
9 federal court decision on that where we lost. And I think the  
10 reason that we lost that case is especially relevant here  
11 because it really lays out the boundaries of what the MOA does  
12 and doesn't do, and we actually went to court thinking that it  
13 does a lot more than the Court said it did.

14           So the MOA, and this is a quote from the MOA record  
15 on appeal 47,146, evaluates as the proposed action the  
16 execution of the MOA by the Fish and Wildlife Service, not  
17 groundwater pumping, the execution of the MOA, and the MOA has  
18 three parts. There's the dedication of water rights. There's  
19 the habitat restoration measures, and there's those spring flow  
20 triggers at Warm Springs West. That's what it's looking at.

21           It specifically states that it's programmatic. It's  
22 considering the big picture, does not consider future  
23 site-specific actions. So pumping from any particular well is  
24 not analyzed in the biological opinion. Groundwater pumping in  
25 general, I mean, there's an analysis of what groundwater

1 pumping could do to spring flows, and it's basically the same  
2 analysis that we've seen throughout this case. It's this close  
3 connection acknowledging that groundwater pumping is going to  
4 reduce the spring flows at Warm Springs West.

5 But because they are analyzing the MOA and not the  
6 pumping, the Fish and Wildlife Service didn't issue an  
7 incidental take statement here. There's no incidental take  
8 statement attached to the MOA. The Fish and Wildlife Service  
9 said, well, signing the MOA isn't going to cause any take. So  
10 we don't need to issue an incidental take statement.

11 We have analysis in the MOA that we can, quote, tier  
12 to that may support an incidental take statement for a future  
13 project. But the MOA itself doesn't -- it doesn't protect  
14 against take at all. Nothing out of this process protects  
15 against take.

16 What does protect against take are the tiered BiOps,  
17 and as far as I can tell, there are three of them in the  
18 record. One of them is to CSI for the withdrawal of 4,600  
19 acre-feet from two locations in Coyote Springs Valley. The  
20 incidental take limit on that statement is 2.7 CF -- or 2.78  
21 CFS at Warm Springs West.

22 There's another one to Southern Nevada Water  
23 Authority, also with the same incidental take limit. And as I  
24 mentioned, Lincoln Vidler has received an incidental take  
25 statement for the withdrawal of a thousand acre-feet from Kane

1 Springs Valley. And the take limit on that is 3.0 CFS at Warm  
2 Springs West.

3 This means that the vast majority of the water users  
4 in the Lower White River Flow System and the State Engineer  
5 himself lack any protection against take liability. And the  
6 parties that I mentioned have protection only insofar as they  
7 conduct these specific actions. So we're talking about, you  
8 know, specific water withdrawals within the system.

9 THE COURT: Of that particular entity.

10 MR. LAKE: Yeah. One or two wells. I mean, Coyote  
11 Springs Valley is two wells. Lincoln Vidler is one well.

12 Any expansion on that is going to require more  
13 consultation.

14 And you have all of these -- you have 40,000 -- this  
15 adds up to -- I'm going to try to do math again. So I'm sorry.  
16 You know, this is about a little under 10,000 acre-feet I think  
17 in total. I could be wrong about that, but my point is that  
18 it's less than 40,000, and that's the amount of rights that are  
19 out there. So the idea that take could occur is not remote  
20 here, and the State Engineer was correct to realize that.

21 We've talked about hydrology quite a bit, but I would  
22 just like to reiterate and remind the Court about the testimony  
23 that I read off from Fish and Wildlife Service that, you know,  
24 this is well established in the record. And what certain  
25 parties are asking here is that the State Engineer just bury

1 his head in the sand, and an argument has been made even that,  
2 well, there's no evidence for take in the record, but that's a  
3 different -- I mean, there is evidence for take in the record.  
4 But that's really a different question.

5           What's being addressed in the briefing I think is the  
6 question of proving liability for take. I mean, this is the  
7 standard that comes into play when you go to federal court, and  
8 you say, you know, this person has taken an endangered species,  
9 and this is the burden you have to meet to prove that in that  
10 specific case. It's a different question from whether there is  
11 potential liability. It's like, you know, we said earlier  
12 there's a difference between showing that death occurred and  
13 then somebody committed murder, and I think we've shown that a  
14 death can occur here, you know, quite easily.

15           And then some people are running in here and saying,  
16 well, we should completely disregard that because no one has  
17 proven that, you know, no one has been convicted of murder yet.  
18 We don't need somebody to be convicted of murder for this to be  
19 acknowledged. The State Engineer, you know, does not need to  
20 be sued for take in order to realize the impacts on this fish.

21           I'd also like to talk about briefly the public trust  
22 doctrine and how that plays into this.

23           The State Engineer has an ongoing duty to consider  
24 the public trust because water rights are, and this is provided  
25 in the statute. This is NRS 533.025, all underground waters

1 both in the boundaries of the State belong to the public. They  
2 are also subject to all existing rights. I think this statute  
3 really encapsulates the two immovable obstacles that we  
4 encounter in this case that require the reduction of pumping.  
5 Public ownership and the existing rights.

6 The ESA issue, of course, relates to public  
7 ownership, and Mr. Taggart has discussed the Mineral County  
8 case. And I'm not going to go back into the statutes --

9 THE COURT: You're talking about the most recent one?

10 MR. LAKE: The most recent one, right, and this is  
11 where the Nevada Supreme Court said the public trust doctrine  
12 applies. What the Nevada Supreme Court also said in that case  
13 is that the public trust, like the State and Nevada water  
14 statutes are consistent with the public trust doctrine. So  
15 they looked at the statutes, and they said, you know, the State  
16 Engineer already has an obligation to look at the public  
17 interest. Therefore we don't need to graft on, at least in  
18 those circumstances, they did not need to graft on any  
19 additional common law requirements. They said the statutes  
20 already provide for the public interest.

21 And if we were to take the very narrow analysis that  
22 some parties are urging here, looking at each statute  
23 individually as if it doesn't relate to the other statutes,  
24 then that decision doesn't make any sense. We've talked a lot  
25 about how science is evolving, and that was something that did



1 come up in the Walker Lake case too.

2 Science is evolving, and if -- just like a conflict  
3 with existing rights, if a particular appropriation turns out  
4 not to be in the public interest later on down the road, well,  
5 that kind of implies that -- and the State Engineer can't do  
6 anything about it. So if that's the case, that implies that  
7 there really isn't adequate protection for the public trust  
8 doctrine in Nevada water statutes. And you can see that very  
9 starkly in this case.

10 If the State Engineer is powerless to address the  
11 overappropriation we're seeing here, I mean, you're cutting off  
12 the supply of water to the dace. You're also cutting off the  
13 supply of water to the only communities, the only businesses  
14 that depend on Lower White River Flow System water, you know,  
15 the communities in the Moapa Valley, the farms in the Moapa  
16 Valley, the water rights holders under the Muddy River Decree.  
17 That's what happens if the State Engineer can't manage the  
18 system.

19 You know, putting aside all of the technical  
20 discussion about how exactly this is accomplished, this is  
21 something that, you know, if the public interest means anything  
22 in Nevada, if the public trust means anything in Nevada, this  
23 is something that needs to be safeguarded.

24 I would like to briefly address something that came  
25 up in the last argument. Counsel for Coyote Springs mentioned

1 that there is an amount of water that doesn't affect the dace.  
2 That evidence was presented to the State Engineer. That  
3 evidence is based on geologic studies and an analysis of  
4 basically precipitation induced recharge in the sheep range.  
5 This is basically somebody trying to decide of all the rain  
6 that falls in the sheep range, how much of it infiltrates and  
7 actually gets into the carbon aquifer.

8 I'm not going to go into the details of that, I'll  
9 just note that several parties raised substantial concerns with  
10 the methodology employed in that analysis, both the geologic  
11 study and the implications drawn from it and the precipitation  
12 study. You know, to put it in greatly simplified terms, and  
13 I'm sure --

14 THE COURT: Oh, no, simplify it.

15 MR. LAKE: Well, if Dr. Myers were here, he'd  
16 probably yell at me, but the precipitation map just didn't  
17 apply to the situation that they were using it for. So this  
18 precipitation map has to be used with one particular kind of an  
19 analysis on one particular scale, and that wasn't done here.  
20 And several hydrologists testified at the hearing that if you  
21 don't, you know, if you don't match up this precipitation map  
22 with these other methodologies, it's useless.

23 There was also questioning of like if there's a fault  
24 at a particular location, that doesn't show a boundary. There  
25 are faults all over the place in the Lower White River Flow

1 System. Some of them, like the Pahrnagat shear zone that  
2 Mr. Taggart mentioned, are boundaries. Others, like the faults  
3 at the mouth of Kane Springs Valley aren't. Water flows  
4 through them. Water can flow. You know, you see impacts on  
5 either side. I think that's the real test here.

6           Yeah, there's faults, but, you know, the issue is,  
7 like if you pump at a well at Location A, and Location B is on  
8 the other side of the fault, are you seeing an impact from that  
9 pumping? Are you seeing a response? And you did. You saw  
10 responses throughout Coyote Springs Valley. And that was used  
11 to refute the analysis that there's some amount of water that's  
12 bypassing the Springs and doesn't affect the dace. The State  
13 Engineer took that into account. It's within his bailiwick of  
14 technical expertise, and that should not be disturbed.

15           And I believe that is all I have.

16           My next topic is Kane Springs Valley. I feel like  
17 that's been covered, as they said, ad nauseam. I'll address a  
18 few points. This is also briefed. So I don't think I need to  
19 go into it into much detail.

20           First I'd like to address this issue of the hydraulic  
21 gradient or the hydraulic head.

22           Oh, sorry, I missed something. I'm going to kind of  
23 backtrack. I'm sorry.

24           THE COURT: That's okay.

25           MR. LAKE: With the -- with some amount of water

1 bypassing, I think it's important to recognize that what we  
2 also saw with the pumping test is this idea that pumping lowers  
3 the water level, and that's the important part. I mean, that's  
4 important because for various reasons, and again our  
5 hydrologists would shout at me for simplifying this much, but  
6 it's the level that matters, not where water may be flowing at  
7 any particular location. So it's basically the bucket analogy  
8 again.

9           If you look at the Lower White River Flow System like  
10 a bucket, and I'll admit it's not a bucket, but it has some  
11 things in common with a bucket, and one of those things is that  
12 you have a spout, that spout is the Muddy River Springs, and if  
13 the Lower White River Flow System is a bucket, and the Springs  
14 are a spout, the spout's at the top. At least the Pederson  
15 Springs and then the Springs that are especially important to  
16 the Moapa dace are at the top.

17           So water might be swirling around in the bucket in  
18 various ways, but the important part is when is water going to  
19 stop flowing out of the spout. And you could pump -- I mean,  
20 there might be -- and this is a 50,000 acre-foot bucket. But  
21 like we saw in the pumping test, like you don't have to pump  
22 that amount of acre-feet to make the spout go dry. You just  
23 have to make the water level decrease so much that it's below  
24 the spout. And, you know, we know that that's -- I mean, from  
25 the data now, we know that that's less than 8,000.

1           So I think talking about the water budget and the  
2 possibility that there might be some internal heterogeneity in  
3 the system is a distraction, at least as far as the dace is  
4 concerned. Because the question that the State Engineer asked  
5 and that was answered at the hearing is what are the impacts,  
6 and the impacts on the Springs are stark.

7           And moving on to Kane Springs, I think first -- the  
8 first bit of evidence that's being introduced or being  
9 discussed to exclude Kane Springs is the idea of a hydraulic  
10 head or a hydraulic gradient. And this is -- Ms. Peterson  
11 talked about this yesterday. You know, you go from that well  
12 that Lincoln and Vidler have at the boundary at Kane Springs  
13 Valley, and you go to basically Central Coyote Springs Valley  
14 where --

15           THE COURT: You're talking about the 6,000-foot  
16 difference?

17           MR. LAKE: No. I'm talking about the 60-foot  
18 difference.

19           THE COURT: Okay. Oh, is it 60 feet?

20           MR. LAKE: Yeah. Well, there's a 60-foot difference.

21           THE COURT: Oh, 60 feet.

22           MR. LAKE: And that's drawing a line from Kane  
23 Springs Valley to like Central Coyote Springs Valley. It's  
24 actually bypassing the monitoring -- the CSVN-4 monitoring well  
25 that's in Northern Coyote Springs Valley.

1           Now, the difference in elevation between those two  
2 wells so that the top level of water -- and that's the  
3 important part again. This is like the top of the bucket.  
4 This is the top of the water in the bucket. The difference  
5 between those two locations is 5.5 feet, and that was shown in  
6 the hydrograph that Lincoln and Vidler put up yesterday showing  
7 the two responses. That slide was introduced to discuss the  
8 issue with the transducer.

9           But if you go back to that slide and look at it, and  
10 unfortunately I don't have a copy that I can put up, but if you  
11 go back up to that slide and look at it, the scale on that  
12 shows you the difference between elevations, and it's 5 feet.  
13 That's a 55-foot difference over several miles. I think it's  
14 over 2 miles.

15           THE COURT: Okay. I think you need you to explain  
16 that to me one more time.

17           MR. LAKE: Okay.

18           THE COURT: So there's a 60-foot difference between  
19 the water lines.

20           MR. LAKE: So there's a -- I'm going to use a visual  
21 here, and I'm going to try to describe as well as I can for the  
22 record what I'm doing with this piece of paper.

23           But the slope is like this. It's --

24           THE COURT: So you're holding a piece of paper at  
25 like a slopy angle.

1 MR. DOTSON: Does this work?

2 (Pause in the proceedings.)

3 MR. LAKE: So it's basically you see that the aquifer  
4 is flat, essentially flat.

5 THE COURT: Okay.

6 MR. LAKE: And throughout a lot of its extent, and  
7 we're talking about, you know, especially in Coyote Springs  
8 Valley and the Muddy River Springs area you see this  
9 anomalously flat surface, and that's not normal in groundwater.  
10 Groundwater usually slopes a little bit one way or the other.

11 THE COURT: Because it has to flow somewhere.

12 MR. LAKE: Yeah. Sometimes a lot. Like in the case  
13 of the Pahranaगत shear zone, you have thousands of feet of  
14 difference.

15 But what you're seeing in between, I would say  
16 Central Coyote Springs Valley, sort of in the vicinity of where  
17 the development would be, going north and east from there, so  
18 I'm -- I'm going to use the State Engineer's map here for this.

19 THE COURT: Okay.

20 MR. LAKE: I'll stand over there so everybody can  
21 see.

22 THE COURT: Okay. Can you hear him?

23 We just still need to make sure that we can hear.

24 (Pause in the proceedings.)

25 MR. LAKE: Okay. Thank you.

1           This central part, so CSI-4, MX-5, CSVM-1, this is  
2 the flat, the anomalously flat part. Now, you have the slope  
3 increases here in Northern Coyote Springs Valley trending  
4 towards Kane Springs Valley. So you start to see the increase  
5 in slope around here. It continues through CSVM-4.

6           THE COURT: And let me be clear. When you're talking  
7 about slope, are you talking about slope in the aquifer? Are  
8 you talking about slope in the land above?

9           MR. LAKE: In the aquifer.

10          THE COURT: Okay. Thank you.

11          MR. LAKE: So this is the difference. So when you  
12 drill the well, this is the difference in groundwater level at  
13 the top, like the top water level of the well, the top of the  
14 water. It's the elevation of that surface, and that's actually  
15 also what you're seeing in all these hydrographs except for the  
16 spring flow ones. Like, these blue lines, that's what's also  
17 being represented.

18          I think we can put this down now. Thanks.

19          THE COURT: Okay. So are you -- so then as it moves  
20 north, this aquifer or the top of the aquifer basically starts  
21 to slope up (indiscernible)?

22          MR. LAKE: It starts to slope, but not very much.

23          THE COURT: Okay.

24          MR. LAKE: And that's what I wanted to talk about.  
25 So between CSVM-4 and Coyote Springs Valley and KMW-1 -- that's



1 about a 2-mile difference -- there's a 5.5-foot slope. Now  
2 that's more slope than you see in Central Coyote Springs  
3 Valley, but it's still like -- I think it was Dr. Felling  
4 who -- or Mr. Felling who testified. It's still very flat.

5           So the actual slope, you know, when you look at  
6 5.5 feet over 2 miles, and this is in the record at Record on  
7 Appeal 707 and also at 34534. The slope is 0.00042, and that's  
8 why people are saying it's flat, because it's barely anything.  
9 And that very, you know, flat surface is one indication that  
10 there's a hydraulic connection here. And as many people have  
11 already discussed, another indication is that pumping test  
12 impacts were observed at that KMW-1 well. So we saw pumping  
13 test impacts in Kane Springs.

14           This means that even if there is a fault structure  
15 there, and there could be, the evidence was inconclusive. The  
16 State Engineer acknowledged that in Order 1309. It's not  
17 acting as a barrier. You have these two very indicative  
18 phenomenon where water is flowing, and water is at the same  
19 level. And that shows that there's a connection. And by  
20 connection it means a connection that could lead to impacts in  
21 one of the other basins. And because that's the important part  
22 here. Lowering water levels, lowering spring flows.

23           The Fish and Wildlife Service actually -- and State  
24 Engineer both acknowledged this when Lincoln and Vidler applied  
25 for their water rights in Kane Springs Valley. Ruling 5712 --

1 and this has also been discussed -- acknowledges the close  
2 hydrologic connection. It discusses how Lincoln and Vidler's  
3 pumping test suggests that impacts would radiate across the  
4 supposed boundary between the basins.

5 Fish and Wildlife Service agreed, and that's why you  
6 have an incidental take statement issued in conjunction with  
7 that project. Because Fish and Wildlife Services analysis  
8 concluded that, yes, you know, pumping has a high likelihood of  
9 causing take of the dace. Pumping in Kane Springs has a high  
10 likelihood of causing take of the dace. So Lincoln and Vidler  
11 need an incidental take statement.

12 And that's really -- that's really the extent of what  
13 I think I can talk about without being completely redundant.

14 So if there are no further questions, I will  
15 conclude.

16 THE COURT: Okay. Perfect timing. That's great.  
17 We're almost straight up at noon.

18 Okay. So thank you.

19 So at this point, why don't we break for lunch. Back  
20 at 1:00.

21 Just so I am clear on the order of who's next, I've  
22 got Muddy Valley, Lincoln Pacific and then Lincoln Vidler. So  
23 you guys are up in the afternoon. And then if we still have  
24 some time, I guess we'll start going into the replies.

25 (Proceedings recessed at 11:57 a.m., until 1:00 p.m.)

1                   **ARGUMENT FOR MUDDY VALLEY IRRIGATION COMPANY**

2                   MR. DOTSON: Good afternoon, Your Honor. Rob Dotson  
3 again, along with Steve King on behalf of Muddy Valley  
4 Irrigation Company.

5                   And this is -- well, just some housekeeping items  
6 first. I will get a printout of this to provide to your clerk,  
7 and then also what I have instructed have happen with my staff  
8 in Reno and I hope has happened, is to file a notice with just  
9 the slides, not my notes that -- my little cheat sheet portion  
10 into the record for my opening. And I will do the same thing  
11 for this, and then for my reply presentation, as well, assuming  
12 that I have a PowerPoint for that, which I plan on having.

13                  THE COURT: Okay.

14                  MR. DOTSON: So as I already described in our little  
15 discussion earlier, this is my opportunity on behalf of the  
16 irrigation company to address the issues that -- where we  
17 support the Order 1309. And as I think we made clear in our  
18 opening, in our briefs, and I think throughout our briefs, in  
19 fact, is that we're seeking a remand, only a portion. Really,  
20 it's in, like, two paragraphs and the supporting documents of  
21 1309.

22                  There's a lot of things about 1309 that we agree with  
23 and, in fact, our problem is really that some of 1309, to us,  
24 doesn't seem consistent with that -- those particular offending  
25 paragraphs.

1           So it is our position that certain portions of 1309  
2 should be maintained and affirmed. And in fact, I think you'll  
3 recall in my opening discussion, I kind of -- baited maybe  
4 isn't -- is too strong of a term, the State Engineer to try to  
5 suggest, hey, maybe we can get a stipulation out of them,  
6 and -- but we didn't quite get that, Your Honor.

7           But what we did is a statement that, if you do choose  
8 to remand, that they would request that you simply strike that  
9 element, right. Or if you should -- or instead of remanding,  
10 I'm sorry, I misstated it.

11           Instead of remanding, simply strike --

12           THE COURT: Oh, that I would strike it.

13           MR. DOTSON: -- that element. That's what I  
14 understood to be the statement.

15           Now, this is also a time for me to do a little  
16 mea culpa. Because unlike Mr. Taggart and some of the other  
17 people in this room that have made their lives in water law, I  
18 am not a water law lawyer and I will admit that freely and  
19 openly. I'm a -- I'm a country litigator who moved to Reno to  
20 ski for a few years in 1994 and, I don't know, I lost track of  
21 time. And so, that's me.

22           But I -- and I have learned as I've listened, in  
23 particular to Vidler's arguments yesterday, that I had some  
24 misunderstanding that I want to correct. And I think it's  
25 understandable, my misunderstandings, but -- and I think that

1 some of the things I have heard from the Court might indicate  
2 that you have some of those same misunderstandings.

3 THE COURT: Could be.

4 MR. DOTSON: And so I want to talk about some of  
5 those issues as -- and those would mostly be at the end of the  
6 presentation. But as I go through it, I'll be discussing some  
7 of those things.

8 So in support of the State Engineer's Order 1309, we  
9 agree that there has to be a designation and a management  
10 conjunctively, jointly, both, likely. Because I've learned a  
11 little bit about those statements and that I think that that  
12 nomenclature in the state law, the delineation or the  
13 designation of a basin, are things that those words do matter  
14 and they're similar enough that it's easy to become confused.  
15 And in fact, I think that sometimes the State Engineer uses it  
16 and it doesn't necessarily mean the term of art that they mean.

17 And one of the things that as I was -- so I also  
18 wasn't at the hearing that we've been talking about. I --  
19 first thing I filed in this thing was the petition for judicial  
20 review. But I looked through all the record, and one of the  
21 issues we're going to talk about is something that I didn't see  
22 in the record but I've heard over the last few days and I want  
23 to bring out.

24 And this is that first point: I said -- we said,  
25 Muddy Valley Irrigation Company said in its answering brief in

1 support of this that no party has the right to challenge the  
2 creation of the Lower White River Flow System. And I'll talk  
3 about majorly four categories and I am going to go through  
4 those right now.

5           And the reason for that was that because I didn't  
6 think it was still timely. Because I thought that's what 1303  
7 did. And I said that because in the very first paragraph, the  
8 recitals -- and the thing about water law, that my observation  
9 may be incorrect, is that they -- they rely -- they do a lot of  
10 recitals. And sometimes in contract, recitals mean very  
11 little, right. It's just a waste of -- these are the parties  
12 and this is what this is about. And other times, there's huge  
13 fights over recitals.

14           But in this instance, I think that there's a lot of  
15 important stuff that come out of the recitals in the orders in  
16 this case and we're going to spend some time with those.

17           But the very first recital at page 70 of the record  
18 is,

19                       Whereas, the purpose of this interim order  
20                       is to designate a multi-basin area known to  
21                       share a close hydrologic connection as a joint  
22                       administrative unit which shall be known as the  
23                       Lower White River Flow System.

24           Well, I read that and I understood that to mean that  
25 this was a 534.030 designation of this entire area that we were

1 now discussing, and then everybody who showed up at the hearing  
2 then knew that that was the designation. If you read on, on  
3 the next page it goes through each of the basins and it points  
4 out when those were designated, which was also a head-fake for  
5 me, Your Honor. Because I'm, like, okay, now they're using the  
6 term of art and we're talking about this Lower White River Flow  
7 System and it includes Kane Springs, at least that's what's in  
8 my head.

9 I think based upon what Vidler said and what the  
10 State Engineer said, my understanding was incorrect. There's  
11 no 534.030 designation for Kane Springs. And to the extent my  
12 briefs would suggest otherwise -- and I think fortunately just  
13 because of loose language it doesn't really say that otherwise,  
14 but I'll tell you that's what I was thinking when I drafted it.  
15 And so if it reads that way, that's wrong.

16 But all of the powers and rights of the State  
17 Engineer to the initial toolbox, as it's been called, to  
18 address and secure and protect and exercise its rights, protect  
19 the public policy under 534.020 apply at least to those other  
20 basins, everything except King Sprains, and maybe not including  
21 that area of the Black Mountains too. I guess that's up to you  
22 to figure out. But as I'm speaking now, I'm recognizing that.

23 However, as to everybody else, 1303 -- 1303 told them  
24 in the first paragraph what we were doing, right. And then it  
25 keeps going on and it tells them what they were doing. And so

1 to suggest that this was new, they should have appealed 1303  
2 and there should have been a petition for judicial review, in  
3 my answering brief --

4 THE COURT: So let me ask you -- oh, so let me ask  
5 you. So I had the question --

6 MR. DOTSON: Yeah. Go ahead.

7 THE COURT: -- yesterday --

8 MR. DOTSON: That's what I was getting to --

9 THE COURT: Oh, okay.

10 MR. DOTSON: -- that question.

11 THE COURT: All right. That's fine.

12 MR. DOTSON: Yeah. But go ahead and ask it. You  
13 asked was --

14 THE COURT: Well, I mean the question is --

15 MR. DOTSON: Can you repeal a petition for judicial  
16 review.

17 THE COURT: Well, no, no. The question is can you  
18 appeal an --

19 MR. DOTSON: I'm sorry --

20 THE COURT: -- interim order.

21 MR. DOTSON: An interim order. That's the question.

22 THE COURT: Right.

23 MR. DOTSON: Well, I would have said yes and I  
24 thought that's what it said earlier. But earlier in the -- was  
25 it Monday, I think I heard Coyote Springs say they did appeal



1 it. I must have missed this in the order, and that there was a  
2 settlement.

3 And so that's something that I just want to be very  
4 candid about. Because in my answer, and I think others might  
5 be able -- I'm happy to yield the floor to counsel --

6 MR. ROBINSON: Okay.

7 MR. DOTSON: -- if he wants to answer that  
8 question --

9 MR. ROBINSON: Yeah.

10 MR. DOTSON: -- for us --

11 THE COURT: Sure.

12 MR. DOTSON: -- just because in the interest of  
13 being -- he can use my time.

14 THE COURT: Sure.

15 MR. DOTSON: In the interest of being clear about it.  
16 Because I said no party appealed and they're forever barred --

17 MR. ROBINSON: Okay.

18 MR. DOTSON: -- from that.

19 MR. ROBINSON: Mr. Dotson is thoroughly confused.

20 THE COURT: Okay.

21 MR. DOTSON: All right. I may be.

22 MR. ROBINSON: I think we can stipulate to that.

23 First moratorium shutdown of Coyote Springs was the May 16th,  
24 2018 letter. We challenged that in a petition for judicial  
25 review.

1 THE COURT: Okay.

2 MR. ROBINSON: That case was settled in August of  
3 2018. 1303 came out in January, I believe, of 2019.

4 THE COURT: Okay.

5 MR. ROBINSON: We challenged that. We filed a  
6 petition for judicial review.

7 THE COURT: Okay.

8 MR. ROBINSON: And the State Engineer was a  
9 respondent. We did a lot of briefing. And by the time we got  
10 to decide various motions, the 1309 hearing was two weeks away  
11 and we agreed to stay the petition for judicial review of 1303.

12 THE COURT: So where is that?

13 MR. DOTSON: Yeah.

14 MR. ROBINSON: 1303 has been rescinded. And so that  
15 case is gone.

16 THE COURT: Oh, so it made it moot.

17 MR. ROBINSON: Yes.

18 MR. DOTSON: All right. All right. So I -- I  
19 think -- I think that makes me right and not confused, by the  
20 way, Your Honor.

21 THE COURT: Okay.

22 MR. DOTSON: And so let me keep talking through this  
23 because now, now we're at the same place I was at about 10:30  
24 last night in my hotel room and -- which is okay.

25 So I was wrong when I said no party had -- had filed

1 a petition for review. And I didn't see that in the record,  
2 candidly. It may be here, but it may have also just failed to  
3 show up.

4 And so I think that proves that you can file a  
5 petition for -- for judicial review of an interim order, and I  
6 don't see why you wouldn't when it does what this does. And  
7 that I'm not sure what effect that has, because contrary to  
8 what my colleague just said, I would disagree that 1309  
9 rescinds that portion of 1303.

10 Because here's what 1309 says on the record at  
11 page 67. It says --

12 THE COURT: Wait, let me --

13 MR. DOTSON: -- in Number 6 --

14 THE COURT: Let me just clarify.

15 MR. DOTSON: Sure. Go ahead.

16 THE COURT: Really quickly.

17 MR. DOTSON: Yeah.

18 THE COURT: So Mr. Robinson.

19 MR. ROBINSON: Yes, ma'am.

20 THE COURT: On the -- of the petition for judicial  
21 review on 1303, was the issue whether or not the Nevada State  
22 Engineer has the authority to jointly manage or conjunctively  
23 manage?

24 MR. ROBINSON: All of the above.

25 THE COURT: Okay.

1 MR. DOTSON: So page 67 of the order, page 66 -- or  
2 66 of the order, page 67 of the decree -- or of the record  
3 says: All other matters set forth in the interim 1303 that are  
4 not specifically addressed herein are hereby rescinded.

5 Well, this issue is specifically addressed in 1309.  
6 And so I don't think that sentence can be argued to rescind  
7 1303. It doesn't because it is addressed in 1309. And so I  
8 question the timeliness of -- of the -- and the ability to  
9 raise an objection to the Lower White River Flow System, and  
10 that's a technical argument.

11 Sometimes people call those --

12 THE COURT: Well, that's a technical legal argument.

13 MR. DOTSON: It's a technical legal argument --

14 THE COURT: Yeah. It is. Sure.

15 MR. DOTSON: -- that has to be determined *de novo*.  
16 And because I have a terrible poker face, I'm anything -- I got  
17 to be transparent because I just can't -- I used to  
18 cross-examine witnesses walking away from them.

19 So I wanted to raise it to Your Honor because I got  
20 two hours and 56 minutes. I'm not going to need it all.  
21 Because I could see that there was some confusion here. And I  
22 appreciate Counsel's statements so that we can get the record  
23 at least as straight --

24 THE COURT: Let me --

25 MR. DOTSON: -- as we can.

1 THE COURT: Let me clarify it. Is any of that in the  
2 record on appeal?

3 MR. ROBINSON: Yes. It's in our petition. It's in  
4 our briefs and --

5 THE COURT: No. I mean the petition for a judicial  
6 review of 1303.

7 MR. ROBINSON: Yes.

8 THE COURT: Okay. All right. I just want to make  
9 sure.

10 MR. ROBINSON: He hasn't read our petition, nor has  
11 he read our briefs.

12 THE COURT: Wait, did --

13 MR. TAGGART: Your Honor, I thought that that was  
14 offered and it wasn't allowed based on a motion to strike.

15 MR. BOLOTIN: And there was certain -- I'd have to go  
16 back and look at the record --

17 MR. DOTSON: Let's put on the record who is speaking,  
18 please, so we get this --

19 THE COURT: Yes. Sorry, yes.

20 MR. BOLOTIN: This is James Bolotin, Deputy Attorney  
21 General for the State Engineer.

22 There was certain parts related to 1303 were in the  
23 record obviously.

24 MR. DOTSON: Sure.

25 MR. BOLOTIN: But then there were certain documents

1 that CSI did not introduce during the administrative process  
2 and they sought to do a request for judicial notice, I believe,  
3 with their opening brief.

4 THE COURT: Right.

5 MR. BOLOTIN: And we opposed the judicial notice  
6 because --

7 THE COURT: It was outside the record.

8 MR. BOLOTIN: -- they had a chance to put it in the  
9 record and it wasn't in the record.

10 THE COURT: Okay. All right. Well, I'll look  
11 through the record just to make sure.

12 MR. DOTSON: And it's a big record, so --

13 THE COURT: Oh, yeah.

14 MR. DOTSON: So let's get to the second point.  
15 Because here's the good news, Your Honor. I don't think you  
16 actually have to find -- as with -- as with many things in the  
17 law, you get to the same result on multiple paths. And I think  
18 the path is that the designation on the management --  
19 designation of that management area, the Lower White River Flow  
20 System, can be upheld.

21 And although this would be a highly technical --  
22 well, maybe not highly technical, a technical basis to reject  
23 their petitions, those who would challenge this issue, I think  
24 it is a valid one.

25 The next issue on this point is, I think the State

1 Engineer -- we think State Engineer possesses the legal  
2 authority to create and manage the Lower White River Flow  
3 System as a single basin made up of various sub-basins.

4 Third, that the creation of the Lower White River  
5 Flow System is based on substantial evidence.

6 And fourth, that the creation and management of the  
7 Lower White River Flow System makes just logical sense. It  
8 works. Sometimes, and we've -- I talked about this in my  
9 opening. And this is -- this -- this is where I'm going to use  
10 the same common sense argument that, and the power of the  
11 court, to enforce its decree for this point as well. And that  
12 was the argument I used against the State Engineer on the  
13 amount of flow in the Muddy River and allowing a huge reduction  
14 while still finding that not to conflict with the decree.

15 I think you can use the logic of the decree and, just  
16 like the jury instruction that says that our jurors can --  
17 don't have to check their common sense at the door, neither  
18 does -- do the judges, especially when it's the decree court  
19 who's ruling on the decree and enforcing it.

20 So getting to that first point, the time to challenge  
21 the creation of the joint management of the Lower White River  
22 Flow System has long passed. Now, maybe it's already been  
23 challenged. Maybe it's in some other court. I don't know.

24 But it is clear, this I do know, because even though  
25 I'm not a water law specialist, I take -- I took the CLEs when

1 I first started getting involved in this and -- and I can read  
2 statutes.

3           And as the Supreme Court justice who is my father's  
4 former law partner who swore my wife and I in Iowa said, you  
5 know, Rob, the advice I give was read the stuff that it's about  
6 and you can do most anything because if it's too complicated,  
7 we can't really enforce it at the Supreme Court. And I think  
8 that was pretty good advice that's worked pretty well for me  
9 since '94.

10           And we read a lot -- what this Court needs to do is  
11 really look at the cases and look at the statutes and think  
12 about those things. And I think there's, you know -- there's  
13 some science overlay, but those are just facts just like facts  
14 in any other case. And most of what you're going to be doing  
15 is applying law.

16           This statute 533.4 -- or 450, mostly dyslexic,  
17 requires a party to seek judicial review of any order or  
18 decision of the State Engineer within 30 days. I said in my  
19 briefs nobody did it because that's what I thought. Even if  
20 they did, it sounds like it at least hasn't been pursued. It  
21 may be stale. It may have been dismissed. I don't know. If  
22 it was dismissed, then this technical situation still exists  
23 and it's an impediment to those who are challenging this, so at  
24 least those that were included within that 1303 order.

25           Based upon the record that I saw, it does -- didn't



1 appear that any party had sought review within that period of  
2 time. But I will concede, and so that's why I put it in the  
3 slide, that the oral argument in -- before Your Honor this week  
4 has indicated to the contrary. And obviously, we've had a  
5 representation to the contrary.

6 Order 1303 remains in full force and effect regarding  
7 the creation and management of the Lower White River Flow  
8 System. And that would be my reading unless there's a petition  
9 for judicial review someplace else in this building.

10 Okay. But you know what, this is the -- 1309 did not  
11 create the Lower White River Flow System. In fact, even to the  
12 extent that 1303 has the words that I described, I don't think  
13 that makes sense because -- and I'm actually -- because I have  
14 so much time and we're a little ahead, I'm actually going to  
15 take some time to look at 1169.

16 Because in my opening and in some of the discussion  
17 by the State Engineer and some of the things that SNWA has  
18 argued, there has been the contention that this is not a new  
19 thing, and it's not. If you look at 1169, we're going to --  
20 actually going to look at this quote, it warns that development  
21 of the carbonate water is risky and effects may be disastrous  
22 for developers and current users.

23 So I'm going to switch here. It's not what I  
24 intended to do. This is 1169. This was entered in 2002 before  
25 I ever did anything in the water law. But look at the very

1 first sentence: Holding in abeyance the carbonate-rock aquifer  
2 system groundwater applications.

3 This -- so 1303, or the letter that counsel  
4 referenced, which as we've heard discussion about actually this  
5 week, that's not the first time things were -- the brakes were  
6 pumped in this aquifer system. Not at all.

7 And I want to actually take the time to go through a  
8 few other things. So -- all right. So here are all these  
9 recitals.

10 THE COURT: And this is slide?

11 MR. DOTSON: This is not a slide.

12 THE COURT: Oh.

13 MR. DOTSON: This is from the actual amended --

14 THE COURT: Order itself.

15 MR. DOTSON: -- record, which I have a little  
16 complaint about because it's so monstrous, it's really clunky.  
17 But this is the record on appeal at page 659. And so I  
18 literally have just loaded the amended record onto -- that's  
19 what's on the -- on this -- in front of you, actually.

20 So at the end of the first page we've got a -- the  
21 first recital that's kind of interesting. In 1984, the Water  
22 Resources Division of the United States Department of Interior,  
23 Geologic Survey, proposed a 10-year investigation of the entire  
24 Carbonate Terrane, I don't know if it's terrane or terrain --

25 THE COURT: Terrain?

1 MR. DOTSON: Maybe that's a fancy way of spelling  
2 terrain, which includes the carbonate-rock aquifers of the  
3 areas referenced above. This study was proposed because the  
4 water resources of Carbonate Terrane were not well-defined.  
5 The hydrology and geology of the area are complex and the data  
6 was sparse. And it cites to this -- let me get farther, lower  
7 here. Sorry. It cites to this memorandum, August 3rd, 1984  
8 from Terry Kaiser -- or Katzer, Nevada Office Chief, Water  
9 Resources Division.

10 Well, that's going to become pretty important because  
11 look at this next recital: Whereas, it has been known since  
12 1984 that to arrive at some reasonable understanding of the  
13 carbonate-rock aquifer system, substantial amounts of money  
14 would be required to develop the science. A significant period  
15 of study would be required and that, unless this understanding  
16 is reached, the development of carbonate water is risky and the  
17 resultant effects maybe be disastrous for the developers and  
18 current users.

19 My client was one of those current users that is  
20 referenced in this order. This is a coming straight from 1169,  
21 Your Honor. And this is 2002 that this is happening and it's  
22 quoting something from 1984. I was still in high school in  
23 1984.

24 These are all -- this is a whole list that Engineer  
25 Ricci put in of challenges, and I'm not going to go through

1 them all, because even if I've got 2 hours and 46 minutes, we  
2 all know we don't want to hear me talk that long.

3 But there is -- one of these that stuck out was the  
4 fact that there was no significant historical pumping of  
5 groundwater from the carbonate-rock aquifer system. The  
6 groundwater models can only be used as a limited predictive  
7 tool for estimating the principal location and magnitude of the  
8 impacts of pumping groundwater from the system.

9 One of the takeaways that you're going to see as you  
10 review this, and we're going to look at some of them, is they  
11 thought there was a lot of water that could be pumped without  
12 doing much. Otherwise, obviously, none of the things that  
13 happened would have happened.

14 And but they recognized even then, the relationship  
15 between geothermal systems, the hot springs that we're talking  
16 about that are in the headwaters to the Muddy River, and the  
17 deep carbonate-rock aquifers in groundwater flow systems is not  
18 well understood.

19 So everybody knew they were on maybe thin ice as they  
20 were making these applications. And there were hundreds of --  
21 well, I guess it would be thousands of acre-feet of  
22 applications that were held in abeyance by this order. And  
23 we've heard, it's in the record, it's in this document in  
24 reference.

25 Now we're down to page 3 of the order, and this is

1 record on appeal 661: Because assurances that the adverse  
2 effects of development will not overshadow the benefits -- all  
3 right. Will not overshadow, the benefits cannot be made with a  
4 high degree of confidence. The development of the  
5 carbonate-rock aquifer system must be undertaken in gradual  
6 stages, together with adequate monitoring in order to predict  
7 through the use of a calibrated model the effects of the  
8 continued or increased development with a high degree of  
9 confidence.

10 And obviously, this is all leading up to the State  
11 Engineer at that time, Hugh Ricci's thought that, well, we've  
12 got to finally get some pumping done because we've granted  
13 thousands of acre-feet of water and we really don't know how  
14 this carbonate-rock aquifer thing is going to work.

15 I'm not going to read all of this, but at the end of  
16 the next recital,

17 This approach would hopefully avoid the  
18 havoc that could be created by the curtailment  
19 of water by those who have come to rely on  
20 its -- it if impacts occur requiring curtailment  
21 of the water use.

22 There was reference earlier to yellow lights. Well,  
23 these are red lights. This is, you got to stop. They  
24 literally did stop and say we've got to get this pumping done.

25 The 1995 water resources investigation report

1 estimates the total water budget for all southern Nevada  
2 aquifers from the natural recharge to the mountains and  
3 subsurface inflow to the study area to be about 160,000  
4 acre-feet annually, and discharges from major discharge areas  
5 to be about 77,000 acre-feet annually.

6 I have this in red because it's particularly  
7 important to me. Because if you go down and you look at that  
8 footnote, you'll see that the discharge areas are identified as  
9 Muddy River Springs, 36,000 acre-feet annually.

10 Now, you'll recall from my opening that we'll  
11 compromise. We'll live with the result of this order. We're  
12 not going to appeal the determination that the -- the flow  
13 predevelopment was 33,000 or can be used, 33,090 can be used.  
14 But you can see that even as of 2002, they were using a much  
15 higher number. Which, as you review the other -- the other  
16 portions of the record that I referred to, particularly S --  
17 the SNWA report which is found beginning at page 41,930 of the  
18 record, there were periods of time where the flow was clearly  
19 higher than that. And you can make an argument that the flow  
20 was clearly higher than that and I guess that's what the State  
21 Engineer was saying here. But we're not -- to be clear on the  
22 record, that's not part of our petition for a judicial review.

23 Importantly, and this is a concept that I think  
24 Mr. Lake was discussing earlier when we were talking about  
25 recharge and subsurface flow in this next recital: Whereas, it

1 is believed that all of the recharge and subsurface inflow  
2 cannot be captured for use.

3 In other words, that 160,000 acre-foot number that we  
4 saw up above in this whole area of southern Nevada, they were  
5 recognizing that, well, we can't get it all. Plants are going  
6 to use some and, you know, you just -- it's not -- you can't --  
7 it's not just a -- it's not a budget where it's like my  
8 checking account where it can be measured with that precision.

9 So they had a big public hearing and apparently had  
10 it down here. And that's, you know, I guess interesting and  
11 perhaps important because of the ability to designate. And  
12 I -- I'm going to move away from this now, but the point that  
13 I'm making is, going back to my PowerPoint, is that it's not  
14 like 1309 in 2017, wow, look at this thing that just happened.  
15 That's not what occurred. And I know SNWA had suggested, well,  
16 really there's -- there was documents back from the '60s and  
17 things like that. Well, these are legal actions that are being  
18 taken involving the White River Flow System recognized and  
19 named by basin in 2002.

20 So in January 2014, and I don't know why I did this  
21 in my brief because there's this whole series of rulings that  
22 come in. For some reason, I picked, like, the second one here.  
23 But it had -- they all have similar language. And so this is  
24 reiterating what was obviously understood apparently back, at  
25 least in '84, that there is a close hydrologic connection

1 between these various sub-basins. So they're already calling  
2 them sub-basins, noting -- noted that -- or actually, that's  
3 me. That's my statement, sorry.

4 Noted that they share virtually all the same source  
5 and supply of water. So even if they are only now recognized  
6 and the nomenclature of sub-basin is used, back in 2014, it was  
7 understood.

8 And that is supportive in why the State Engineer's  
9 action in 1309 should not have been any surprise, with the  
10 exception perhaps of Kane Springs because, obviously, it wasn't  
11 included in those earlier discussions, though, I can't say what  
12 was included or wasn't included in the actual record with  
13 and -- and what the science was in the '80s, obviously.

14 And Vidler showed the carbonate-rock aquifer in that  
15 1169 references it as well, this underlayment. But it also  
16 talks about aquifers within the carbonate rock. So there seems  
17 to have been, at least as of 1169, an understanding that they  
18 aren't all connected.

19 Order 1303 recognized it as a joint administrative  
20 unit. And then they sought input about the geographic  
21 boundary. And clearly, based upon the record, it was then that  
22 Kane Springs and that -- was added and that this line was  
23 moved.

24 Actually, before I -- well, let's just -- let's just  
25 go ahead. Go ahead.



1           So let's talk about the legal authority to do it.  
2 And this is -- I kind of foreshadowed this earlier. Yeah,  
3 we've heard a lot about the fact that the word basin is not  
4 defined in the statute. That's really interesting. And I  
5 remember figuring that out, like, in 2010 because I -- I'd  
6 probably been working in this area for about a year before I  
7 realized that. And -- and I keep thinking, well, it's got to  
8 be someplace, but it's not.

9           And I think this -- the arguments you've heard this  
10 week, Your Honor, kind of explain why. It -- it would have  
11 been -- well, creating a legal construct that doesn't  
12 necessarily fit within the natural world. And so having it be  
13 more flexible makes the law able to be more flexible.

14           So but in this instance, we know that there is the  
15 stated policy. And you've heard a lot about 533.024 and -- and  
16 the policy of conjunctive management, and I talked about this  
17 in our answering brief. And we discussed how, you know, you --  
18 there -- we cite to some cases that this isn't just a  
19 throwaway, though, either. It is guidance. The legislature  
20 does provide guidance to the State Engineer here about the  
21 public policy of the state. And by the way, when we get to the  
22 end, it does make common sense too.

23           Now, there are some limitations put on that. And the  
24 State Engineer, at least in their briefing, certainly cited to  
25 this. And this is the protection of, in this instance, the

1 decreed water rights from my client and others similarly  
2 situated.

3           And there has been no showing that -- that the State  
4 Engineer's action isn't authorized by that, and in fact, isn't  
5 even necessary for there to have been a statute. If you just  
6 had a decree and you have just an enabling act that says, hey,  
7 you've got to help manage these decrees -- let's pretend we had  
8 a different system, right, which could happen, I suppose. And  
9 the State Engineer is not awarding permits and certificates and  
10 all that and it's just decreed rights. But the State Engineer  
11 is kind of like a water master.

12           Well, isn't that really what he's doing here? What  
13 he's doing is, he is making sure that the water that has been  
14 decreed under the prior appropriation document continues to  
15 flow and serve. That's what the creation of this area does.  
16 Because what he's identifying is, that is the area that impacts  
17 these -- this decreed water.

18           Now, there's a question about what -- how much can be  
19 pupped. And on that, you know that we disagree with the State  
20 Engineer about the 8,000. We disagree about the number, but we  
21 don't disagree that there has to be a cap and there has to be  
22 control. And in fact, it is our position that this statute and  
23 the decree is what authorizes the State Engineer to take  
24 whatever action is necessary to make sure that that water is  
25 protected.

1 In fact, to not do so, he would have to violate that  
2 statute. He would have to violate your decree. And frankly,  
3 we think that's what's happened with the 8,000. But there is  
4 some number of less than that that probably would be perfect  
5 and would be fine.

6 Now, this comes back to my mistaken understanding.  
7 534.030 allows the State Engineer to, quote, designate basins  
8 and to make other describing boundaries. Now, you've been  
9 focusing on that word, area. I focused on that as well in that  
10 statute. Well, in that statute and in 534.020.

11 And it doesn't say that the area has to be -- it uses  
12 the example in the language of within the -- the basin, but it  
13 doesn't limit the -- it doesn't say it has to be within a  
14 basin.

15 The State Engineer may -- and now, this is 534.020:  
16 The State Engineer may make rules and regulations within an  
17 area designated by him wherein his judgment the groundwater  
18 basin is being depleted.

19 Well, he made the determination that all of these  
20 basins, save and except Kane Springs, were designated basins.  
21 And if you look at 1303 on the second page, it goes through  
22 those. I'm just going to click off so I can tell what slide  
23 I'm on. I am on Slide 6 now, Your Honor.

24 What's more is there is substantial evidence in the  
25 record to support the creation of the White River Flow System.

1 We've talked about a lot of that already. And but what is  
2 substantial evidence, that which a reasonable mind might accept  
3 as adequate to support a conclusion.

4           Importantly, just because there is contrary evidence  
5 doesn't mean there's not substantial evidence. It doesn't mean  
6 everything would have to be -- if that were the case, we'd  
7 have -- never have a decision in any court, frankly, because  
8 you better not get to trial if there really is no question of  
9 fact and there's no substantial evidence -- there's no evidence  
10 if -- if not substantial, in a contrary position.

11           So the mere existence of a geologic study proposed by  
12 Coyote Springs doesn't mean that the -- that the State Engineer  
13 can't make a decision that runs contrary to that geologic  
14 study. What the -- what the State Engineer has to do is, it  
15 has to -- he has to or they have to look at that evidence,  
16 assuming it's valid evidence, and then weigh it in the  
17 decision, which that clearly did happen.

18           In this instance when you look at 1309, the -- the  
19 State Engineer goes through the evidence. And it is clear,  
20 based upon the conclusion and those words there, that greater  
21 weight was placed on the hydrographs and the pumping and his  
22 own professional judgment than the determination and the expert  
23 testimony regarding, in the example I gave, the geologic  
24 testimony that might separate certain areas from others.

25           He made the determination that the results of the

1 1169 aquifer test show hydrologic connection between the  
2 various sub-basins. And that's a basis, in MVIC's view, and  
3 provides substantial evidence that you have to create this  
4 area, whether you call it a basin or you call it several basins  
5 that are jointly administered and conjunctively administered as  
6 well, obviously, is probably form over substance.

7           It seems to me because he -- you know, again,  
8 listening to the evidence -- this wasn't really the way I  
9 walked in this -- this week, but listening to the arguments and  
10 listening to the -- looking at the law and considering it, if  
11 in 1968 all of these basins were created by him, why would it  
12 not be within his authority to say, well, these are all  
13 sub-basins of one actual basin, which makes more sense  
14 scientifically and logically, than to try to just figure out  
15 how each of these six or seven basins works if they were  
16 separately administered.

17           The test showed that pumping within one or more of  
18 the sub-basins affected water levels in adjacent basins that  
19 shared the same supply of water and that the level of water  
20 decline encompassed 1,100 square miles.

21           So there was argument yesterday from Vidler about  
22 it's only six inches, right. Six inches over 1,000 -- and some  
23 places it's more than six inches, by the way. But even if it  
24 were only six inches, over 1,100 miles, that's a lot of water.  
25 In --

1 THE COURT: Let me just -- let me just clarify  
2 something.

3 MR. DOTSON: Yeah. Sure.

4 THE COURT: So because you just said, made the  
5 argument that if the -- if in 1968 the State Engineer created  
6 all these basins that, you know, it would still be within his  
7 authority to change the areas of these basins. My  
8 understanding is that he didn't actually create that basins; is  
9 that correct?

10 MR. DOTSON: That's true. I guess God created the  
11 basins --

12 THE COURT: Oh.

13 MR. DOTSON: -- and -- or a supreme being, in my view  
14 and that --

15 THE COURT: Well, I mean --

16 MR. DOTSON: -- and that the --

17 THE COURT: I don't mean create that way.

18 MR. DOTSON: I know.

19 THE COURT: I mean delineate.

20 MR. DOTSON: He -- he and the federal government, and  
21 if you look at the -- maybe this isn't in 1169, but it is --  
22 it's in something I've read recently, that the geologic -- the  
23 federal government through, I think, the geologic survey in  
24 conjunction with the State Engineer's office, and made a  
25 determination of these areas.

1           And if you look at the map, and it's -- that's in the  
2 record and I think there's one in the record that -- that  
3 actually has more topography shown. You know, generally  
4 speaking, what it seems like they're trying to do is they're  
5 trying to pick valleys where it's a closed valley or a  
6 close-to-closed valley, but most of them aren't closed valley.

7           You know, the basin that I'm most familiar with is  
8 Lake Tahoe, which rests on the state line, of course, because  
9 California moved the state line on us so they could steal  
10 60 percent of my lake. But that is a closed basin, except for  
11 where the Truckee River comes out, right. So consequently, it  
12 filled up, kind of like what Mr. Taggart was saying. Well, if  
13 it just keeps snowing and the water doesn't go anywhere, well  
14 then it fills up. Well, that's happened there.

15           And so the State Engineer didn't create the basins,  
16 either you know, metaphysically or by himself, but they did  
17 work conjunctively with the federal government to identify  
18 them. And doesn't that make sense.

19           Counsel for -- for Coyote Springs made an interesting  
20 argument yesterday about California law, maybe it was two days  
21 ago, about we -- there's a rule against segmentation in  
22 California because you could make mistakes and things like  
23 that. But the truth is human experience tells us that it's  
24 always easier to deal with a smaller thing than a bigger thing.

25           I also found that argument interesting because that's

1 exactly what they're asking to do. He warn -- Coyote Springs  
2 was warning against segmentation, but yet, they're asking this  
3 Court to administrator it by each basin, which as we'll see  
4 later just doesn't make logical sense.

5 Can I switch to this ELMO for a moment? Is there a  
6 way to switch the -- I just turned it on. I want to talk about  
7 that 6 inches.

8 THE CLERK: Did someone unplug it?

9 MR. DOTSON: Well, that -- well, it has power.

10 THE COURT: Is it --

11 THE CLERK: I noticed there was some cords, the  
12 lights are on.

13 THE COURT: No. The lights are on.

14 THE CLERK: But I mean --

15 THE COURT: Is it plugged down there?

16 THE CLERK: I think there's other cords to it. I  
17 have it on -- on now and it isn't --

18 MR. DOTSON: Oh, you have it on?

19 THE CLERK: -- working.

20 MR. DOTSON: I've got it on.

21 THE CLERK: We have never used it in here, so --

22 MR. DOTSON: Well, let's never mind then.

23 THE COURT: Not yet.

24 MR. DOTSON: I guess I'm not going to do this. Well,  
25 I'll draw and then I'm going to try to -- and I'll hold it up



1 and then we can put it in as an exhibit if you want, if anybody  
2 wants, but --

3 So you asked Counsel for Center for Biological  
4 Diversity a question about water level and -- and this is why I  
5 was trying to help him with this because I thought maybe  
6 drawing a picture might be helpful.

7 And so -- so say that this lower line, which is  
8 conveniently blue -- we'll make this red instead, the surface.  
9 Let's say the red line is the surface of the earth and the blue  
10 straight line below it is the water level, the water table in  
11 that area. And right here, that water comes out as a spring,  
12 right.

13 THE COURT: And you're pointing to a --

14 MR. DOTSON: I'm pointing to a little X I put in  
15 the --

16 THE COURT: -- a midpoint where --

17 MR. DOTSON: Yeah.

18 THE COURT: Okay.

19 MR. DOTSON: On the -- on the red line. And then  
20 that water, which in my hypothetical here is the Muddy River,  
21 right, that water then flows down and joins with other springs  
22 and that becomes the Muddy River. And that's why when we talk  
23 about the elevation of the spring on the -- it's important.

24 Now, they use that term, again, because I'm  
25 relatively new, in this room at least, to water law, they talk

1 about the elevation of the head. What they're talking about  
2 then, I'll draw a line, is -- and I drew two parallel red  
3 lines. Let's say I drill -- somebody drilled a well and the  
4 head was where that water table was. That's where you first  
5 hit water. That's that elevation. It's that many feet below  
6 the surface, whatever. And it has an actual elevation on the  
7 earth I guess, as well.

8 But the point, well, that I would make and I think  
9 was trying to be made earlier is, let's say that the water  
10 level is actually only six inches above that point where the  
11 spring is. Once the water level goes down to -- let's take  
12 this -- let's call this number one. Let's say the water level  
13 goes down to point two, now there's no way for this water to  
14 get up to here. It can't bump up.

15 And so that's why there's so much discussion in this  
16 case, and you'll see in the record when the experts talked --  
17 talk about the height and the change in the water level.  
18 That's why it's a concern, especially with regard to a spring.  
19 Because, you know, I don't know, maybe the water level is 10  
20 feet above that spring right now. But even if there's 700 feet  
21 below, if you lose 20 feet, it doesn't matter. That's the --  
22 that's the concern that I think was trying to be articulated  
23 there.

24 Now, so that's why six inches is still a lot of  
25 water. And I think it was, you know, I think it's clear from

1 the reaction after the 1169 pump test, which wasn't as much.  
2 When you read 1169 and you read how many acre-feet were  
3 supposed to be pumped for two years and how many feet were --

4 THE COURT: That's much more --

5 MR. DOTSON: -- fortunately for my client, that much  
6 wasn't pumped and -- and you know, I want to speak for a moment  
7 about that.

8 You know, MVIC has been patient. Water law takes a  
9 long time. But the record here, Your Honor, makes it clear  
10 that for 30 years off and on my client has been suffering  
11 injury. The pump test caused injury. But in my own mind, it's  
12 kind of like I have something wrong with my knee and it's  
13 actually interfering with my skiing a little bit and I won't --  
14 going to probably have to have it scoped or some surgery done.

15 Now, God forbid, hopefully it doesn't result in the  
16 amputation of my leg, but to my client, MVIC, they -- this is  
17 all kind of the surgery to fix and cure their water right so  
18 their water right gets back, right. And that pump test, as you  
19 can see from all the hydrographs you've seen changed and -- and  
20 it caused damage, but it was understandable damage. It was not  
21 like -- it wasn't an assault on MVIC. It was in order to  
22 figure this out and ultimately protect those rights.

23 And that's fine and that's the process that the State  
24 Engineer was undergoing with 1169. That, I would argue, and  
25 I'm suspect the -- I would argue in favor of the State

1 Engineer. I'm sure the State Engineer would say the same,  
2 that's what's happening right now. That's what happened in  
3 1303. That's what's happening in 1309.

4 They're trying to -- the State Engineer is trying to  
5 execute his public trust obligations and not allow people to  
6 too much rely on water rights that will eventually have to be  
7 curtailed, because eventually my client will run out of  
8 patience and we are a prior appropriation state and will say  
9 no, no mas, we are done.

10 The State Engineer took a lot of other evidence that  
11 was adverse to joint administration and -- but what's  
12 interesting here is although there's some arguments about  
13 geology and about interconnection, it's mostly a technical  
14 argument that is being made.

15 And the existence, the mere existence of some factual  
16 information that contradicts a vast majority of other  
17 information in support of a joint area means that there is  
18 substantial evidence to support it. And that his finding is  
19 supported by substantial evidence.

20 Now, we're getting to the state -- the creation of  
21 the Lower White River Flow System makes logical sense.

22 THE COURT: And this is slide?

23 MR. DOTSON: This is -- let's just see. Because  
24 my -- I couldn't even send a printout to get a print -- this is  
25 Slide 8, Your Honor.

1           So there's a few books that exist out there, and one  
2 of them is this guy named James Davenport and he's referenced  
3 sometimes in the law. And I think he's still alive. And this  
4 is a quote from that book: Where groundwater and surface water  
5 systems are interconnected, they should not be viewed as  
6 separate sources in water management decisions.

7           Okay. And it's kind of like a treatise, I guess, is  
8 what it is. It is a treatise on water law. And it just does  
9 make common sense. If we know that there's an interconnection  
10 between these water sources, and in particular in a situation  
11 such as this, and this is very frequent as you've, I'm sure,  
12 identified during the arguments this week, that the surface  
13 water were the -- were the easiest -- that was the easiest  
14 water to put to beneficial use. So of course those are the  
15 oldest rights. And it's going to be true probably everywhere  
16 in the state.

17           And many, if not all, of those systems -- I'm sure  
18 not all, but many of those systems are decreed rights, such as  
19 this. And so if you don't take into account the effect of  
20 groundwater pumping on those decreed rights, you will  
21 invariably violate the decree, which is where I started  
22 yesterday.

23           And so to the extent that the creation of a joint  
24 area for management, the Lower White River Flow System in this  
25 instance, is being done by the State Engineer so that he can

1 protect those rights. He's following the law and it's making  
2 common sense, given the whole purpose of that office.

3 Now, there was some discussion by Coyote Springs  
4 about, well, what I care about is what happens in Basin 210.  
5 Here's the problem: The water can flow from one basin to  
6 another and it is undeterred. It does not care about the  
7 construct of artificial lines on a map. That water molecule  
8 doesn't know anything about the 232 basins that we've designed.  
9 It does not care.

10 It's going to flow. And since we know that it flows  
11 from these basins to each other and that that is the water that  
12 eventually comes out and serves my clients, it would be  
13 improper for the State Engineer to not consider that. And  
14 therefore, it is proper that the State Engineer did consider  
15 it.

16 Also, as much as everyone would like in this room,  
17 and I'm sure we would all like it, the State Engineer, nor the  
18 state, nor even you, Your Honor, can cause more water to exist  
19 within the Lower White River Flow System. The amount of water  
20 that is there is the amount of water that is there. And by  
21 simply deciding you segment it into separate basins, six or  
22 seven separate basins, and then you try to administrator it  
23 within those separate basins, all you're doing is using the  
24 legal construct that we've done for convenience and setting  
25 yourself up for disaster.

1           You can't just administer Basin 210 and ignore the  
2 other basins around it. Let's just pump all the water we can  
3 out of 210 and then we'll, I guess, have all the water from the  
4 other basins flowing towards it and no water coming out of the  
5 Muddy River. That's why the State Engineer in Order 1169 did  
6 what he did, because he realized you couldn't just do that.

7           Now, and I don't know if this is -- this is the place  
8 for it, but one of the attacks that we've heard against the  
9 State Engineer relates to the public trust doctrine which, in  
10 my opening, I indicate is consistent with support of the  
11 decree.

12           And I think I cited to and I want to just read from  
13 *Mineral Country versus Lyon County*, and this is Judge Stiglich  
14 speaking in the majority. And this is -- you don't have to go  
15 very far into the opinion. This is on the third paragraph: We  
16 further hold that the state engineers -- that the state's --  
17 I'm sorry, let me start over.

18           We further hold that the state statutory water scheme  
19 is consistent with the public trust doctrine by requiring the  
20 State Engineer to consider the public interest when allocating  
21 and administering water rights. That's from the majority.

22           So just -- I just thought -- I didn't have a really  
23 good place to put that in, but that ties into the concept of --  
24 and you know, we're not taking a position with regard to the  
25 dace. I think it's clear that when there's water, which helps

1 my client, apparently that is great for the dace too.

2 But there's a lot of other issues here too. And the  
3 public interest factor doesn't obviously just end when the  
4 water right is granted. That's what that language says. It  
5 continues while you administer. And that's the importance --  
6 well, one of the importance -- part of the importance of that.

7 It also means in my opening, and I would suggest this  
8 is supportive of the state engineers, that sometimes the State  
9 Engineer and the Court has to make those tough decisions  
10 because of the public trust doctrine so that we can rely upon  
11 these decreed rights. And each of the junior rights that  
12 took -- and I don't know how many times you're going to hear  
13 this, I'm sorry, took with the understanding they got -- they  
14 were granted those rights with the understanding that they were  
15 less senior.

16 And as you saw from the 1169 recitals that I took the  
17 time to put in front of you, it was very clear in 2002 the  
18 jeopardy that existed as to how certain are these water rights  
19 that we've been granting and nobody's been pumping, and how  
20 important it was that, unlike some areas where you pump right  
21 after you get the water right, that hadn't happened here. And  
22 so he had to actually order everybody to pump so that he could  
23 figure out what the reaction of the system would be.

24 Okay. A few other attacks on the State Engineer,  
25 that there should be a separate administration of ground and



1 surface water. Again, I think we've -- I've already talked  
2 about that. It just doesn't make logical sense, right. Not  
3 only is there an encouragement of conjunctive management, but I  
4 don't care where AB 51 got granted or didn't. The bottom line  
5 is, he -- there's a decree that was entered in this Court in  
6 1920, and that is his job to defend. And it was said, you  
7 know, the -- well, I think I'll have it in here probably about  
8 take the -- you know, granteth and taketh away. Maybe that's  
9 what he has to do.

10 But the second argument that is being made is the  
11 basin-by-basin management argument. I've already -- I've  
12 already said that doesn't really seem to make sense because it  
13 will result in segmentation. It will result in the very  
14 disaster that was warned of in 1984 and revisited in 2002 and  
15 acknowledged and tried to be prevented in Order 1303 and in  
16 1309.

17 The decree was entered at a time where neither of  
18 those legal constructs were memorialized in statute. And the  
19 decree does not defer to either concept. You can look  
20 throughout the decree, and I've already encouraged you to do so  
21 because it's your court that you're enforcing. And they're not  
22 limiting those -- the protection of those sources of water to,  
23 as I say at the last bullet point, to the county line, to a  
24 particular basin. There's no such limitation in the decree;  
25 and therefore, there's no such limitation to this Court in

1 supporting the State Engineer in his efforts to protect the  
2 decree. And that is a reason not to overturn that portion of  
3 the decree.

4           The State Engineer was right to protect the tree --  
5 the decree. The State Engineer can giveth and he can taketh  
6 away. Indeed, he must. Each of these water rights that was  
7 granted after 1920 -- actually, after 1905 because the 1920  
8 decree refers back and identifies that those waters were put to  
9 beneficial use in 1905, they all take subsequent.

10           And NRS 533.0245 is all the farther that the -- that  
11 the state -- all the other -- all the instructions that the  
12 State Engineer needs to support his decision, if that decision  
13 is what is necessary to protect the decree. In fact, to do  
14 otherwise would allow his actions to damage the decreed rights.

15           In other words, if this Court were to say, you know  
16 what, you don't have authority to create this joint management  
17 area, then what this Court would be doing is it would be  
18 telling the State Engineer, listen, I know you've said the only  
19 way you could protect these decreed rights is to administer all  
20 these rights together, but I'm not going to let you do that.

21           Well then, how is he going to protect the decreed  
22 rights? I guess he'd have to go from basin to basin. Maybe he  
23 could do that. I mean, I think in my answering brief I argued  
24 that he should do that. He can do that. It's really a -- I  
25 think that's where I did the -- that was in the reply, the rose

1 by any other -- I quoted Shakespeare. But it wouldn't make any  
2 difference. He'd have to do it that way.

3 But the problem is, because the gradient is so  
4 flat -- SNWA today showed a map where the blue lines and the  
5 flows from different basins and certain paths are recognized  
6 because there's a lot of gradient, so there's a lot of flow.  
7 But if the flow is just a matter of -- if the gradient  
8 variations are a matter of a few feet or a few inches and the  
9 slope is so incredibly tiny, then it's not going to take much  
10 and it's going to be difficult to rely upon those -- it makes  
11 it very difficult on a basin-by-basin basis, you could see,  
12 because of the fact that that gradient is not nearly so strong  
13 as it is in other parts of the state. That's the importance,  
14 at least to me as I understand it, of the comment from the  
15 experts that, oh, yeah, this is incredibly flat.

16 So how can the State Engineer -- this is my fourth  
17 bullet point, and for the record --

18 THE COURT: Which slide?

19 MR. DOTSON: -- this is on page 10 of 11. How would  
20 it possibly make sense for the State Engineer not to adjust his  
21 decisions based upon new science?

22 In 1491, except for Norwegians who had figured out  
23 that the world was round, everybody thought the world was flat.  
24 Are we still -- well, I mean, some of us are, but most of us  
25 aren't walking around still thinking the world is flat and that

1 that sun is spinning around this earth.

2 It would make no sense if whoever was Caesar at the  
3 time sat down a rule that -- I guess it wouldn't have been  
4 Caesar. I'm mixing up my -- if the queen --

5 THE COURT: History.

6 MR. DOTSON: -- said no, you -- you cannot use that  
7 new technology and you must not sail any farther than this.

8 No. You're not going to do that. You're going to  
9 pay attention to the natural world around it as we understand  
10 it now. And what is clear is that our understanding of the  
11 natural world is evolving. And in these legal documents, it is  
12 one of the things I actually do dig about this area of the law,  
13 you can actually see that evolution of technology.

14 There are things that are -- that the methodologies  
15 that were used in the CSI geologic study, that's great. I  
16 mean, we're actually looking into the earth, right. And I'm  
17 sure we're going to get new and better things in that regard.  
18 And that will allow us to figure out, hey, maybe there's a  
19 pocket of water in -- in one of these basins that is totally  
20 isolated. But that's going to take further study.

21 The study -- the information we have right now is  
22 that the water looks flat from all these wells. And if we  
23 don't administer and let the State Engineer administer these,  
24 at least jointly if not in one basin, we are going to send  
25 ourselves to a disastrous conclusion.

1           There was a comment -- and this doesn't really  
2 necessarily fit about headward waters versus tributaries. And  
3 you had this -- a question about that. I don't think with  
4 regard to my client, with regard to the State Engineer's  
5 decisions here, that it makes any difference.

6           The point is, the decree says sources of water. Any  
7 water that is in the river at the point of diversion for my  
8 client is supposed to be my client's water. That's the whole  
9 point of that second grant. And I -- you know, I only mention  
10 this because of the -- of the question that was -- that was  
11 posed. This is my last slide. I think this is Slide 11.

12           Some have criticized the State Engineer and said,  
13 well, wait a second, we'll just -- the State Engineer, if you  
14 let him do this, he's just going to start strapping together  
15 basins all over the place. And I don't think I've actually  
16 heard the slippery slope term be used, but that what's it  
17 sounds like to me. It sounds like, okay, somebody's making the  
18 slippery slope argument.

19           But well, number one, there's a lot of areas in law  
20 where we do just recognize there's a slippery slope, right.  
21 But that doesn't keep us from having to administer the law in  
22 those areas. And we have -- we put certain right -- certain  
23 limitations on free speech. It doesn't -- just the mere fact  
24 that there may be some challenges doesn't mean we don't allow  
25 that to happen and we have to allow that to happen here.

1           In this instance, that determination of administering  
2 jointly several basins and making them sub-basins is supported  
3 by substantial evidence. And no matter what -- well, I would  
4 encourage that this Court's decision state as much. Because I  
5 think that's what the State Engineer is saying, saying I have  
6 substantial evidence.

7           And if this Court finds that there was substantial  
8 evidence, then that supports that decision. And if in the  
9 future there's a determination made that, I don't know what  
10 basin it would be, but say -- say the basin that Lake Tahoe is  
11 in and the basin that Carson City is in, and as far as I know,  
12 there's no hydrologic connection but we're going to  
13 administrator them together.

14           Well, there's probably not going to be substantial  
15 evidence for that, right. It just doesn't make sense, even  
16 though they are adjacent. So and then there could be a  
17 petition for judicial review at that point and you, or whoever  
18 the judge is that happens to get that, in that hypothetical I  
19 guess it would be probably a judge in Carson City --

20           THE COURT: Yes. Not here.

21           MR. DOTSON: -- Judge Wilson can decide, oh, yeah,  
22 there's -- there is or there isn't substantial evidence.  
23 That's why we have the system we have. And the mere fact that  
24 we would have to employ our legal system isn't a reason to not  
25 allow an application of the law. That's not a reason to say,

1 okay, sorry, I guess we're just going to have to let these  
2 decreed rights be violated and conflicted with because that's  
3 too hard and we can't -- we can't figure that out. That  
4 wouldn't make any sense.

5 So I think I've already made that clear with the  
6 opening on my mea culpa, my third point. It was my belief that  
7 534.030 designation had occurred to all of these basins. It  
8 hasn't. I think it's pretty clear that it's -- but it's -- but  
9 it does apply to most of them, everything but Kane Springs.  
10 And therefore, 534.020 applies to six of these basins.

11 Another little housekeeping item, on 1303 if you go  
12 to Footnote 21, there's a typo there. And it says, id -- was  
13 it Footnote 21? Oh, not 1309, sorry.

14 For Footnote 21, it says id, and the Footnote above  
15 it is 532.120. But if you look at the language that is cited  
16 at Footnote 21, it states: Whereas, within an area that has  
17 been designated by the State Engineer as provided for in NRS  
18 534 wherein the judgment of the State Engineer the groundwater  
19 basin is being depleted, the State Engineer in his or her  
20 administrative capacity may make such rules and regulations and  
21 orders as are deemed essential for the welfare of the area  
22 involved.

23 That's clearly 534.120. And I think that some people  
24 may have argued that he didn't rely upon 534.120. But that  
25 language, even though he's citing to 532.120, is clearly almost

1 a direct quote. So that's further support legally for his  
2 decision in 1303.

3 Now, lastly, I guess, the State Engineer makes a  
4 determination that 8,000 acre-feet can be pumped. And as you  
5 know, we do not agree with that so I'm not supporting that. We  
6 do support that some cap below that should be arrived at. And  
7 we say that because if you just read the order and you look at  
8 the science that he cites to, it clearly just doesn't make  
9 logical sense because it couldn't physically return the flow of  
10 the river back to its predevelopment flows if you are just  
11 maybe reaching a steady state.

12 Yesterday, the State Engineer -- and this is just  
13 kind of a friendly clarification or amendment, in support of  
14 the order said the perineal yield of the area of the Lower  
15 White River Flow System was 8,000 acre-feet. And maybe that is  
16 correct in water-speak, but so as to avoid the confusion, I  
17 think that meant above the decree. So in other words, above  
18 the decreed flows.

19 In my argument on behalf of the State Engineer would  
20 be that that must mean it's 8,000 plus 33,900 is the perineal  
21 yield of this area, because that's how much the flow is coming  
22 out of the Muddy River, there should be coming out of the Muddy  
23 River, 33,900. The problem is, that math just doesn't make  
24 sense which is why we didn't support him on the 8,000.

25 But clearly, there is some perineal yield above, or



1 at least my client thinks, there's some system perineal yield  
2 above the flow of the Muddy River. In other words, there is --  
3 you know, maybe it's not the 100,000 acre-feet that somebody at  
4 one point in time thought could be pumped from this area, but  
5 there is some amount that can be pumped from this area. And  
6 this Court, although we urge a reversal of the 8,000 acre-feet,  
7 should support the State Engineer's determination that some cap  
8 that is consistent with the additional available water over and  
9 above the decree can be developed and put to beneficial use  
10 from the groundwater of this area.

11 Court's indulgence while I consult with my  
12 co-counsel. All right. So after consulting with -- consulting  
13 with Mr. King, he has a -- he has a great breadth and depth of  
14 knowledge in water law. And he has pointed out to me that, in  
15 fact, the Davenport book and other sources identify that they  
16 don't really call them designated or delineated. They talk  
17 about the basins having been mapped.

18 And that actually makes perfect sense, and it makes  
19 sense considering the argument we've seen this week and some  
20 statements from the -- from -- well, from multiple parties.  
21 But sometimes there's adjustments to the boundary lines of the  
22 maps for these basins. It's not that somebody's out there with  
23 a bulldozer changing the physical world. It's that they're  
24 recognizing this artificial construct that we've utilized to  
25 ease the administration burden for the State Engineer doesn't

1 match the physical reality. And so therefore, they've modified  
2 it. So they've been mapped.

3 Thank you, Your Honor.

4 THE COURT: Okay. Thank you. All right. So should  
5 we take maybe a short 10-minute break? Is that --

6 MR. ROBINSON: Perfect.

7 THE COURT: All right. Then I think next up is  
8 Georgia-Pacific. All right. Am I -- I think that's who it is.  
9 Yeah. I have Georgia-Pacific and then Lincoln Vidler.

10 (Proceedings recessed at 2:17 p.m., until 2:28 p.m.)

11 THE COURT: Okay. So the timer is ready. So  
12 whenever you're ready, Mr. Foletta.

13 MR. FOLETTA: Okay. Thank you, Your Honor.

14 **ARGUMENT FOR GEORGIA-PACIFIC AND REPUBLIC ENVIRONMENTAL**

15 MR. FOLETTA: Lucas Foletta for Georgia-Pacific and  
16 Republic.

17 I just wanted to make a couple comments -- this is  
18 going to be very brief -- in response to the Center for  
19 Biological Diversity's petition for judicial review and the  
20 brief they filed in support of that.

21 They make -- and the procedural kind of posture is a  
22 little awkward obviously because we all have our own petitions,  
23 and we're filing briefs against others, and both the --

24 THE COURT: I've never had anything like this before.

25 MR. FOLETTA: Yeah. Both the Center and we are

1 asking that the, you know, change be made to the order in  
2 effect as to the same issue. In fact, the pump limit, but, of  
3 course, they want the -- they think the number should be lower,  
4 and we think the number should be higher.

5           So, but they make two basic arguments. One is that  
6 the 8,000 acre-foot limit is not based on substantial evidence  
7 itself. And the other is that the State Engineer failed to  
8 appropriately assess the impact of the declining stream flows  
9 on the dace. So they're kind of connected, but as I read their  
10 brief, that's how they've articulated their position.

11           So with respect to the first issue, whether there's  
12 substantial evidence to support the 8,000 acre-foot limit.  
13 Obviously our position in our case is that there isn't  
14 substantial evidence to support the 8,000 acre-foot limit  
15 because we think the weight of the evidence is that the limit  
16 should be higher.

17           That said, assuming for the sake of this argument  
18 that the issue is really what CBD thinks about the limit, what  
19 I would do is just, one, I would incorporate by reference my  
20 comments from yesterday about, you know, our views about why  
21 there isn't substantial evidence to support even the 8,000  
22 acre-foot number, let alone a lower number. So, you know, we  
23 talked about just the fact that there was not a consensus about  
24 what the limit should be in the expert testimony, that there  
25 was a range of testimony as to what the number should be, from,

1 you know, like zero to up to 30,000 acre-feet and that the  
2 State Engineer had made -- commented on some limitations of the  
3 evidence that he had in front of him.

4 All those critiques are equally applicable to the  
5 position that the Center for Biological Diversity is taking.  
6 So that's kind of a long way of saying we also don't think that  
7 there's substantial evidence that could support the Center's  
8 position, right, that the number should be lower.

9 I would just add sort of one thing for the Court to  
10 consider, to put a cap on that, and I didn't talk about this  
11 before, but it has to do with Kane Springs. And I don't want  
12 my friends with an interest in Kane Springs to get mad at me  
13 because we are not advocating for the inclusion of Kane Springs  
14 in the Lower White River Flow System.

15 But if we're assuming that the order is -- if we're  
16 assuming that the order is legitimate in all respects other  
17 than those that the Center has raised, then what I would say is  
18 that one thing that stands out about the order and that -- and  
19 this is I think this is a criticism of the Center's position as  
20 well is that Kane Springs was added to the LWFS -- LWRFS in  
21 1309. It wasn't in there in 1303.

22 You recall the hearing was all about what we should  
23 do with respect to the Lower White River Flow System, and so --  
24 and people were commenting on the 1303 reports, right. So with  
25 respect to Kane Springs, there was a lot of evidence or

1 analysis of what the impact is of including Kane Springs in the  
2 basin. There was some. There was an SNWA report that I think  
3 concluded that Kane Springs could contribute about 4,000  
4 acre-feet annually a year to the system as a whole. That  
5 analysis is not reflected in either the State Engineer's  
6 position or the Center's position, which would suggest that the  
7 8,000 acre-foot number is lower than it should be if you assume  
8 that Kane Springs should be in the basin.

9 And so --

10 THE COURT: If you're doing the math that they  
11 should -- that they would be contributing 4,000, then that  
12 would raise the number.

13 MR. FOLETTA: It would raise the number. I'm not  
14 saying it raises it one to one, but the number, it supports the  
15 idea that the number is not too low and indeed should be  
16 higher. And so I don't -- this isn't reflected in the Center's  
17 analysis. And so again I think that analysis suffers from a  
18 lack of substantial evidence. And consequently if the State  
19 Engineer were to be reversed along those lines, I don't think  
20 that would be appropriate.

21 The other thing I wanted to address is the second  
22 issue, which is the State Engineer's assessment as the Center  
23 characterizes it, of the impact of declining stream flows on  
24 the dace. You know, we have talked about in our briefing -- I  
25 think we talked about a little bit the other day sort of the

1 position that the Fish and Wildlife Service had took in the  
2 hearing, and Ms. Peterson talked to you about that and showed  
3 you I think a transcript where there was a back and forth and  
4 some questions about whether they felt that there was a take  
5 occurring or not.

6           What our position is with respect to the Center's  
7 argument is that there really again isn't substantial evidence  
8 to support the notion that -- that the declining -- that there  
9 are declining stream flows and that that is the cause of one of  
10 the concerns about the dace. In other words, there are other  
11 things going on that undermine the assertion that it's all  
12 about kind of stream flows and that we should be looking closer  
13 at that, right.

14           So, for example, we had the memorandum of agreement  
15 that you've heard about multiple times. I'm not going to show  
16 it to you, but there's a page of the memorandum of agreement.  
17 It's at the record at 531.4041 I believe, and it's pretty  
18 interesting because it shows you how the parties to that  
19 agreement had come up with a rubric to kind of work through the  
20 dace issue. And so as the stream flows decline from 3.2 down  
21 to I think 2.7 CFS, the pumping also declines. That was the  
22 basic agreement. So stream flows are declining. Pumping  
23 declines as that happened, and that's the basic framework.

24           The interesting part about it is 3.2 was the starting  
25 point, not the endpoint, right. So you started at 3.2. And I

1 think the first requirement is that the parties confer with the  
2 Fish and Wildlife Service at that point when it gets to 3.2.  
3 As you go down to 2.7, it goes from 3.2 to 3.0 to 2.9 to 2.8 to  
4 2.7. Then pumping declines and some other things happen. But  
5 the point is the agreement doesn't reflect the notion that  
6 3.2 is the bare minimum -- 3.2 CFS is the bare minimum. Yet  
7 that is the number that I think the Center seizes on a bit and  
8 the order itself is focused around.

9           So I would agree I think -- somebody earlier talked  
10 about this because there was a question about kind of the scope  
11 of the agreement, to whom it applies and where it applies and  
12 so forth.

13           The point of the agreement from our perspective is  
14 that it undermines the assertion, the evidentiary sort of basis  
15 for the claim that 3.2 is the right number and that we've got  
16 to maintain that number. Because even the Fish and Wildlife  
17 Service entered into an agreement that said that's not the  
18 floor, right.

19           The CBD also I think overlooks the impact of invasive  
20 species on the tilapia -- not the tilapia, on the dace. And we  
21 talked about this in our brief, and this is another factor  
22 that's --

23           THE COURT: Is that the tilapia?

24           MR. FOLETTA: The tilapia is the invasive species.

25           So we talked about this in our briefing, but in

1 response to their position, the idea is that this is a nonflow  
2 related factor that is impacting the viability of the dace in  
3 connection, which there's evidence to support the notion that,  
4 again, things other than flow levels need to be addressed to  
5 ensure the integrity of the species.

6 And so the opinion that the center references you to  
7 in their briefing identifies conservation actions that don't  
8 relate to spring flows. That's the point here, including,  
9 quote, "The eradication of nonnative fish, such as tilapia,  
10 from the historic range of the Moapa dace." So this is the  
11 record at 47159.

12 At the hearing, the Fish and Wildlife Service  
13 introduced a white paper that showed that -- that talked about  
14 kind of the history of the dace in this area, and it said that,  
15 quote -- or excuse me, tilapia, quote, "invaded the Muddy River  
16 Springs area in 1995 and dramatically reduced the population of  
17 the dace." That's the record at 48721.

18 It further went on to say, quote,

19 Current knowledge of this system suggest  
20 that the negative interaction between tilapia  
21 and Moapa dace was so severe that the recovery  
22 of the species depended upon the removal of  
23 tilapia from the system, a major recovery action  
24 only recently completed in full.

25 That's the same page in the record.



1           So the point there is not only that there are other  
2 things affecting the dace, but that the mitigation efforts that  
3 have taken place to date to try to secure the viability of the  
4 dace are, according to this white paper, recently completed and  
5 that, you know, it takes time, the passage of time to  
6 understand the effects of the other things that have been done  
7 other than maintaining stream flows, let's say pursuant to the  
8 MOA, to understand what is happening with the dace, what needs  
9 to be done down the road, and consequently it undermines this  
10 kind of -- this conclusion that we should be looking closer and  
11 closer at stream flows to the exclusion of some of these other  
12 things.

13           With that, Your Honor, I do not have any further  
14 comments on the Center's (indiscernible). Thank you.

15           THE COURT: Thank you.

16                       (Pause in the proceedings.)

17           THE COURT: The floor is yours.

18           **ARGUMENT FOR LINCOLN COUNTY AND VIDLER WATER**

19           MS. PETERSON: Thank you, Your Honor. Karen Peterson  
20 from Allison MacKenzie law firm representing Vidler Water  
21 Company, and I also have Mr. Klomp here with me at the counsel  
22 table. He's going to -- we have a really short PowerPoint on  
23 this section, and I just wanted to explain that we did file an  
24 answering brief in response to --

25           THE COURT: You had an intervening brief, right.

1 MS. PETERSON: -- the Center for Biodiversity's. So  
2 I'm going to address some of the arguments that they made on  
3 Monday. I'm responding to arguments they made on Monday, but  
4 they made arguments today that were kind of covered the same  
5 things. So I am responding to Monday.

6 THE COURT: Okay.

7 MS. PETERSON: I just wanted you to know that.

8 So one of the things in the argument on Monday, the  
9 Center for Biological Diversity indicated and it kind of  
10 inferred that there might be an incidental take statement that  
11 Lincoln and Vidler might have. And so we just wanted to point  
12 out, and it is in the record, that we do have an incidental  
13 take statement that allows, if we meet certain criteria and  
14 there's take before that criteria -- take before the criteria,  
15 that we are allowed the incidental take, and it's set fourth --

16 First of all, Slide 1 shows the request that Lincoln  
17 and Vidler made for formal and informal consultation for the  
18 Kane Springs Valley project. And that is in the record there  
19 49906. And actually the U.S. Fish and Wildlife put in our  
20 complete biological opinion, which included the incidental take  
21 statement, into the record in 1309.

22 So if you could go to Slide 2.

23 And there, we're on page 37 of the exhibit, the U.S.  
24 Fish and Wildlife exhibit. And again the record on appeal  
25 citations are noted there, and the top paragraph indicates that

1 the, you know, after the U.S. Fish and Wildlife has done its  
2 review that our project is not likely to jeopardize the  
3 continued existence of the dace. The project could contribute  
4 to groundwater level declines and spring flow reductions;  
5 however, implementation of the projects conservation actions  
6 will minimize these impacts.

7 And then going -- and again, we didn't put -- I mean,  
8 it's -- I don't know how many pages, 50 or something like that.  
9 So obviously we didn't put anything in.

10 But then going down to the next paragraph, there was  
11 discussion about Section 9, and our biological opinion does  
12 reference Section 9 right there. And then the second part on  
13 the slide that we've highlighted indicates under the terms of  
14 Section 7 before and 762 of the act,

15 Taking that is incidental to and not  
16 intended as part of the agency action, and  
17 that's what I was just referring to, is not  
18 considered a prohibited taking provided that  
19 such action -- such taking, sorry, is in  
20 compliance with the terms and conditions of this  
21 incidental take statement.

22 And then if you could turn to the next slide, slide  
23 Number 3. Again, that's another section and the next page  
24 about the Moapa dace. And then it's interesting that it notes  
25 our biological opinion and our incidental take statement

1 acknowledges that the amount of groundwater pumping under our  
2 project is substantially smaller than the amount of pumping  
3 that could potentially occur under the Order 1169 pumping.

4 And then again, it does allow that a small  
5 unquantifiable amount of take in the form of habitat loss would  
6 occur if the spring flows reach 3.0 CFS at the Warm Springs  
7 gage. And if they decrease below 3.0, the amount of the  
8 incidental take for this project would be exceeded for the  
9 Moapa dace.

10 So our stipulation that we have with the State  
11 Engineer that was filed with U.S. Fish and Wildlife to our  
12 applications, that has a trigger point of 3.2, but actually the  
13 incidental take statement allows a little bit lower.

14 And then do we have one more slide? Yeah.

15 And then this is the final determinations with regard  
16 to the effect of the take. So we just wanted to point that out  
17 to Your Honor.

18 And then we have put the citations to the record  
19 there.

20 So the other thing that we cited in our brief, and I  
21 again wanted to reiterate here is the *Mineral County versus*  
22 *Lyon County* case, and you've heard a lot about it today and/or  
23 Monday, but -- and the public interest that's being analyzed,  
24 and there seems to be an argument that public interest is  
25 supposed to be analyzed continually by the State Engineer, like

1 while we're holding our groundwater permits, and that's not at  
2 all what is supposed to occur with regard to the public  
3 interest determination that the State Engineer is supposed to  
4 make. It's supposed to be made at the beginning in the  
5 application process.

6 And, of course, then when the State Engineer grants  
7 any applications, those become vested property rights. They  
8 become adjudicated property rights, and that's under the  
9 Fillipini (phonetic) case and all that line of cases. And so  
10 there's not some kind of continuing obligation by the State  
11 Engineer to continually look at the public interest. That's  
12 exactly what *Mineral County* said is not supposed to happen  
13 because there's supposed to be certainty with regard to water  
14 rights.

15 And again, we've cited in our briefs with regard to  
16 the *Mineral County* case the Nevada Legislature has enacted a  
17 comprehensive statutory scheme outlined in NRS Chapters 532,  
18 533 and 534 that regulate the procedures by which water rights  
19 may be acquired, changed or lost.

20 And the Nevada Supreme Court goes on to say in  
21 *Mineral County versus Lyon County* the statutory scheme in  
22 Nevada therefore expressly prohibits reallocating adjudicated  
23 water rights that have not been abandoned, forfeited or  
24 otherwise lost pursuant to an express statutory provision.

25 And finally Nevada's comprehensive statutes are

1 already consistent with the public trust doctrine because the  
2 statutes both require that water allocations be based on public  
3 interest and that the allocation satisfy all of the elements to  
4 safeguard public trust property.

5           There's no authority for the State Engineer to  
6 create -- based on that, we don't think there's any authority  
7 for the State Engineer to create any new procedures for the  
8 public trust which are not authorized by the statutes.

9           And the other thing I also wanted to note about the  
10 biological opinion, turning back to that, is that it is an  
11 approval that's in place that again provides some certainty to  
12 water right holders. We know where we stand. We know what the  
13 rules are with regard to the Moapa dace and what the U.S. Fish  
14 and Wildlife has allowed us to pump with our mitigation  
15 procedures in place so that we are not impacting the Moapa  
16 dace.

17           And again, that provides some certainty to water  
18 right holders. We know what's going to happen, not like  
19 something here where the State Engineer says, oh, no, the State  
20 may be liable for a take, and therefore, Lincoln and Vidler,  
21 you're not going to be able to use your water rights anymore  
22 because I'm going to throw you -- I'm going to throw Kane  
23 Springs into the Lower White River Flow System.

24           The other brief that we filed, and answering brief  
25 that we filed had to do with Southern Nevada Water Authority

1 and Moapa Valley irrigation company -- Muddy Valley Irrigation  
2 Company. I'm sorry.

3 And we -- as we put in our brief, we disagreed with  
4 the calculations of the predevelopment flows. We disagreed  
5 with the calculations of the irrigated acreage that SNWA holds.  
6 We disagreed with their quantifications of their water rights  
7 that they hold or their ICS credits that they're claiming.

8 We also argued that the State Engineer did not modify  
9 the Muddy River Decree under Order 1309 and did not modify  
10 SNWA's water rights or didn't modify Muddy Valley Irrigation  
11 Company's water rights, and there's been arguments made to the  
12 Court about this Court being, you know, the decree court. And  
13 that makes me a little nervous because while the Eighth  
14 Judicial District Court is the decree court now, this is a  
15 petition for judicial review of Order 1309. And if there's any  
16 interpretations of the decree or any kind of enforcement of the  
17 decree, that needs to be done in the proceeding where all of  
18 the water right holders in the decree have notice and are  
19 entitled to participate.

20 And so again, I get a little concerned that we're  
21 going to go outside the realm of, you know, a petition for  
22 judicial review by the Court somehow -- I interpret the relief  
23 that they're asking is that the Court interpret the decree in  
24 this proceeding, and I'm not sure that that's appropriate.

25 The State Engineer, what the State Engineer did in

1 Order 1309 is indicated that all the water right holders under  
2 the decree are getting their water. That's what he was talking  
3 about in the paragraphs that they have appealed. And the State  
4 Engineer under the decree is the watermaster for that decree.  
5 And the decree -- it's in the record under the Muddy River  
6 Decree, and it's at the record on appeal at 33.793, which  
7 indicates that there's going to be a watermaster for this  
8 decree, and the State Engineer is going to approve that  
9 watermaster. And actually, as it stands today, the State  
10 Engineer is the watermaster of the decree.

11 THE COURT: So that's like an actual term of art,  
12 watermaster?

13 MS. PETERSON: Yeah. Yeah.

14 THE COURT: Okay.

15 MS. PETERSON: And so what the watermaster does, and  
16 again, this is in the decree, and it's at page 33793, that the  
17 watermaster under the decree supervises, controls and regulates  
18 the distribution of the water.

19 And again, the watermaster doesn't necessarily have  
20 to be the State Engineer, but in this case for this decree, the  
21 watermaster is the State Engineer. So the watermaster knows  
22 that the water is being delivered, and everybody is getting  
23 their water because his office is supervising, controlling and  
24 regulating the distribution of the waters of the decree.

25 And so I guess -- and I think you picked up on it,



1 that it is an order and a judgment and a decree of the Court.  
2 And again, that's in the Muddy River Decree. It's in the  
3 record at 33771. And the Muddy River Decree also, you know, it  
4 orders, adjudged and decrees. It uses those words. It's a  
5 judgment of the Court. And that's at 33786.

6 So again, if there's any modification or  
7 interpretation or enforcement, I mean, that needs to be done by  
8 the decree court I'm going to call it, and again, everybody has  
9 to have notice of that under the decree.

10 And with regard to this enforcement of the decree, in  
11 *U.S. versus Orr Ditch Company*, it's 600 F.3d 1152. It's a 2010  
12 case, and it's a federal case because it involved a federal  
13 decree, but it was a case in which the surface water right  
14 holder was contending that groundwater rights that had been  
15 granted by the State Engineer under state law interfered with  
16 the federal decree. And the federal decree court said that the  
17 decree court did have jurisdiction to consider those claims.

18 And so I just want to point out that if there's any  
19 enforcement that needs to be done of the decree, that's brought  
20 in the decree court. It's not brought in front of the State  
21 Engineer because we're talking about enforcing a judgment  
22 that's been entered by a court of law. So that would be the  
23 place to go if there's any enforcement that needs to be done  
24 under the decree.

25 And the other thing I wanted to point out is that if

1 there's claims of impairment under the decree, you know, the  
2 Muddy Valley Irrigation Company needs to go to court -- or  
3 SNWA, they need to go to court. And it's not like you just  
4 stop pumping in the -- what they're contending 1100 square  
5 miles of potential water decline. I mean, what you have to do  
6 is -- because you're impacting somebody's property rights. I  
7 mean, you have to prove that their pumping impacts your water  
8 rights. That's what you do. So that would be what would have  
9 to be done in the District Court, not any way in this  
10 proceeding.

11           So and then the other thing I wanted to point out,  
12 and there was a slide in the Center opening, is that the slide  
13 that indicated that SNWA's report that after the 1169 pump  
14 tests, but that there where no water level declines or no  
15 discernible impacts from pumping north of that Kane Springs  
16 wash fault.

17           And I also wanted to let you know that Muddy Valley  
18 Irrigation Company adopted all of the studies of the Southern  
19 Nevada Water Authority in the proceedings below in 1309. And  
20 so if they adopted all the studies and joined in on all of the  
21 studies that the SNWA submitted, that they would also concur in  
22 those opinions that there is no discernible impact from  
23 pumping, you know, north of that -- north and west, whatever  
24 was on that slide of Kane Springs wash fault.

25           So and I know we heard just recently that they're not

1 saying there can't be any pumping, but I heard on Monday that  
2 any pumping in the Lower White River Flow System affects the  
3 Springs. That's what I heard on Monday. So.

4 And I also heard on Monday from Muddy Valley  
5 Irrigation Company that one of the objects of this proceeding  
6 was to return the Muddy River flows to predevelopment flows,  
7 and I just want to point out that when you look in Order 1303  
8 as to what the scope of this proceeding was, it was not to  
9 return Muddy River flows to predevelopment flows. That's not  
10 one of the questions that the State Engineer asked everybody to  
11 address in 1303. Remember, those were the five questions. One  
12 was the boundaries, how much water can be pumped, can you move  
13 water between the carbonate and the alluvium. So there was --  
14 I mean, this proceeding is not about returning Muddy River  
15 flows to predevelopment flows, and --

16 THE COURT: When you're talking about this  
17 proceeding, this proceeding in this Court or the proceeding  
18 that was -- that --

19 MS. PETERSON: 1309.

20 THE COURT: 1309. Okay.

21 MS. PETERSON: That -- I mean, the five --

22 THE COURT: Whatever precipitated 1309, that  
23 proceeding?

24 MS. PETERSON: The four specific matters that we were  
25 supposed to address in 1309 -- well, from Interim Order 1303,

1 1303 hearing, which resulted in Order 1309 where the geographic  
2 boundary of the Lower White River Flow System, aquifer recovery  
3 subsequent to the Order 1169 aquifer tests, long-term annual  
4 quantity and location of groundwater that may be pumped in the  
5 Lower White River Flow System and the effect of movement of  
6 water rights between the alluvial and carbonate wells within  
7 the Lower White River Flow System.

8 And I don't see in there that we're supposed to  
9 return the Muddy River flows to predevelopment flows.

10 And again, as I've indicated in our briefs, we  
11 disagree with what the level of those flows are.

12 And I'm very concerned -- this is my last point --  
13 that Mr. Dotson asked you, as his request for relief to affirm  
14 that predevelopment flows were equal to 33,900 acre-feet  
15 annually, and he was taking that from Order 1309. And he asked  
16 you to affirm that the river flow has flowed 13 -- 30,600  
17 acre-feet since 2015. I think the average river flow was  
18 30,600 acre-feet since 2015. And I have two problems with  
19 that.

20 Number one is, he's asking you to affirm parts of  
21 Order 1309 that they're appealing. Those are the specific  
22 paragraphs. They're pages 60 and 61 of Order 1309. They're  
23 found at the record on appeal at pages 61 and 62, and those are  
24 the exact paragraphs that they're appealing. And yet they want  
25 you to affirm those factual matters.

1 He's asking you to affirm those factual matters in  
2 this proceeding. And the reason he wants you to do that is so  
3 that if there is a Phase 2 in this proceeding and we have to  
4 determine what conflicts are, there's already going to be a  
5 finding by this Court that the predevelopment flows of the  
6 Muddy River were 33,900 acre-feet and that the flows since 2015  
7 are 30,600. So they're already going to have their conflict  
8 determination made because they keep on contending that they've  
9 lost 3,300 acre-feet -- 3,300 acre-feet since 2015. And that's  
10 going to be the law of the case, and that's going to go into  
11 Phase 2, and that is not appropriate, and that is scary. So  
12 you, please, cannot do that.

13 THE COURT: I can hear the desperation in your voice.

14 MS. PETERSON: It's -- it's not right.

15 So that's all I have. Thank you.

16 THE COURT: Okay. Thank you.

17 Mr. Klomp.

18 MR. KLOMP: I join in Ms. Peterson's --

19 THE COURT: Oh, are you -- is that everything?

20 MR. KLOMP: Yeah. We were sort of together.

21 THE COURT: Okay. That's fine.

22 So then now we are going to -- there were five.

23 MR. KLOMP: One quick matter, Your Honor.

24 THE COURT: Yes.

25 MR. KLOMP: There's a thumb drive right here, and I

1 don't know that somebody.

2 UNIDENTIFIED SPEAKER: I think that's Mr. Taggart's.

3 THE COURT: Okay. Mr. Taggart, do you want to take a  
4 minute before you start?

5 (Pause in the proceedings.)

6 MR. TAGGART: No, I can go now.

7 (Pause in the proceedings.)

8 MR. TAGGART: Okay. We're good.

9 THE COURT: So you'll have a copy of this for us?

10 MR. TAGGART: Oh, I was going to cover that. No,  
11 this is just a document from the record on appeal. I was just  
12 going to show this as a demonstrative.

13 THE COURT: All right.

14 MR. TAGGART: And I will cite to it as just from the  
15 record on appeal.

16 THE COURT: That's fine.

17 MR. TAGGART: All right. So I will not have a  
18 third -- or I don't know how many it would be.

19 THE COURT: PowerPoint or --

20 MR. TAGGART: A PowerPoint for this reply.

21 THE COURT: Okay. Thank you.

22 MR. TAGGART: So that 17 minutes means I talked for  
23 three hours and 45 minutes already?

24 THE COURT: Yes. Impressive that you haven't lost  
25 your voice.

1 (Pause in the proceedings.)

2 **ARGUMENT FOR SNWA AND LVVWD**

3 MR. TAGGART: So if it pleases the Court, again, Paul  
4 Taggart on behalf of the Water District and the authority.

5 A couple housekeeping matters. One, there was a  
6 discussion earlier, we've talked at length about the original  
7 map that had the -- the original map that mapped the basins,  
8 and we talked about it being in 1968. I'm alerted by my  
9 associate that that map and that report is not in the record.  
10 We cited to a 1968 USGS report when we talked about that map.  
11 So I just want to be clear, we cited to 9348 through 9422 of  
12 the ROA, and that's actually a 1968 USGS report about  
13 something, not the map. So we don't have a map of the  
14 original -- the original locations of the basins, but what we  
15 have is the 1971 map that I showed this morning, which is part  
16 of Waterford, Nevada. So that's just a housekeeping thing.

17 The other thing is that I thought we cited to  
18 (indiscernible)'s rulings. I've told you that this morning  
19 that we did in our briefs, but I'm told we didn't. So I  
20 apologize for that.

21 The -- I'll be brief since I only have a few minutes  
22 anyway. A couple of things. I'm here now to reply to  
23 arguments made against our arguments regarding the conflicts  
24 determination by the State Engineer. And I'll just remind the  
25 Court that there was clear statements made at the prehearing

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1 conference about what would and would not be ruled upon, and we  
2 think this fell within that, and I think Your Honor recalls  
3 that when I read that transcript into the record.

4           So a couple things have been said. One, no one has  
5 filed any complaint about the water. We have. So that's an  
6 inaccurate statement. A number of inaccurate statements have  
7 been made about our position here.

8           One, we did file a notice of alleged violation. It's  
9 up on the screen, and it's in the record at pages 48131 and  
10 48132. We attached to this document the same analysis that we  
11 talked about earlier, the depletion analysis that our experts  
12 completed about the amount of ICS credits that were not  
13 generated because of captured water. We included all that  
14 information and filed that with the State Engineer. And there  
15 is a file stamp on there that's dated July 3rd, 2019.

16           And so I agree that conflicts requires an evidentiary  
17 hearing. We didn't get to have that, but I also struggle to  
18 understand how were supposed to wait for that. If we file  
19 something with the State Engineer and he doesn't consider it,  
20 how long are we supposed wait?

21           When we filed this with the Court, this petition for  
22 judicial review, and again, completely disagree with my  
23 colleague about this, we invoked the jurisdiction of the decree  
24 court, and it should be scary because water has been taken from  
25 decreed right owners, and there's nothing in this action of



1 invoking the power of the decree court that requires notice to  
2 all decree owners. This is an enforcement action under the  
3 decree. And there's been --

4 THE COURT: Well, let me ask then, is an enforcement  
5 action proper in a PJR?

6 MR. TAGGART: Yes. When that case that we've been  
7 citing to, *Orr Ditch*, when it was filed, the -- you know,  
8 that's what they were asking, that the application be denied so  
9 that they wouldn't have an impact to their water. We've asked  
10 that the Court simply interpret the decree, and that is not  
11 modifying the decree. You know, I've been through having to  
12 name all the owners in a decree, and you do that when you amend  
13 a decree, not when you ask for a decree to be enforced, not  
14 when you ask for a decree to be interpreted by the decree  
15 court.

16 The parties to the alleged action have to be part of  
17 the case. All of those were part of this -- I believe all of  
18 those have been noticed, and all of those are here.

19 So our PJR specifically states that, you know, the  
20 subject matter of this appeal involves decreed waters of the  
21 Muddy River Decree, and so in our view we've done that.

22 We're not asking, again, as you know, we're not  
23 asking you to adjudicate the conflicts question. We'd rather  
24 not have that happen here. We'd rather you strike the language  
25 in the order and have that done properly in an evidentiary

1 hearing.

2 So the issue of whether it's proper here or not is  
3 probably academic. The key is that we should have that  
4 evidentiary hearing initially.

5 Just because the State Engineer is a water  
6 commissioner or a watermaster for this Court doesn't mean we're  
7 getting our water. And that's the whole point of some of the  
8 arguments that we've made.

9 So I think that the easiest thing for the Court is to  
10 understand the scope issue, to -- and the fact that so much of  
11 what the State Engineer relied upon in his analysis on  
12 conflicts is not available in the record for folks to see and  
13 understand how it was done. So for those reasons, it's  
14 fundamentally unfair to allow that conflict finding to stand.  
15 And for that reason, we ask that you reverse that, but uphold  
16 the remainder of 1303, and we've -- and that's the extent of  
17 our argument.

18 And I am done.

19 THE COURT: Okay.

20 MR. TAGGART: I will provide you with the PowerPoints  
21 tomorrow morning.

22 THE COURT: Okay.

23 MR. TAGGART: And provide those to all of the parties  
24 in the case as well. Thank you.

25 THE COURT: Thank you.

1 THE CLERK: Is it just the PowerPoints (inaudible)?

2 MR. TAGGART: Yeah, it'll just be the ones that I  
3 spoke about already. All right.

4 THE CLERK: Okay. Because you've given me some.

5 MR. TAGGART: And are we doing that as --

6 Yes.

7 THE CLERK: I just don't want to --

8 MR. TAGGART: I think I've given you two of three.

9 THE CLERK: Okay. So it's just this last one that  
10 you --

11 MR. TAGGART: But are we doing it all as one exhibit  
12 and adding to it or --

13 THE CLERK: No. I'm putting them in the order as you  
14 guys go. So when they get it on appeal they can (inaudible).

15 THE COURT: Okay. So you have a number already for  
16 when I gave it to you?

17 THE CLERK: I do. So yours will be 14.

18 MR. TAGGART: Okay. Thank you.

19 Thank you, Your Honor.

20 (Pause in the proceedings.)

21 THE CLERK: All right. So this you're not giving?

22 MR. TAGGART: No, not this.

23 THE COURT: No, this is just on the record on appeal.

24 So it's a --

25 UNIDENTIFIED SPEAKER: She kind of needs them for

1 her --

2 THE COURT: Oh, you need it. Well, if you want to go  
3 through --

4 MR. TAGGART: Well, I can provide you with this.

5 THE COURT: Okay.

6 MR. TAGGART: It's easy. It's only two pages. I'll  
7 get a copy made.

8 THE CLERK: So you gave one -- you gave me two  
9 yesterday. No, I think I only got --

10 MR. TAGGART: Right. On Monday I would have started  
11 and given you one regarding conflicts.

12 THE CLERK: Right. Let me find my (inaudible). So  
13 right now I have -- I have one for Monday.

14 MR. TAGGART: Yes.

15 THE CLERK: And then one that you gave last night.

16 MR. TAGGART: Yes.

17 UNIDENTIFIED SPEAKER: Your Honor, are we in recess?

18 THE COURT: We're -- I guess we're sort of in --  
19 informally. Do you guys want to take a formal recess?

20 UNIDENTIFIED SPEAKER: Yeah.

21 THE COURT: Okay. Why don't we recess for five  
22 minutes and come back at --

23 UNIDENTIFIED SPEAKER: I just wasn't sure.

24 (Proceedings recessed at 3:10 p.m., until 3:20 p.m.)

25 THE COURT: Okay. Whenever you're ready.



1 or interest in the term area in the statute. And if you go to  
2 the second page of 1303, it's very clear how the State Engineer  
3 wants to implement the word area.

4 Now, there are not seven basins at stake here that's  
5 being swept into the big bathtub called the mega basins. There  
6 are five, and then there are two of the basins that are  
7 designated as areas because they are not completely designated  
8 basins, only an area within the basin is part of this case.  
9 And that's Black Mountain, and that's I think the Warm Springs,  
10 and that's why throughout 1303, 1309 and the various petitions  
11 that the word area is used, and we'll get into that in a little  
12 bit more detail in the statute.

13 So the Black Mountain Area hydrographic basin is  
14 discussed in 1303. Garnet Valley hydrographic basin is  
15 discussed in 1303. The California Wash hydrographic basin was  
16 designated pursuant to 534.030. Hidden Valley hydrographic  
17 basin was designated. So the Muddy River Springs area was  
18 partially, partially designated.

19 So what we have, Your Honor, on 1303 is partial  
20 designations of areas within a basin, and then the other basins  
21 which are identified as designated except, of course, Kane  
22 Springs is not identified as a designated basin, nor can it be  
23 because it is not.

24 1309 on the other hand, Your Honor, does the same  
25 thing. It identifies the Black Mountain area hydrographic

1 basin, area being the operative word. It's an area within a  
2 basin, and that's how the State Engineer has used the term.

3 But more importantly, the order says this: The  
4 various basins, a northwest portion of the Black Mountain area  
5 as described in this order is hereby delineated. Not  
6 designated, delineated. So my partner Ms. Winston is going to  
7 get into that in a little bit more detail. But what we've lost  
8 sight of over the last -- what's it been, three weeks?

9 THE COURT: It feels like it, although we've been  
10 moving along quite quickly. So --

11 MR. ROBISON: We've lost sight of this simple word  
12 the engineer and the legislature and the courts have used for  
13 years, and that's the word basin.

14 The overlay for our closing argument in rebuttal goes  
15 back to the Pyramid Lake Indian tribe versus Ricci case.

16 First,

17 It is undisputed that Nevada's groundwater  
18 resources have long been managed on a perennial  
19 yield basis for the entire hydrographic basin.  
20 Such system is specifically contemplated by the  
21 Nevada groundwater code, which provides the  
22 State Engineer to take various acts on a basin  
23 wide basis.

24 They cite for that proposition 534.034, but that's  
25 been argued much differently than as defined and described in

1 this decision by the State Engineer himself.

2 Method of designation for groundwater basin, see  
3 534.035. Establishment of groundwater boards in an individual  
4 basin, see 534.050. Permits required before a well may be  
5 dried -- drilled in a designated groundwater basin.

6 It is in fact this authority that the State Engineer  
7 has identified 235 groundwater basins, and there they are, and  
8 the word used in this absolutely clear language by the State  
9 Engineer is that the authority of the engineer to identify  
10 these basins. And as we have said, there has been so much  
11 reliance on the definition given to the word basin by the State  
12 Engineer himself over decades of all users, courts and  
13 legislature.

14 Finally, the State Engineer says this:

15 It is patently reasonable for the State  
16 Engineer to manage these basins in a manner  
17 consistent with statutory authority. This  
18 approach is also reasonable for the reason that  
19 managing a basin on the base of its perennial  
20 yield requires and ensures that the basin will  
21 remain in balance.

22 We always have to come back to this proposition in  
23 this case, Your Honor, that there was a fault, (indiscernible)  
24 fault. Over here is the legal issue, statutory authority to  
25 eradicate basins and make them a basin, which we're calling the



1 mega basin. Statutory authority, it stops. If there is no  
2 statutory authority and the State Engineer has exceeded the  
3 legislative authority, we don't get to the other side of the  
4 fault, which is the science. And I'm now going to yield the  
5 floor to Ms. Winston and be back with you in a little bit, Your  
6 Honor.

7 THE COURT: Okay. Thank you.

8 **ARGUMENT FOR COYOTE SPRINGS**

9 MS. WINSTON: Thank you, Your Honor. Hannah Winston  
10 on behalf of CSI.

11 I'm going to address three issues in this argument.  
12 The first is the use of the terms designate or designation  
13 versus delineation. The second issue is whether the creation  
14 of the mega basin or combining multiple basins into one,  
15 whether that is a legal question or a factual one. The third  
16 issue I'm going to address is this idea of conjunctive  
17 management versus joint administration or joint management.

18 I'm going to walk through the statutes on designating  
19 basins, so I really welcome the Court, encourage the Court to  
20 ask any questions as we go through them.

21 Designation is a term or designate is a term that is  
22 used throughout NRS Chapter 534. The word delineate is not  
23 used in NRS Chapter 34 or NRS Chapter 33. That is a State  
24 Engineer word.

25 THE COURT: Do you mean 534?

1 MS. WINSTON: Either one. 534 --

2 THE COURT: I only heard you say 34 and 33. So, but  
3 you mean 533 and 534?

4 MS. WINSTON: Correct. Yes.

5 THE COURT: Okay.

6 MS. WINSTON: Sorry about that, Your Honor.

7 So the first statute I'd like to pull up is  
8 NRS 534.011, and these are just from the statutes. It's not  
9 necessarily an exhibit.

10 NRS 534.011 is important. It's part of the  
11 definitions for the chapter, and it provides that an area of  
12 active management means an area in which the State Engineer  
13 is -- I'm going to sum it up so I'm not just reading it to you  
14 because you can read -- it's an area where a basin needs  
15 particularly close attention. And Subsection 2 is important  
16 because it says that that area has also received a designation  
17 under NRS 534.030.

18 So now, Mark, if we could go to that statute,  
19 NRS 534.030.

20 NRS 534.030 provides the process for designating a  
21 basin. And as we just saw in NRS 534.011, designating a basin  
22 means we're designating it for additional or particular  
23 management. So it's an area of active management. That's what  
24 we mean when we say we're designating a basin.

25 So there's two ways to initiate the process to

1 designate a basin for more management. Either under  
2 Subsection 1, the petitioners or water right holders in a basin  
3 can actually petition the State Engineer and say we need you to  
4 come in and please designate.

5 In the absence of a petition, we look at  
6 Subsection 2. The State Engineer can actually initiate this  
7 proceeding himself. And, of course, we've seen this before.  
8 There's multiple basins. And what you can see on the -- I  
9 believe this is CSI's Exhibit 2.

10 MR. ROBISON: I believe so.

11 MS. WINSTON: The basins that are shown in gray are  
12 ones that have gone through this process and been designated.

13 Important to this case is that Kane Springs Valley  
14 has not gone through that process. And to figure out what the  
15 process is, we look at 534.030. So if the State Engineer  
16 thinks that a basin needs to have this additional management,  
17 it needs to be designated, then the State Engineer can hold a  
18 hearing. And important to this case is Subsection (2)(a) and  
19 (2)(b). You'll see in (2)(a) that the State Engineer shall  
20 hold a public hearing within the basin. Okay. So when we're  
21 designating a basin, we're not designating seven basins at one  
22 time. We're designating a basin in that or a portion therein.  
23 And that basin -- or the hearing has to be held within the  
24 basin. It makes sense.

25 THE COURT: Let me ask you a question. So under the

1 statutory framework that we have, is it your position that you  
2 do not dispute the fact that the State Engineer can manage the  
3 basins with an eye towards how those -- how the water flows  
4 within those basins, but if the dispute is him changing those  
5 six basins and delineating it into one basin?

6 MS. WINSTON: That's correct.

7 And what's important about your question, Your Honor,  
8 is that that's -- that's really the issue here. How do you  
9 manage seven basins together if the science shows that they're  
10 related or there's a hydraulic connection between basins? Is  
11 the answer to erase the boundary lines between them that have  
12 been established since 1968? No. We have tools to manage  
13 them. So we start with 534.030. This statute works in  
14 conjunction with NRS 534.120 and .110. So 534.030 provides the  
15 process to designate, and NRS 534.110 and 534.120 provides the  
16 State Engineer with the tools to implement that management.

17 So I want to pull up NRS 534.110, please. And I'd  
18 like to go to Subsection 6, which I think is important to the  
19 Court's question as well. Because if the State Engineer is  
20 managing basins by the basin, sees that there is a hydraulic  
21 connection, what can he do? Well, if the State Engineer  
22 determines after following the proper steps that an  
23 investigation is warranted, curtailment is warranted, then the  
24 State Engineer can implement curtailment, but only in a basin,  
25 right, not amongst several basins together.

1           And the curtailment has to be restricted to conform  
2 to priority rights, not amongst seven basins, but in the basin  
3 because curtailment only happens by the basin.

4           THE COURT: So let me ask. So if the State Engineer  
5 is looking at how each of the basins are interconnected and how  
6 drawing in certain basins affect other basins, is it your  
7 contention then that the Nevada State Engineer cannot consider  
8 the senior surface water rights of other parties in other  
9 basins and how that is affected by junior groundwater right  
10 holders in connecting these things?

11           MS. WINSTON: No. I believe that the State Engineer  
12 does have to consider groundwater and surface flow rights.

13           THE COURT: Even if it's different, but potentially  
14 basins that affect each other?

15           MS. WINSTON: Right. So this -- it's actually the  
16 third issue I was going to address, but I'll just jump right  
17 in.

18           THE COURT: Okay.

19           MS. WINSTON: There's been a lot of discussion about  
20 conjunctive management versus joint administration or joint  
21 management.

22           THE COURT: And I guess for me there's a difference  
23 between when you're talking -- when you're defining joint  
24 management, if you're talking about joining together several  
25 basins as one versus jointly managing, you know, six or seven

1 separate basins.

2 MS. WINSTON: Correct. So the word joint management  
3 or joint administration, those terms, those are not in  
4 NRS Chapter 533 or 534. Those are State Engineer terms, okay.  
5 So to the State Engineer, apparently since 1309, joint  
6 management or joint administration means literally combining  
7 seven basins, erasing their boundaries and viewing that as one  
8 hydrographic basin. That is how the State Engineer views joint  
9 management.

10 My position is the State Engineer can do -- consider  
11 the effect of pumping between multiple basins without combining  
12 the basins into one. He can still implement the tools that are  
13 available to him without erasing those boundaries because it  
14 has, as we briefed, and as Mr. Robison is going to address,  
15 that has very severe consequences.

16 If the State Engineer is just managing seven basins  
17 and this interconnectedness between the basins, then he can  
18 still curtail by the basin if he maintains the boundaries  
19 between the established basins. He can still curtail and  
20 respect and give priority to priority rights in each basin  
21 while being mindful of the impact of the connection of water  
22 between the basins.

23 Where I think that this conjunctive management issue  
24 has gotten a bit confused is conjunctive management; that word  
25 is in the statute, right. It's in the declaration of

1 legislative policy. And let's bring that up. That's at  
2 NRS 533.024.

3 UNIDENTIFIED SPEAKER: I didn't down load 533. I  
4 downloaded 532.

5 MS. WINSTON: Oh, okay. Then we remember what it is  
6 says. We read it so many times.

7 THE COURT: Okay.

8 MS. WINSTON: So in that one it says it's the policy  
9 of the State of Nevada to conjunctively manage water regardless  
10 of the source. Source means groundwater or surface flows. And  
11 there was some argument today that some petitioners have taken  
12 a position that this is the first time that the State Engineer  
13 has ever conjunctively managed groundwater and surface flows.  
14 That is not CSI's position. Of course the State Engineer has  
15 to disc consider decreed rights. That is prior appropriation.  
16 That's reflected in the statutory scheme. The issue of first  
17 impression is combining basins to make them one. That is the  
18 issue of first impression.

19 So the State Engineer can assess the effective  
20 groundwater pumping on surface flows. The State Engineer can  
21 look at the interconnectedness of basins and manage each basin  
22 by the basin. That's how the statutes are written. That is  
23 how it's been done historically. But the State Engineer cannot  
24 combine those basins into one. That is where CSI takes issue.

25 I'd like to pull up NRS 534.120. So I mentioned

1 earlier that 534.030 provides the process to designate a basin.  
2 NRS 534.120 provides the tools: How do you manage a basin that  
3 has been designated? And this is the provision of the statute  
4 that you brought up to Mr. Robison in his opening argument.

5           So I think now we have a better understanding.  
6 Within an area that has been designated by the State Engineer  
7 as provided for in this chapter, so that means as an area of  
8 active management. There's also critical management areas that  
9 can be defined. And as SNWA articulated earlier, only Diamond  
10 Valley has that actual critical management area designation.

11           If we look through the rest of the statute, there are  
12 different tools available. So in Subsection -- you don't have  
13 to zoom in -- but in Subsection 2, the State Engineer can  
14 require periodical statements of water elevations. The State  
15 Engineer can determine whether there are preferred uses for the  
16 water. The State Engineer can issue temporary permits. The  
17 State Engineer could temporarily stop pumping in certain areas.  
18 So there's different things that the State Engineer can do in  
19 those designated basins that are part of his tools in his  
20 toolbox when a basin has been designated.

21           Part of the problem with the State Engineer or some  
22 other petitioners in trying to justify 1309 as having occurred  
23 under these statutes for designating basins is that Kane  
24 Springs has never gone through the designation process. So the  
25 State Engineer cannot use these tools in Kane Springs Valley.



1           And I mentioned earlier 1169 was issued under  
2 NRS 533.368, which is to conduct an investigation to see if  
3 there's additional water for appropriation, not to assess the  
4 boundaries, not to decide that these basins should be combined  
5 and treated as one. That's not the purpose of 1169. Because  
6 1309 comes from the pump test and everything that occurred  
7 after, 1309 cannot all of a sudden stem or be rooted in  
8 534.120, .110 or .030. That's just not where we are, and it's  
9 just sort of a after-the-fact justification to try and make  
10 1309 lawful.

11           Now I want to talk about the State Engineer's use of  
12 the word delineate.

13           So in Order 1309, the State Engineer says that he is  
14 delineating the Lower White River Flow System as that one  
15 hydrographic basin.

16           As I mentioned earlier, the word delineate is not in  
17 the statutes. That is the State Engineer's word. And when you  
18 talk about delineating, that's really creating, right. He's  
19 creating. He's determining that this is one basin.

20           After all of the argument that we've heard over the  
21 past couple of days, we still have not identified one statute  
22 that allows the State Engineer to determine, establish,  
23 redefine the basins. There's been a lot of discussion about  
24 the map that shows the 232 hydrographic basins. And that map,  
25 as we briefed, came from the Rush Report from 1968. The USGS

1 in conjunction with the State Engineer developed that map and  
2 established those 232 hydrographic basins.

3 If the State Engineer had authority to change those  
4 established basins, it would have to be in a statute, and the  
5 State Engineer has not identified any statute that would give  
6 him that authority.

7 There's also been a lot of discussion about what a  
8 basin is. The State Engineer in his answering brief almost  
9 feigns confusion as to what CSI means when they refer to the  
10 term basin. Obviously this is disingenuous given how water has  
11 been managed, how the basins has been referred to over the  
12 years.

13 The State Engineer has argued that nothing in  
14 Nevada's water law constrains the State Engineer's view of what  
15 a basin is. But what the State Engineer thinks a basin is is  
16 truly irrelevant. The legislature uses the word basin  
17 throughout the statutory scheme. And this is where I find it  
18 so striking that we have no statutory interpretation from the  
19 State Engineer to explain what a basin is or why the State  
20 Engineer alone somehow has authority to define what a basin is  
21 whenever he wants and on whatever terms he decides.

22 The State Engineer does not argue that the word is  
23 ambiguous. So we just start with the plain language. That is  
24 how statutory interpretation works. A basin is just a geologic  
25 feature. It's akin to a valley. It's a geologic feature

1 that's also a mountain. So mountain ranges get identified, and  
2 they get named, just like Nevada's basins do.

3 And what's interesting is the State Engineer's Water  
4 Words Dictionary actually defines Nevada basins. And it does  
5 so by referencing the basins that were established by the USGS  
6 in conjunction with the State Engineer. Those are the 232  
7 hydrographic basins.

8 Rather than actually go through any type of statutory  
9 interpretation or statutory analysis, the State Engineer just  
10 dismisses of it and says the legislature left it up to the  
11 State Engineer to determine what a basin is. That is not how  
12 statutory interpretation works. The State Engineer can only  
13 act where authorized to do so. There is no statute that says  
14 the State Engineer gets to decide what a basin is or what that  
15 term means.

16 The State Engineer is also dismissive of the fact  
17 that Coyote Springs looks at the fact that the legislature uses  
18 the term basin in a singular versus plural. That is a tool of  
19 statutory interpretation. We assume, the presumption is if the  
20 legislature says a basin, any basin, a particular basin or a  
21 portion thereof or a portion therein, that means one basin.  
22 The presumption is if the legislature wanted to reference  
23 multiple basins, then the legislature would have done so. And  
24 the State Engineer hasn't provided any authority or any  
25 explanation as to how you could possibly read the term a basin

1 as multiple basins. That would violate tools of statutory  
2 construction. That would violate the plain language of the  
3 statute.

4 The next issue that I want to address is the State  
5 Engineer's attempt to characterize the combining of multiple  
6 basins into one as a factual issue versus a legal issue.

7 So we know why the State Engineer wants it to be  
8 factual: Because more deference is given to factual findings.

9 The problem is the basins have been established since  
10 1968. As I referenced earlier, if there was an intention by  
11 the legislature to give the State Engineer the ability to  
12 change those basins, then it would have said so. It has not  
13 done that.

14 The second issue is that where the State Engineer is  
15 authorized to conduct factual investigations, which is now what  
16 he wants to characterize as 1309 constituting, that combining  
17 these basins into one hydrographic basin is a factual finding.  
18 If that were true, the legislature would still have to  
19 authorize that. So throughout the statutory scheme, we'll see  
20 where the State Engineer is authorized to conduct factual  
21 investigations.

22 We start with 1169. We saw it earlier. Under  
23 NRS 533.368, the State Engineer is authorized to conduct a  
24 study or investigation to see if additional water is available  
25 for appropriation. So that's a factual finding that is

1 expressly authorized by statute.

2 Another example, NRS 534.110, Subsection 6, that  
3 statute authorizes the State Engineer to conduct a study to  
4 determine if it's necessary to initiate curtailment  
5 proceedings.

6 So if, even if the determination of combining  
7 multiple basins into one, even if we could call that a factual  
8 determination, there still has to be statutory authorization to  
9 allow that to happen. And here there's no statute that says  
10 the State Engineer can conduct an investigation to change the  
11 basin boundaries or to combine multiple basins into one.

12 The last issue I told you I was going to address is  
13 this joint administration versus conjunctive management, and  
14 the one thing I wanted to show the Court.

15 And Mark, if you'll pull up NRS 532.167.

16 Under this statute, the legislature requires the  
17 State Engineer to develop a water budget for every basin in  
18 Nevada.

19 And we've talked a lot about water budgets, that that  
20 is a tool that the State Engineer can use to assess water in  
21 each basin. The State Engineer can assess whether those basins  
22 have a hydraulic connection, how they impact each other. And  
23 then the State Engineer can enter his rules and regulations  
24 where appropriate if he finds that there's a depletion of  
25 water.

1           And with that, I will pass it on to Mr. Herrema. I  
2 probably said that wrong. I call him Brad.

3                           **ARGUMENT FOR COYOTE SPRINGS**

4           MR. HERREMA: Good afternoon, Your Honor.

5           THE COURT: Good afternoon.

6           MR. HERREMA: Brad Herrema on behalf of CSI. I'm  
7 going to just hit a few highlights on the substantial evidence  
8 issues. I know you've heard a lot over the last almost three  
9 days here, not quite three weeks, but so I'll try to be brief.  
10 I appreciate the attention I know you've paid and the time you  
11 put into the briefing as well.

12                   Just kind of harkening back to what I talked about on  
13 Monday, it's clear, and I think it's become clear to you that  
14 1309 has put the Lower White River Flow System basins into a  
15 state of uncertainty.

16                   Mr. Taggart said, you know, it makes sense that the  
17 State Engineer would do this fact-finding process before policy  
18 setting. But it's not -- it's still not clear to me why the  
19 State Engineer felt that it needed to issue an order like 1309  
20 when it was finding facts unless, of course, the State Engineer  
21 wanted to have those validated either through the statute of  
22 limitations running or a process like this.

23                   One other thing I heard from both Mr. Taggart this  
24 morning and Mr. Dotson this afternoon, they both seized on this  
25 word segmentation that I used when I was talking on Monday to

1 sort of explain to the Court how I'm trying to wrap my head  
2 around what's happening here.

3           And they both have I think sort of challenged my  
4 argument in saying well, you're inconsistent because you've  
5 said that on the one hand that the State Engineer shouldn't  
6 segment this, but on the other hand you're saying what the  
7 State Engineer should do is look at this basin by basin and not  
8 combine these six, seven basins into one single basin. And  
9 that confuses the concept of what segmentation is.

10           The segmentation issue in California CEQA law,  
11 California Environmental Quality Act law, is breaking something  
12 up processwise into smaller pieces so that you don't ever have  
13 to look at the whole of it when the impacts of the whole might  
14 be -- might not be able to see the forest if you're only  
15 looking at the individual trees. And that's what the concern  
16 is here with breaking things up into 1309 as a single order  
17 with supposedly just fact-finding and then deferring a process,  
18 which we don't know what it will be. We don't know when it  
19 will be.

20           Mr. Bolotin said in his argument, you know, if things  
21 don't get figured out, then the State Engineer will have to  
22 start some process. And so we have this black cloud looming  
23 over all of our heads now because we don't know what the State  
24 Engineer is planning to do next, but he's sure trying really  
25 hard to make sure that these factual findings are approved.

1 THE COURT: So when you were referring to the  
2 segmentation, you're talking about dividing the fact-finding  
3 process from the determination of the conflicts of the  
4 different water right holders; is that correct?

5 MR. HERREMA: I'm talking about separating this  
6 ruling, this order on the fact-finding from whatever the  
7 process will be. We don't know. Some people have  
8 characterized it as the beginning of a curtailment process.  
9 Others have said, you know, maybe because of this black cloud  
10 over us people will have to work it out, and something, you  
11 know, a miracle will happen. I don't know what it will be, but  
12 that's the segmentation I'm talking about.

13 And the reason I brought it up on Monday and why I  
14 think it's part of the substantial evidence review is because  
15 we don't know what all of this is going to be used for. We  
16 can't tell if it's suitable for that purpose. And so how can  
17 the State Engineer claim that there's substantial evidence for  
18 findings that will support what, we don't know. That's the  
19 context of the segmentation argument.

20 I don't need to repeat the substantial evidence  
21 standards. They've been repeated many times over the past  
22 couple of days. I would just hit a couple real quickly.

23 Even where the issues involve technical or  
24 complex scientific issues, the State Engineer's  
25 orders must be sufficiently explained and



1 supported to allow for judicial review.

2 That's *Eureka County*.

3 And even under deferential substantial  
4 evidence review, Courts must not merely rubber  
5 stamp agency action. They must determine that  
6 the agency articulated a rational connection  
7 between the facts presented and its decision.

8 And so it's not enough for the State Engineer just to  
9 say this is what he's decided.

10 And then we talked a little bit the other day. I  
11 think it's been cleared up. The State Engineer himself views  
12 that the legislature has mandated that he use the best  
13 available science.

14 A couple more things in regard to the -- both the  
15 determination of a hydraulic connection and the State  
16 Engineer's reliance on the 1169 pump test and then I'll touch  
17 on the 8,000.

18 In regard to the reliance of the State Engineer on  
19 the 1169 pump test, Mr. Taggart stated that some folks have  
20 characterized the pump test as perhaps not well thought out.  
21 That certainly was not what my argument was. I think  
22 Ms. Winston has done an excellent job today of explaining what  
23 the genesis of that pump test was, what the statutory  
24 authorization that the State Engineer thought he was operating  
25 under was for that pump test. And I think that informs the

1 manner in which that pump test was constructed.

2           So if the pump test had been designed for other  
3 purposes, such as potential curtailment of existing rights as  
4 opposed to an investigation of what water might be available  
5 for additional appropriation, it may have been designed  
6 differently.

7           If the parties understood what the criteria were that  
8 the State Engineer was going to use for determining whether  
9 there was a close connection that justified merging these six,  
10 seven basins into a single basin, they also might have designed  
11 the pump test differently.

12           And just in regard to those criteria, I'm not going  
13 to walk through them. Mr. Taggart said CSI knew before it  
14 submitted its report and testimony to the State Engineer what  
15 those criteria were. That's absolutely not true. There's  
16 nowhere that -- that it's shown that the State Engineer had  
17 disclosed what those criteria were before 1309.

18           In regard to what the pump tests can and can't be  
19 used for, Mr. Bolotin brought yesterday his demonstrative  
20 exhibit here with -- we've got multiple. They did their  
21 multiplying.

22           THE COURT: I can't see that one.

23           MR. HERREMA: He brought his demonstrative here with  
24 a handful of hydrographs shown. I'd like to just clarify.  
25 This has eight well hydrographs on it, two spring flow

1 hydrographs. There were a total of 79 wells in alluvial or  
2 carbonate aquifers that were monitored as part of that 1169  
3 pump test. And they had well data collected either  
4 continuously, monthly, quarterly. There were also a total of  
5 10 surface water gauging sites included in the monitoring that  
6 worked so.

7 I know this is a demonstrative exhibit, but when you  
8 look at it, please keep in context that there are 70 other well  
9 hydrographs and eight spring flow hydrographs that are not  
10 shown on the bigger.

11 I did want to show you just a couple other  
12 hydrographs.

13 Mark, if you could bring those up.

14 These hydrographs here, these are Coyote Springs  
15 Valley, CSVM wells 3, 4 and 5. We'll walk through them.

16 I don't think they're marked on the bottom with  
17 the --

18 THE COURT: This is slide?

19 UNIDENTIFIED SPEAKER: 53.

20 THE COURT: 53.

21 MR. HERREMA: I don't think they're marked on the  
22 bottom of the ROA cites. The ROA cites are 35653 through  
23 35655. They're part of the expert report that Coyote Springs  
24 submitted to the State Engineer back in July of 2019. So the  
25 first is CSVM-3. This is a well that's at the north end of the

1 Coyote Springs Valley.

2 THE COURT: This is the one that's what, 2 miles away  
3 from the Kane Springs Valley well?

4 MR. HERREMA: It's further north. I'm not sure  
5 exactly where it is.

6 The next one I have is CSVM-4 --

7 THE COURT: Oh. Maybe that's the one that's --

8 MR. HERREMA: -- and this is actually shown on  
9 Mr. Bolotin's chart here. You can see it's just south --  
10 southwest of the KMW 1.

11 And this is the well that the -- or the hydrograph  
12 that the State Engineer uses for establishing a close  
13 connection.

14 The next one I'd like to show you though is CSVM-5.  
15 And this is a hydrograph that's not on the State Engineer's  
16 demonstrative exhibit here. This is a well that is west of --  
17 it's in the western portion of the Coyote Springs Valley. And  
18 it's something -- west of something that Mr. Robison has  
19 described as the highway fault. It's a fault that was  
20 identified by CSI's consultant after the State Engineer issued  
21 1303 and said, you know, we're going to have this evidentiary  
22 hearing process.

23 Then CSI engaged a company called Zonge, Z-o-n-g-e,  
24 and they did the CSAMT process that Mr. Morrison talked about  
25 real briefly yesterday. And so this well is west of the

1 highway fault that was identified.

2           So one of the concerns that I talked about on Monday  
3 was the fact that this test took place 25 and a half months.  
4 It's a very short amount of time, and it has to be viewed in  
5 the context it took place. And I mentioned on Monday that it  
6 took place at the end of a long dry period.

7           Mark, could you bring up the precipitation record.

8           I had intended to have this on Monday, and I  
9 apologize that I didn't have it.

10           Here you can see the -- on the bottom here the  
11 precipitation record got a --

12           THE COURT: And what slide is this?

13           UNIDENTIFIED SPEAKER: This would be 54.

14           MR. HERREMA: You can see the ROA cite on the  
15 left-hand side there.

16           Now, this -- there's a dark blue line, and what it  
17 shows during -- it's called cumulative departure from the mean.  
18 And so that's a term of art. It's taken me a long time to kind  
19 of wrap my head around what it means, but if you take a median  
20 amount of precipitation during a -- over a long stretch of time  
21 and you start at that particular point in time, and then you  
22 see cumulatively how are we doing? Are we trending along the  
23 line, along the mean where we think the average would be? If  
24 we're above the mean, then that line would be higher. If we're  
25 below, then that line would be lower. You plot that each year

1 as a trend though. It's cumulative.

2 And so what you see here with this blue line dipping  
3 down, that's a dry period where we had this pump test taking  
4 place. And for all the reasons I talked about previously, you  
5 have to view those pump test results and the data that they  
6 provided in that context.

7 In regard to the inclusion of Kane Springs, I think  
8 Coyote Springs has made its position quite clear.

9 Now, there was a discussion with Ms. Peterson  
10 yesterday. She brought out a ruler and showed the 6 inches and  
11 sort of how much that actually means in terms of these  
12 different water levels.

13 Mr. Lake talked today about an analogy of having a  
14 couple buckets next to each other or one bucket maybe with some  
15 type of structure in the middle that -- or in it that separated  
16 different parts from each other, and it caused differences in  
17 what we call hydraulic head. And what you've been asking  
18 throughout the hearing, you know, what are you talking about  
19 when you're talking about elevations. We're talking about  
20 something called hydraulic head. And frequently it's recorded  
21 as the water level as opposed to -- or as compared to mean sea  
22 level.

23 So we can talk about the altitude of different cities  
24 like Las Vegas, Los Angeles, Denver. We can also talk about  
25 the -- what the hydraulic head in these wells is, and that's a

1 number above a baseline. And so you can compare wells if you  
2 use that common baseline. So we know that the water level in  
3 the wells, regardless of what's happening in terms of the  
4 ground surface, we know that the water level in these wells,  
5 it's different by about 60 feet. And the State Engineer has  
6 said, well, regardless of that you've got a similar response to  
7 the pump test. And so they must be connected.

8           And as Mr. Lake was talking about, you could have  
9 these connected buckets where if one drops because of the  
10 differences in the connection the other might drop. But the  
11 converse is not necessarily true, and particularly given the  
12 way that the pump test was set up. No one disputes that there  
13 was no pumping from the Kane Spring Valley during the 1169 pump  
14 tests. So you might be able to claim that there's an impact on  
15 what's happening in Kane Spring because of the pumping lower  
16 down in Coyote Spring Valley during the 1169 pump test, but  
17 there's no way to claim that there's -- there's no way to know  
18 what the impacts of Kane Spring pumping might be because that  
19 wasn't part of the test.

20           And, in fact, Ms. Peterson did show a plot of two  
21 hydrographs yesterday that showed when they did test the  
22 pumping in the Kane Spring Valley well there wasn't a response  
23 in the Coyote Spring Valley well.

24           Now, one other thing on the Kane Spring exclusion  
25 issue. Yesterday Mr. Morrison brought up or mentioned very

1 briefly a critique of the Zonge work as lacking credibility was  
2 I think the word that he used. I don't think that's a fair way  
3 to characterize his concerns with their work. His briefing,  
4 his answering brief, there was a criticism of the way that they  
5 laid out specific testing lines for this geophysical testing  
6 that they were doing, but I don't know that that goes to the  
7 credibility of the witness. I think that was not really a fair  
8 characterization.

9           And also I would just point out that the Water  
10 District, Moapa Valley Water District acknowledges that faults  
11 can act as low permeability structures at the bottom of Kane  
12 Springs Valley, but they say perhaps it doesn't hydraulically  
13 isolate one basin from the other.

14           The fault found by that Zonge study at the base of  
15 Kane Springs, in CSI's opinion, it acts similarly to the low  
16 permeability layer between the Pahrangat Valley and Kane  
17 Springs. It does create a steep water level gradient that  
18 hydraulically separates Kane Springs and Coyote Springs. And  
19 the same reason that the State Engineer excluded Pahrangat and  
20 Delmar basins from the Lower White River Flow System would  
21 require or mandate the exclusion of Kane Spring Valley from the  
22 Lower White River Flow System as well.

23           I think someone -- maybe more than one person that  
24 said well, this is a remarkably flat basin. And if you look at  
25 60 feet of difference in water level elevation over 22 miles,



1 you know, that's not much of a slope at all, but that's like  
2 saying it's remarkably flat from the sixth floor of your  
3 apartment building to a park 22 miles away as long as you don't  
4 mind that first step walking off the apartment building.

5 Finally, I'd like to reiterate that 1309 doesn't  
6 explain why Ruling 5712 conclusions are -- I'm sorry, why  
7 the -- yes, the Ruling 5712 conclusions are overruled. The  
8 1169 pump tests don't refute the facts that were in 5712, and  
9 the State Engineer's decision to exclude Kane Springs Valley  
10 from the Lower White River Flow Systems is arbitrary, as it  
11 dismisses the difference in hydraulic head that he previously  
12 found to be conclusive evidence in 5712 that Kane Spring Valley  
13 should be excluded from the 1169 pump test.

14 In regard to the 8,000 acre-foot cap, it's been made  
15 clear that this number was come up with primarily, and I think  
16 the State Engineer's brief is very clear that this 8,000  
17 acre-foot number is based on a desire to protect senior Muddy  
18 River rights.

19 And the question I think it begs is if it's necessary  
20 to protect those rights, why set this cap that they've sort of  
21 backed into with this effects analysis as opposed to doing what  
22 the State Engineer previously talked about doing following and  
23 creating a groundwater model, which is what he said in 1169 he  
24 was going to do? And considering his responsibility, as  
25 Ms. Winston talked about, to create a water budget or establish

1 a water budget for each of these individual basins, why do you  
2 need to go -- to back into this number based on affects when  
3 he's got other options.

4 Now, Mr. Taggart showed his clients -- I didn't see  
5 the title of it. I don't know if it was a notice of violation  
6 or a request for action. And whatever the demonstrative was  
7 that he showed in regard to his client's request that the State  
8 Engineer take action on the depletion in the Muddy River flows.

9 THE COURT: It was a notice of alleged violation.

10 MR. HERREMA: Okay. The notice of alleged violation.  
11 Thank you.

12 Now, I would just note the date on that, July 3,  
13 2019. I think that's the same date that expert reports were  
14 due to the State Engineer in the 1303 hearing process. So this  
15 is -- this is something that wasn't done outside of that, this  
16 current process. It was I think occasioned by the work that  
17 they were doing for the 1303 hearing expert reports, but if you  
18 have that available, and the water authority has availed itself  
19 of that.

20 Mr. Taggart talked earlier about different types of  
21 curtailment. He said there's conflict curtailment mechanisms  
22 that the State Engineer can undertake. The water authority has  
23 availed itself of it.

24 So why set this 8,000 acre-foot affects-based cap  
25 now, create the black cloud that we're all under with no idea

1 what's going to happen next, particularly when the State  
2 Engineer hasn't defined how the 8,000 is available within the  
3 subbasins or how it will limit pumping to the 8,000 acre-feet?

4 In regard to the availability of the 8,000, I think  
5 too many people during the proceeding have sort of talked about  
6 the system as if it's one big bathtub without any  
7 heterogeneities in it. So using this concept, this rough  
8 justice concept of impacts at only one particular location to  
9 set this cap, it doesn't take into consideration the  
10 variability and what's happening in the Lower White River Flow  
11 System.

12 It doesn't consider the fact that not every well  
13 has -- pumping from neither each individual well has the same  
14 impacts on the flow system, and there may be flow paths where  
15 water goes -- discharges from completely different parts of the  
16 basin.

17 Mr. Dotson brought up 1169 earlier. He showed  
18 Footnote 12, which is on page 4 of 1169. I'd invite the Court  
19 to take a look at that, and you'll see what the State Engineer  
20 said there about all of the different points of discharge from  
21 the Lower White River Flow System basins. There's many more  
22 than just Muddy River Springs.

23 And so this 8,000 acre-foot cap doesn't take into  
24 account that there may be the ability to pump water that would  
25 not otherwise be discharging from that Muddy River Springs

1 area.

2 In fact, during the pump test, there was 14 and a  
3 half thousand acre feet of pumping of which 5300 occurred in  
4 Coyote Spring Valley. There was only a resultant 300 acre-foot  
5 to 450 acre-foot impact on spring flow. And so that suggests  
6 that there must be other things going on in terms of the  
7 effects of that pumping and where that water is coming from.

8 Mr. Taggart showed a chart. I think it was this  
9 morning, with all of the basins, the 232 basins, and then a  
10 bunch of arrows in between them. And those arrows were showing  
11 the way water flowed in between different basins. And so when  
12 there's communication between the basin, one might contribute  
13 to another, and that was what those arrows showed.

14 Now, these types of movements also occur within the  
15 individual basins, and not just basin to basin, but within the  
16 individual basins you have water coming in, water going out,  
17 water moving in different directions.

18 Mark, could you bring up the chart.

19 (Pause in the proceedings.)

20 This is what Coyote Springs attempted to do in --

21 THE COURT: What page is this or what slide is this?

22 UNIDENTIFIED SPEAKER: This will be 55.

23 MR. HERREMA: Is there an ROA cite on the bottom  
24 there, Mark?

25 UNIDENTIFIED SPEAKER: Yes.

1 MR. HERREMA: Now, this is from CSI's expert report.

2 THE COURT: It says ROA 41017?

3 MR. HERREMA: Yes. Thank you.

4 And this is a type of analysis, and Ms. Winston  
5 touched on it a little bit in her argument as well, but this is  
6 the type of analysis that the State Engineer should -- this is  
7 just Coyote Spring Valley, but this is the type of analysis  
8 that can be done not only in Coyote Spring Valley as part of  
9 the water budget that the State Engineer is required to  
10 develop, but it also can be done to talk about the  
11 relationships between the different basins.

12 And this is the way to develop that number that is --  
13 if they feel that they need to come up with a combined  
14 perennial yield for all these basins, this is the way to do it,  
15 not this backed out impacts analysis of 8,000 that they've come  
16 up with.

17 What that doesn't take into account is the flow paths  
18 that might exist, the faulting structures that I talked about  
19 in terms of the work that Zonge did. There's a -- I think it's  
20 deuterium is the way it's pronounced. It's an isotope that  
21 is -- that you can look at to understand how water moves around  
22 within the basins. If you look at the prior page in CSI's  
23 expert report, which I don't have the slide of unfortunately,  
24 but it's the immediately previous ROA cite. You'll see the  
25 water budget that CSI did that supports these arrows here on

1 the slide that we're looking at.

2 One more thing on the faults. Mr. Taggart discussed  
3 yesterday the movement of water can be fault driven. He talked  
4 about people, you know, finding water in faults and maybe  
5 locating wells there. Faults can both constrain water from  
6 moving from one place to another. They can also act as  
7 conduits. And Vidler and CSI both performed studies following  
8 the issuance of 1303 to come up with that best available  
9 science as to how these faults might exist within the basin.  
10 And the State Engineer largely disregarded this evidence.

11 There's one more thing I would add in regard to the  
12 issue of the individual water budgets. The State Engineer's  
13 website has an estimated perennial yield of each of these 232  
14 delineated basins. And this is the type of analysis that  
15 should be done had the State Engineer not been in such a hurry  
16 to have 1303 boundaries and the 8,000 acre-foot cap adopted.

17 So in summary, we believe the best evidence was  
18 ignored in 1309. The State Engineer relied on 1169 pump test  
19 data for the purpose that it wasn't designed for and was not  
20 interested in the further evaluation of the geophysical  
21 conditions in the basin in order to set a perennial yield as  
22 well.

23 I guess the final point I would make on the 8,000 is  
24 just reiterating that there is no substantial evidence. There  
25 is no specific evidence that was in the record or presented or

1 that the State Engineer can cite to in regard to this 8,000  
2 acre-foot number. So he said it based on the upper bound of a  
3 range of pumping where groundwater levels have, I think, neared  
4 stabilization is the term that he uses, and that simply does  
5 not meet the substantial evidence standard.

6 Thank you.

7 THE COURT: Thank you.

8 MR. ROBISON: I've been told that the head can absorb  
9 only that which the rear end can endure. Do you need a break  
10 or your staff?

11 THE COURT: I'm okay. Oh, I don't know if everyone  
12 else needs a break.

13 MR. ROBISON: That sounded like a no.

14 THE COURT: Okay. All right. I'm okay. Part of my  
15 staying awake and alert strategy is taking copious notes. So  
16 that way and make sure that I'm really concentrating.

17 MR. ROBISON: Well, I hope it's not that much of a  
18 challenge in the next hour.

19 **ARGUMENT FOR COYOTE SPRINGS**

20 MR. ROBISON: Going back, Your Honor, to how we got  
21 here, CSI. It's been mentioned several times, primarily by me,  
22 that we're not strangers to the litigation with the State  
23 Engineer, and all three of those cases, Southern Nevada Water  
24 Authority was an intervenor.

25 With regard to 1303, that was entered after we made a

1 settlement with the State in which we exchange promises of  
2 cooperation. They would in good faith process our  
3 applications, and we would in good faith participate in the  
4 ongoing workshop analysis of the respective basins involved in  
5 this case.

6 THE COURT: So you're talking about regarding the  
7 subdivision map.

8 MR. ROBISON: Yes.

9 What happened, we challenge 1303 because it  
10 primarily, because it included a complete blackout moratorium.  
11 Unlike any other water user in basin 210, any other basin, we  
12 were shut down. And I've told you all about the investments  
13 and the equities involved in that. Well, 1303, just like the  
14 May 16, 2018, letter shut us down. So we challenged 1303  
15 primarily saying that the moratorium is a taking. It's  
16 unconstitutional to take -- to shut down a project and  
17 depriving a project of water is depriving the owner of its  
18 property. And we've talked about the authority that associates  
19 priority as a property right.

20 We're shut down, and so we litigated. And then we  
21 get to 1309. We presented our evidence, and we all know that  
22 story. 1309, they say, nobody has been ordered to stop  
23 pumping. 1309 is just the guidelines, the goalpost, the  
24 guardrails. Well, that might be true for them.

25 We're shut down. Our maps have been denied because



1 1309 says there's no water. So for every other intervenor or  
2 petitioner to say No harm, no foul because nobody has been  
3 asked to stop pumping is a bit misleading in terms of the total  
4 shutdown that Coyote Springs has experienced as a result of  
5 these ongoing administrative proceedings. And it's been shut  
6 down because the basins have been consolidated. They've been  
7 merged. They've been put into a mega basin, which is not  
8 called for in a statute.

9 We've been here with 22 briefs citing probably 50  
10 cases and more than 50 statutes. And you search through these  
11 arguments, and you search through these briefs, and you search  
12 for all this material for one scintilla of legislative  
13 authority to eradicate basins. We know they can manage basin  
14 to basin, particularly where there's a hydrological connection.  
15 We know that. It's done throughout the State.

16 But how does the legislature look at the term basin  
17 in these statutes? What did the legislature mean? Has every  
18 one of those words in those statutes got an asterisk to it that  
19 says this word means whatever the State Engineer wants it to  
20 mean? No.

21 Is there an implicit suggestion by the legislature  
22 that the numerous times they've used the word basin that that  
23 is supposed to be interpreted as anything the State Engineer  
24 says it is based upon whatever it wants to do to manage  
25 groundwater from basin to basin?

1 I want to go back to the statute that you caused me  
2 to look at after your question. 37, please.

3 The State Engineer may make such reasonable rules and  
4 regulations as may be necessary for the proper and orderly  
5 execution of the powers conferred by law.

6 We don't dispute any of the powers that Ms. Winston  
7 talked about today that are in those statutes. We dispute the  
8 distortion of those words, and we believe that what the mega  
9 basin does, it violates the powers conferred under the statutes  
10 to restrict the investigations, the management, conductive  
11 management and the administration to basins.

12 And it gets pretty important why that happens.

13 The Court --

14 38, please, Mark.

15 When you asked me the question what does this mean  
16 with respect to an area, 534.120(1) says,

17 Within an area that has been designated by  
18 the State Engineer as provided for in this  
19 chapter where in the judgment of the State  
20 Engineer the groundwater basin is being  
21 depleted, the State Engineer in his or her  
22 administrative capacity may make such rules,  
23 regulations and orders as are deemed essential  
24 for the welfare of the area involved.

25 And I was concerned with your question with regard to

1 the term area. So we looked, and we said it's got to be  
2 explained in the statute. And sure enough it is. And if we  
3 take a look then at Slide 39, the NRS 534.110, Subsection 7 and  
4 Subsection 8, this explains why the term area is used in .120.  
5 And we start with Subsection 7.

6 Bring that up, please, in the (indiscernible),  
7 please. 7A, Mark.

8 The State Engineer, A, may designate -- not  
9 delineate, as 1309 says. It may designate -- a  
10 critical management area any basin in which  
11 withdrawals of groundwater consistently exceed  
12 perennial yield of the basin.

13 That's not happened in this case, Your Honor. They  
14 haven't confined themselves to the perennial yield of Basin  
15 210, Coyote Springs Valley. They've gone to say, and I think  
16 area is used -- the critical management area, which obviously  
17 explains and helps to find what is meant by within the area in  
18 120, but I've taken some liberty to emphasize our argument with  
19 the next slide, and that's CSI 40. (Indiscernible) the State  
20 Engineer may designate -- go down to the statute that you  
21 brought my attention to, within an area that has been  
22 designated.

23 So the area in the term designated are tied into the  
24 method by which the State Engineer is entitled to designate and  
25 investigate, but every single support, every single line in

1 this is restricted to a basin or within a basin.

2 And we've heard argument that the State Engineer does  
3 this all the time because it will regulate within a basin.  
4 Therefore it has a right to conjunctively managed, but that's  
5 still restricted to a basin.

6 And the real simple question comes down to whether or  
7 not this Court can say, well, if you take these statutes in  
8 their entirety and read them together, is there any explicit or  
9 implicit power to obliterate boundary lines of a basin which  
10 then jeopardize, if not eliminate prior appropriation and  
11 senior priority.

12 Let's go to 42. We made a list of all the basins --  
13 excuse me I made a list of all the statutes in which the term  
14 basin is used. And we looked for any statute that would in any  
15 way suggest that these boundaries can't be eliminated. There's  
16 nothing, none whatsoever.

17 So let's talk about what this mega basin really does,  
18 Your Honor, and this is more important and probably the most  
19 important reason why we're here. If, as in AB51 the legislator  
20 was going to be (indiscernible) they can eliminate prior  
21 appropriation, they can extinguish senior rights of a user, of  
22 a permittee by consolidating basins, the legislature wouldn't  
23 have touched that with a fork because we all know that that  
24 priority is a property right, and you can't take a property  
25 without compensation. We haven't paid anything. I think

1 that's pretty clear. We haven't been paid anything to shut  
2 down our business.

3 But take a look at Basin 210, and that's on Slide 43.  
4 This is the world in which we grew up. 1983 we got our rights.  
5 We developed. We were approved. Spent all that money because  
6 we were junior to 343 acre-feet that Bedroc had, and that's  
7 vested right. We know that. But then the next seniority  
8 rights are our 4600. We're second in Basin 210. We're junior  
9 only to 343 acre-feet. That's all.

10 Below us, as Mr. Taggart said, the juniors get wiped  
11 out. In the event there's not enough water to service that  
12 basin, the juniors get wiped out, and I agree with Mr. Taggart.  
13 They do. So we're not going to get wiped out into 10 because  
14 we're only junior to 343 acre-feet.

15 So the next slide, Your Honor, is 44, and I wish it  
16 was bigger print, but I've made a copy for the Court to look  
17 at, and I got copies for all counsel.

18 THE COURT: I can look it up here.

19 MR. ROBISON: I'm sorry. I missed you.

20 THE COURT: I can look at it right here. So you can  
21 just -- tell me what I should be looking at.

22 MR. ROBISON: Can I mark this next? Because it ties  
23 the two together.

24 THE COURT: Sure.

25 MR. ROBISON: Your Honor, I'll leave copies of this

1 with counsel and have it marked as our next, CSI.

2 UNIDENTIFIED SPEAKER: 56.

3 MR. ROBISON: 56.

4 THE COURT: Okay.

5 (Pause in the proceedings.)

6 THE COURT: So it can't be marked as 56. She's going  
7 to -- she will remark it as whatever it is.

8 THE CLERK: So I'm sending you guys an e-mail of what  
9 I need tonight.

10 MR. ROBISON: Okay.

11 THE CLERK: So you can bring it in. Because for  
12 every time you spoke, I need whatever you did at that time, and  
13 then the next time. I need them all separated out.

14 MR. ROBISON: All right.

15 THE CLERK: Because she's having them -- they're  
16 putting them in order of how you guys speak.

17 MR. ROBISON: Okay. Thank you.

18 THE CLERK: But I will keep it.

19 MR. ROBISON: The document --

20 (Pause in the proceedings.)

21 MR. ROBISON: Well, I'll refer to this document as  
22 the groundwater rights by priority in the Lower White River  
23 Flow System.

24 So this has been given to us by the State Engineer,  
25 and it is saying to us, well, you thought you had pretty good

1 senior rights in 210, but guess what, now you're so far down  
2 the line that you will get wiped out. You are junior to all of  
3 those rights above that blueline, Your Honor.

4 And you might note that those who have joined with  
5 the State Engineer are the intervenors. Look where they are.  
6 They have nothing to lose with 1309. They're senior to us.  
7 And as Mr. Taggart said, the seniors wipe out the juniors. So  
8 going from a position of --

9 MR. TAGGART: I'm just going to object. I said what  
10 I said, Ken, and it will stand for what it was. I said, well  
11 we're going to make that decision later how all of that exactly  
12 works. I didn't admit my client is going to lose all of their  
13 water if that's what you're trying to imply. I said that may  
14 happen, but that's for the next phase.

15 MR. ROBISON: Your Honor, the priority is a very  
16 important aspect of this case. So is prior appropriation.  
17 What we're trying to show you with these exhibits, Your Honor,  
18 is what happens when you combine basins in this fashion. You  
19 put us so far down the line in terms of priority that the  
20 seniors above us, and you start with Bedroc on the very top, we  
21 know they're -- they've been there forever. We've got the  
22 Church of Latter-day Saints, they're right below them. They've  
23 got -- they have seniority on us, but they don't have anything  
24 on us in 210. They've got no water rights in 210 that are  
25 senior to ours.

1           So the mega basin has just destroyed our senior  
2 rights, our prior appropriation rights, and that's what happens  
3 when you do a mega basin.

4           THE COURT: Well, so let me ask you this.

5           MR. ROBISON: Sure.

6           THE COURT: Mr. Robison, because is it -- I mean, I  
7 know that there has been an argument that it would be form over  
8 substance. I mean, can't the Nevada State Engineer, if he's  
9 looking at how the different basins affect each other then  
10 decide, because -- I mean, let's presuppose that there are  
11 designated areas, that Kane Springs has been a designated area  
12 and all of that kind of stuff. So can't he then decide that  
13 because these senior water rights holders are being affected by  
14 junior water right holders in the next basin that he could then  
15 start a curtailment process --

16          MR. ROBISON: He could.

17          THE COURT: -- so that -- and, I mean, in effect it  
18 would be kind of a reprioritizing, kind of like this.

19          MR. ROBISON: Good point, Your Honor, but  
20 unfortunately, the curtailment statutes are limited to a basin  
21 by basin or within a basin.

22          THE COURT: Okay.

23          MR. ROBISON: That's what the legislature said.  
24 That's why you can't do curtailment across boundaries. Because  
25 the statutory -- the legislature --



1 THE COURT: But he could take it into account as far  
2 as how the other basins affect and then based on that within a  
3 basin do curtailment procedures.

4 MR. ROBISON: Sure. He can give us a notice of  
5 curtailment, and we'll go into 210. We'll argue about why we  
6 shouldn't get curtailed in 210.

7 THE COURT: Okay. But that -- it's really more the  
8 fact that that procedure was not followed, as is outlined in  
9 the statute?

10 MR. ROBISON: That's correct, Your Honor. I couldn't  
11 have said it better. Nor could it be followed under the  
12 statutory scheme that's in effect in this case.

13 THE COURT: Okay.

14 MR. ROBISON: So, Your Honor, there was not much talk  
15 in the arguments that have preceded this one about what happens  
16 to senior rights, the prior appropriation doctrine. That was  
17 silent in the last couple days of argument. Because once you  
18 look at what happens in this situation, we've got real problems  
19 with this make a basin creation, which is again first time  
20 ever, and they say it's happened in other areas. It hasn't.  
21 It's happened within the basin where there's been some  
22 conjunctive management issues.

23 So, Your Honor, we believe that the prior  
24 appropriation doctrine should not be jeopardized by the mega  
25 basin efforts that have been accomplished in this case. Again,

1 the suggestion that everybody gets to wait to see what's  
2 happening and that we're living in the shadow, everybody but  
3 us, we've already been shut down.

4 This is a curtailment without curtailment procedures  
5 because our maps have been denied because no water on 1309. So  
6 where do we go? We go to a curtailment that's already  
7 happened. I mean, in effect, this has been a curtailment  
8 process without a curtailment by the statutory framework. So  
9 we're believing that that alone, Your Honor, justifies that  
10 1309 be declared void. It violates statutory definitions of  
11 basin, and it has obliterated the prior appropriation doctrine  
12 as it pertains to us.

13 I want to now go to the hardest part of rebuttal  
14 argument, and that is to go through your notes to see what they  
15 said that you don't agree with.

16 So it's a bit awkward, but I'm sure you've been  
17 there.

18 THE COURT: I have.

19 MR. ROBISON: And, of course, the notes are not  
20 legible. So bear with me.

21 THE COURT: Do you need a minute to organize?

22 MR. ROBISON: Pardon me?

23 THE COURT: Do you need a minute to organize?

24 MR. ROBISON: No. I'm good.

25 THE COURT: You're good. Okay. All right.

1 MR. ROBISON: It was during the State Engineer's --  
2 Mr. Bolotin's argument where you actually addressed the prior  
3 appropriation concern with him. And the answer was curious.  
4 Because it was a -- he immediately diverted to the Kane Springs  
5 issue in terms of prior appropriation. And I don't think the  
6 State Engineer really came back and said all of this mega basin  
7 doesn't negate or adversely affect prior appropriation. And  
8 they can't.

9 But this whole identification of the basin with  
10 respect to that answer comes out of the Rush Report, as  
11 Ms. Winston indicated. And he relies on the water words, and  
12 everybody does in this case. They cite to that dictionary.  
13 Well, that dictionary is the one that defines the basins as  
14 those delineated on the CSS-2 (phonetic), and no other  
15 definition exists in this case.

16 I've already mentioned most of what the State  
17 Engineer said about 1309 not denying rights, that's just --  
18 that's not true. It has definitely affected our rights, and it  
19 has effectively looked at the situation in terms of the  
20 equities. In that case we cite with regard to the equities,  
21 the *Happy Creek* case, it is an interesting read.

22 THE COURT: Which case?

23 MR. ROBISON: *Happy Creek*.

24 THE COURT: Oh, *Happy Creek*.

25 MR. ROBISON: Yep. The Supreme Court, that's the

1 equity discussion by Justice Pickering, my good friend Paul  
2 Taggart successfully argued how equities should be considered  
3 in these water management cases so as not allow anybody to  
4 forfeit rights. It was a good argument. It was a good  
5 opinion, and it applies to this case.

6 I want to respond to the comments made by the Church.  
7 And we agree with the Church in many ways because the argument  
8 by Mr. Carlson in this case was basically you've got to do  
9 something, Your Honor, in this case with regard to 1309 to  
10 protect existing rights, and 1309 protects existing rights.

11 Well, it protects his existing rights. It doesn't  
12 protect our existing rights.

13 And remember the series of events with respect to the  
14 pump test come out in 2012. The rulings come out in 2014.  
15 Each one of those rulings pertains to a specific basin. Each  
16 one of those rulings pertains to applications made in specific  
17 basins. And each one of those rulings in each one of those  
18 basins regarding the applications in those basins say this: We  
19 are not going to grant additional water to protect existing  
20 right so that we can protect existing rights.

21 I then find ourselves in the same position as the  
22 Church and saying, yes, we too want to protect existing rights.  
23 1309 does not protect existing rights unless you have senior  
24 rights over Coyote Springs. 1309 would affect our existing  
25 rights only because of the consolidation, only because of the

1 merger of various basins.

2           So the 1309 basically defies the reasoning set forth  
3 in the various rulings. And two of those rulings were --  
4 rejected CSI's application for groundwater.

5           So my good friend Mr. Dotson says, well, everybody  
6 knew this was coming, that there was limited water. Well,  
7 that's not exactly -- not exactly accurate. There was an  
8 application for over a hundred thousand acre-feet in 2001. And  
9 no one saw it coming. They're in there trying to get more  
10 water for themselves. A hundred acre-feet of those some  
11 hundred applications, and that's when then they, those  
12 applicants, including my client, Las Vegas Valley Water  
13 District, Southern Nevada Water Authority made applications  
14 thinking that everybody had more water. So this wasn't a train  
15 coming down the track with us -- with a deer in the headlight  
16 type of proposition. After the rulings that had been no really  
17 analysis other than quantity. Pump effect.

18           But in terms of what 1169 did that resulted in those  
19 rulings, there's no discussion about (indiscernible),  
20 transmissivity, faults. And Dettinger, who is quoted in 1169  
21 says the analysis of faults is crucial to water management, and  
22 that's why we are so disappointed actually that the State  
23 Engineer would not give us the credibility with regard to the  
24 highway fault, and the 5,000 acre-feet of water that comes out  
25 of the sheep range, which is on the west side 210 and then goes

1 south.

2 So they still don't explain with respect to the need  
3 to make this a mega basin the fact that Coyote Springs can pump  
4 water from the -- in 210. That does not go in any way  
5 whatsoever to Warm Springs and jeopardize a habitat. That is  
6 about 17 to 20,000 acre-feet that bypasses Warm Springs and the  
7 dace habitat. That's what the science showed.

8 So when the Church says protect existing rights, we  
9 go we second that. Please protect our existing rights. That  
10 was articulated in the rulings that said those applications for  
11 more water are denied.

12 Your Honor, I think 1309 might someday, if it  
13 survives this proceeding, lead to some kind of analysis of what  
14 the perennial yield is for the mega basin. But once you step  
15 there, you've already violated a statute that said that these  
16 basins are to be managed based upon the perennial yields of  
17 each of the basins. Again, that begs the question, because  
18 here again we deal with that dreadful word, basin, one the  
19 legislature uses so many times and the courts has.

20 What does basin mean? What does basin mean? That's  
21 what this Court is going to have to tell us in its order on  
22 1309. Does basin mean any combination of basin that the State  
23 Engineer thinks is appropriate to combine? Does basin mean  
24 those enumerated, delineated basins on CSI 2? What does basin  
25 mean? And there's only one definition, and that comes from the

1 Rush Report, that everybody in this (indiscernible) relies on.  
2 And it's those basins on CSS-2, Your Honor.

3 In order to validate 1309, I think the Court is going  
4 to have to find a way to say that basins can be defined as a  
5 mega basin despite prior appropriation. And if you get there,  
6 Your Honor, I don't know how you reconcile making senior rights  
7 junior when you define basin as a mega basin under the statutes  
8 that existed and apply to this case.

9 And that pertains in part to the green light analysis  
10 that was discussed by SNWA and the State Engineer.

11 They said these studies back in 1169 and the rulings  
12 will constitute an orange light, a yellow light or perhaps even  
13 a red light. That's not -- we saw the rulings. We didn't get  
14 more water, but we saw the State Engineer not say in those  
15 rulings that you get less water. We're going to protect your  
16 existing rights, and, of course, that's when the money started  
17 flowing for improvements.

18 And the Las Vegas Valley Water District and together  
19 with us, we created the GID, and the GID was going to provide  
20 the water to our units and our improvements. But then they  
21 shut us down with no analysis, as I pointed out several times.  
22 The light was not red. The rulings for 6255 through 6261 that  
23 they turned bright green and said go for your development  
24 because we're going to protect your existing rights.

25 The cases cited, particularly by SNWA, *Cappaert*,

1 *Griffin*, Pyramid Lake Indian, Paiute Indian Tribe, if you look  
2 at those cases, and we have, they do not resort -- they do not  
3 refer to in any way an implicit permission to combine basins.

4 Yes, they talked about water management, as they  
5 should. And so we're clear, Your Honor, we don't have a  
6 problem with the State Engineer managing the water that is  
7 owned by the public of this State.

8 THE COURT: Let me ask you. Do you have a problem  
9 with him managing it conjunctively?

10 MR. ROBISON: In our basin, not a bit.

11 THE COURT: Okay.

12 MR. ROBISON: You come back, and we'll go, and we'll  
13 go to the hearings, and we'll present our evidence, and we'll  
14 do a conjunctive management plan for Basin 210. I wish we  
15 would have been given that right in the first place. We  
16 wouldn't be here.

17 Your Honor, I've got 25 minutes left, but I've got  
18 five minutes left on the clock.

19 THE COURT: I don't -- well, I should ask my staff  
20 first. Will you guys kill me if we stay a little late?

21 MR. ROBISON: We want to go home, don't we?

22 THE COURT: I mean, if you want -- I mean, if you  
23 want to just --

24 MR. ROBISON: I'd just as soon break today.

25 THE COURT: Okay. That's fine.



1 MR. ROBISON: I'll probably be more precise if you  
2 let me break.

3 THE COURT: No problem.

4 So why don't we break for the day.

5 Let me ask if those who are left.

6 So we've got Apex, Center for Biological Diversity,  
7 Muddy Valley, Nevada Cogeneration Associates, Georgia-Pacific,  
8 Lincoln and Vidler, just to try and get a sense of how much  
9 more time we're looking at, I just want to -- with no pressure.  
10 I mean, you all have your four hours. I'm just trying to get a  
11 sense of if you think we will end tomorrow, or if we'll be  
12 going into Friday. So let me just ask and, you know, like I  
13 said, no pressure.

14 Apex Dry Lake, do you have an estimate of how long  
15 you think you will take?

16 MR. BALDUCCI: Yes, Your Honor, I've been telling  
17 everyone today I should be 15 to 30 minutes, which will be 10  
18 to 40.

19 THE COURT: Okay. All right. And then Center for  
20 Biological Diversity?

21 MR. LAKE: Your Honor, to be safe, mark me down for  
22 an hour. I'll probably use less, but.

23 THE COURT: Okay.

24 And then Muddy Valley.

25 MR. DOTSON: Same, Your Honor.

1 THE COURT: About an hour?

2 MR. DOTSON: Yeah. I'll probably be less.

3 THE COURT: All right. Nevada Cogeneration?

4 MR. FLAHERTY: Your Honor, I think 30 to 60.

5 THE COURT: Okay. I'll put you down for an hour.  
6 Georgia-Pacific.

7 MR. FOLETTA: Your Honor, I'd say 30 to 45 minutes.

8 THE COURT: Okay.

9 And then Lincoln Vidler?

10 MS. PETERSON: An hour to an hour and a half.

11 THE COURT: Okay. So, I mean, it looks like we are  
12 looking like we will be finishing tomorrow. So I guess we'll  
13 just plan for that. Okay. All right. Thank you.

14 Are there any other housekeeping matters that we need  
15 to take care of today or --

16 I think Michelle is going to send you e-mails about  
17 which exhibits we need from you.

18 (Pause in the proceedings.)

19 MR. ROBISON: I wanted to clarify CSI's position in  
20 maybe 51 and 60.

21 MS. WINSTON: 1329, Order 1329.

22 MR. ROBISON: I just wanted to --

23 / / /

24 / / /

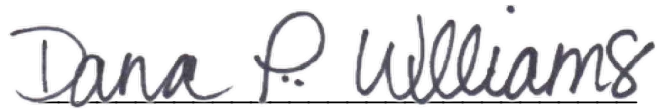
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1 THE COURT: You know what, start it tomorrow. Start  
2 with it tomorrow. So that way we have it on the record.

3 (Proceedings recessed for the evening at 4:57 p.m.)

4 -oOo-

5 ATTEST: I do hereby certify that I have truly and correctly  
6 transcribed the audio/video proceedings in the above-entitled  
7 case to the best of my ability.

8   
9

10 Dana L. Williams  
11 Transcriber

12 ADDITIONAL TRANSCRIBER: KARISA EKENSEAIR  
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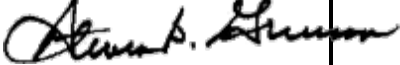
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TRAN

DISTRICT COURT  
CLARK COUNTY, NEVADA  
\* \* \* \* \*

SOUTHERN NEVADA WATER )  
AUTHORITY, )  
 )  
Plaintiff, )  
 )  
vs. )  
 )  
NEVADA STATE ENGINEER, )  
DIVISION OF WATER RESOURCES, )  
 )  
Defendant. )  
 )  
AND RELATED CASES & PARTIES )

CASE NO. A-20-816761-C  
DEPT NO. I

**TRANSCRIPT OF  
PROCEEDINGS**

BEFORE THE HONORABLE BITA YEAGER, DISTRICT COURT JUDGE

THURSDAY, FEBRUARY 17, 2022

**PETITION FOR JUDICIAL REVIEW - DAY 4**

SEE NEXT PAGE FOR APPEARANCES

RECORDED BY: LISA LIZOTTE, COURT RECORDER  
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FOR LINCOLN COUNTY WATER:	WAYNE O. KLOMP, ESQ. DYLAN V. FREHNER, ESQ. District Attorney
FOR VIDLER WATER COMPANY:	KAREN A. PETERSON, ESQ.
FOR NV COGENERATION ASSOCIATES NOS. 1 AND 2:	FRANCIS C. FLAHERTY, ESQ.
FOR MUDDY VALLEY IRRIGATION:	ROBERT A. DOTSON, ESQ. STEVEN D. KING, ESQ.
FOR CENTER FOR BIOLOGICAL DIVERSITY:	SCOTT LAKE, ESQ. LISA T. BELENKY, ESQ.
FOR REPUBLIC ENVIRONMENTAL TECH., AND GEORGIA-PACIFIC GYPSUM:	LUCAS M. FOLETTA, ESQ.
FOR DRY LAKE WATER, LLC, AND APEX HOLDING COMPANY:	CHRISTIAN T. BALDUCCI, ESQ.
FOR BEDROC LIMITED, LLC, WESTERN ELITE ENVIRONMENTAL, AND CITY OF NORTH LAS VEGAS:	NO APPEARANCES NOTED
FOR MOAPA VALLEY WATER DISTRICT:	GREGORY H. MORRISON, ESQ.

JD Reporting, Inc.

FOR COYOTE SPRINGS INVESTMENT:

KENT R. ROBISON, ESQ.  
EMILIA K. CARGILL, ESQ.  
BRADLEY J. HERREMA, ESQ.  
HANNAH E. WINSTON, ESQ.

FOR SIERRA PACIFIC POWER CO.,  
AND NEVADA POWER COMPANY:

JUSTINA A. CAVIGLIA, ESQ.

FOR THE CHURCH OF JESUS CHRIST  
OF LATTER-DAY SAINTS:

SEVERIN A. CARLSON, ESQ.

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1 **LAS VEGAS, CLARK COUNTY, NEVADA, FEBRUARY 17, 2022, 8:30 A.M.**

2 \* \* \* \* \*

3 THE COURT: Okay. Good morning, everyone.

4 There was one housekeeping matter that I realized  
5 last night when Mr. Dotson mentioned an amended record on  
6 appeal. I remember maybe a month or two ago that there was  
7 some issues with getting the amended record on appeal filed in  
8 our clerk's office.

9 UNIDENTIFIED SPEAKER: Yes.

10 THE COURT: It's not in Odyssey that I can tell, and  
11 I don't know if that's something that we needed to make sure is  
12 done.

13 Mr. Bolotin, could you kind of let me know --

14 MR. DOTSON: Your Honor, can we get appearances  
15 first, and then after those, we have some additional  
16 housekeeping on top of that too.

17 THE COURT: Sure.

18 MR. DOTSON: That we would like on the record.

19 THE COURT: Okay. Sure.

20 MR. BOLOTIN: Are we on the record, Your Honor?

21 THE COURT: Yeah, we are on the record.

22 MR. DOTSON: Oh, we are. Okay. I just wanted to --

23 MR. BOLOTIN: James Bolotin --

24 THE COURT: Oh, you know what, hold on.

25 My clerk is asking me to do roll call first. So let

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1 me do that, and then we can get that other -- those additional  
2 matters on the record.

3 All right. So here on behalf of Las Vegas Water  
4 Valley District and Southern Nevada Water Authority.

5 MR. TAGGART: Paul Taggart here on behalf of the  
6 District and the Authority. Good morning, Your Honor.

7 THE COURT: Good morning.

8 Nevada State Engineer?

9 MR. BOLOTIN: Good morning, Your Honor. James  
10 Bolotin from the Attorney General's office here on behalf of  
11 the Nevada State Engineer. And I once again have Micheline  
12 Fairbank, Deputy Administrator from the Division of Water  
13 Resources.

14 THE COURT: Good morning. Thank you.

15 Lincoln County Water District.

16 MR KLOMP: Good morning, Your Honor. Wayne Klomp on  
17 behalf of Lincoln County Water District. Also with me in the  
18 courtroom is Wade Poulsen, the general manager; and Dylan  
19 Frehner, the Lincoln County District Attorney, is appearing via  
20 BlueJeans.

21 THE COURT: Okay. Thank you.

22 Vidler Water Company?

23 MS. PETERSON: Good morning, Your Honor. Karen  
24 Peterson from Allison MacKenzie law firm, and I have Ms. Palmer  
25 here, Mr. Bushner and are here and Mr. Hurth here.

1 THE COURT: Good morning.

2 Nevada Cogeneration Associates Number 1 and 2.

3 MR. FLAHERTY: Good morning, Your Honor. Frank  
4 Flaherty on behalf of Nevada Cogen.

5 THE COURT: Good morning.

6 Muddy Valley Irrigation Company?

7 MR. DOTSON: Good morning, Your Honor. Rob Dotson  
8 along with Steve King on behalf of Muddy Valley Irrigation  
9 Company, and we have the executive director and probably  
10 members of the board online.

11 THE COURT: Okay. Great. Thank you.

12 Center for Biological Diversity.

13 MR. LAKE: Good morning, Your Honor. Scott Lake for  
14 the Center for Biological Diversity. I have Great Basin  
15 Director Patrick Donnelly and cocounsel Lisa Belenky on  
16 BlueJeans.

17 THE COURT: Great. Thank you.

18 Let's see. Republic Environmental Technologies and  
19 Georgia-Pacific Gypsum.

20 MR. FOLETTA: Good morning, Your Honor. Lucas  
21 Foletta.

22 THE COURT: Thank you.

23 Let's see. Dry Lake Water and Apex.

24 MR. BALDUCCI: Good morning, Your Honor. Christian  
25 Balducci appearing on behalf of Apex and Dry Lake. Also

1 appearing via BlueJeans is Lisa Cole. She's my client  
2 representative and a consultant.

3 THE COURT: Okay. Good morning. Thank you.  
4 Bedroc Limited and Western Elite. Anyone?  
5 No. Okay.  
6 Moapa Valley Water District.

7 MR. MORRISON: Good morning, Your Honor. Greg  
8 Morrison here on behalf of Moapa Valley Water District.

9 THE COURT: Okay. Good morning, Mr. Morrison.  
10 Coyote Springs Investments.

11 MR. ROBISON: Good morning, Your Honor. Kent  
12 Robison, together with cocounsel Emilia Cargill, Brad Herrema  
13 and Hannah Winston by BlueJeans. I should also indicate that  
14 our client Albert Seeno, Jr., has been on BlueJeans the entire  
15 week, and he's present today as well. And Mark Ivie, our  
16 technician.

17 THE COURT: Okay. Thank you.  
18 Sierra Pacific Power Company and Nevada Power  
19 Company.

20 MS. CAVIGLIA: Good morning, Your Honor. Justina  
21 Caviglia on behalf of Sierra Pacific and Nevada Power on  
22 BlueJeans today.

23 THE COURT: Okay. Good morning.  
24 And then the Church of Jesus Christ of Latter-day  
25 Saints?

1 MR. CARLSON: Good morning, Your Honor. Sev Carlson.

2 THE COURT: Good morning, Mr. Carlson.

3 All right. So have I missed anyone?

4 All right. Hearing no answer.

5 Now we will go to the housekeeping matter. I just  
6 left off where I had asked Mr. Bolotin about-- of the amended  
7 record on appeal. Can you enlighten me as far as what  
8 happened --

9 MR. BOLOTIN: Yes, Your Honor.

10 THE COURT: -- or is happening with that?

11 MR. BOLOTIN: So we were -- my office -- this is  
12 James Bolotin for the record.

13 We were alerted that some of the exhibits that were  
14 in the original one were not the versions of those documents  
15 the State Engineer had looked at. There's highlighting and  
16 some other things on some of SNWA's exhibits specifically in  
17 the record on appeal. So we worked to just -- the Bates  
18 stamping stayed the same.

19 THE COURT: Okay.

20 MR. BOLOTIN: And we basically filed an amended  
21 record on appeal to just swap in clean versions of those. I  
22 thought they had been filed. I know that Mr. Ireland in my  
23 office and his assistant were working to make that happen. I  
24 know there was something filed, but we can make sure to get  
25 that. We sent thumb drives and everything to all the parties

1 with the amended record on appeal, but we're happy to do  
2 whatever the Court needs to make sure that it's --

3 THE COURT: Yeah. I think it's -- what you'll  
4 probably need to do is get together with our clerk's office to  
5 make sure -- because it's such a voluminous document that I  
6 think they have to do it in chunks. And even then they  
7 probably -- they probably have to involve IT to do it.

8 MR. BOLOTIN: And I know the first time we did the  
9 really big record on appeal the first time, we did some kind  
10 of --

11 THE COURT: Special something.

12 MR. BOLOTIN: -- special thing behind the scenes that  
13 it was in two really big chunks. And then my understanding in  
14 talking to my colleagues and trying to get this done last time,  
15 we couldn't do that again. So we had to do something --

16 THE COURT: Oh, different.

17 MR. BOLOTIN: -- different, and maybe that's where  
18 the issue is.

19 THE COURT: The issue's at.

20 MR. BOLOTIN: But we'll make sure that that happens  
21 as soon we can.

22 THE COURT: Okay. Great. Thank you.

23 And then, Mr. Dotson, there was some other matter  
24 that you needed to address?

25 MR. DOTSON: Well, there's a few things, but I want

1 to speak on that if I might be heard on that first.

2 THE COURT: Sure.

3 MR. DOTSON: Because one of the things that I noticed  
4 as I was preparing, and you are correct, I alluded to it  
5 because I came to the point in my PowerPoint presentation where  
6 I was going to put in 41996. It happens to be one of the pages  
7 that Mr. Bolotin is referring to that has an interlineation and  
8 highlights --

9 THE COURT: I see.

10 MR. DOTSON: -- and it has metadata as well. The  
11 problem is the new record, which I at that point was thinking  
12 was the new record, is also distorted and blurry. And so if  
13 there is a chance to refile -- it's not in color. The new  
14 record, it doesn't have -- so that particular report, which is  
15 the only part I saw with interlineation, metadata and  
16 highlights.

17 MR. BOLOTIN: Yeah, I think that's it.

18 MR. DOTSON: Starts at Record on Appeal 41930 and  
19 runs to 42029. And in the original, you can see, like these  
20 highlighting, these red interlineations are all in the document  
21 you've seen.

22 THE COURT: Okay.

23 MR. DOTSON: And you can tell that Tom O (phonetic)  
24 or somebody like that is who did it, but that's probably  
25 whoever holds the license. So, for example, when I do a

1 highlight, it shows Morgan Bogomil (phonetic), who is my  
2 assistant.

3 THE COURT: Oh, that's the metadata that you're  
4 talking about. Okay.

5 MR. DOTSON: Yeah, so that's Item Number 1.

6 MR. TAGGART: Well, and I'll just -- Paul Taggart for  
7 the record.

8 We don't know who Tom O is. Everybody has kind of  
9 been curious about it, but -- and this came to my attention  
10 just last week. These are reports of my client that were --  
11 that are the ones that had to be replaced. So if we need to  
12 come up with a clean version, you know, without metadata, but  
13 that's in color because I think it's -- you know, a lot of it  
14 is graphs and all of that, the color really matters. So we can  
15 certainly get you, if need be, a copy that doesn't have that on  
16 it.

17 But, I mean, this is what was in the record before  
18 the State Engineer.

19 THE COURT: Sure.

20 MR. TAGGART: We don't want to change that.

21 MR. BOLOTIN: No. And --

22 MR. TAGGART: So I just want to --

23 THE COURT: Sure. I wonder if it would be easier on  
24 our clerk's office if you filed it as an errata to the record  
25 on appeal, you know, basically saying that these are actually

1 the pages that should be in the original record on appeal.

2 MR. BOLOTIN: And just -- yeah, I think what  
3 happened --

4 MR. DOTSON: Just that document.

5 MR. BOLOTIN: -- was we ended up almost refileing the  
6 whole thing, and I think that was the big problem, and I think  
7 it would be easier if we could just take an ROA range that  
8 needs to be part of an errata and file it. That's a much  
9 smaller chunk. It'll probably be easier to do.

10 THE COURT: Yeah. Because, you know, I think I told  
11 you from the beginning the way that the record on appeal is now  
12 is incredibly difficult to navigate because it makes it really  
13 slow and clunky, which is why I gave you all the task of  
14 attaching the parts of the record of appeal -- on appeal, which  
15 I know is a lot of work on your part.

16 MR. DOTSON: And it's even worse on the amended.

17 THE COURT: Oh, I'm sure.

18 MR. DOTSON: Way worse. I mean, it is very clunky.

19 THE COURT: Yes. It's very difficult to navigate.

20 MR. DOTSON: Yeah.

21 THE COURT: So, Mr. Balducci, please --

22 MR. BALDUCCI: Yeah. I can confer. I've had great  
23 success with the clerk's office in doing very creative things.  
24 So I'll confer with them over the lunch break.

25 THE COURT: Thank you.



1 MR. BALDUCCI: I have some ideas on what we can do to  
2 correct them.

3 THE COURT: Okay. Great. Thank you. I really  
4 appreciate that.

5 All right. So that -- with that --

6 MR. DOTSON: Okay. Two more items.

7 THE COURT: Okay. Two. Okay. Go ahead.

8 MR. DOTSON: Item Number 2 was, just as a  
9 housekeeping matter, that prior petition for judicial review,  
10 we've been able to track down, and there is a notice of entry  
11 of order of dismissal in that case, and the case number is  
12 A-19-789203-J. That is dated. The notice of entry is  
13 9/3/2020. So at least we know that there is not another live  
14 case out there, Your Honor.

15 THE COURT: Okay.

16 MR. DOTSON: And then lastly, and perhaps most  
17 excitingly, apparently my suggestions with the State to reach a  
18 resolution have gained some purchase, and I am pleased, and I  
19 feel like we have an obligation in candor to the Court to  
20 announce that we have reached an agreement in principle for a  
21 settlement of the petition for judicial review, which is indeed  
22 this proceeding, in my mind, that would resolve my client's  
23 petition for judicial review against the State Engineer as well  
24 as I believe Southern Nevada Water Authority's.

25 And I'm happy to describe those elements of that

1 agreement if you would like for the record.

2 My board, the Muddy Valley Irrigation Company Board.

3 THE COURT: So I -- so I understand.

4 MR. DOTSON: No. I'm not --

5 THE COURT: No. No. No. I understand this is not  
6 as to any of the other clients. This is something that they  
7 are just going to put on the record as to their own resolution  
8 that they are -- this doesn't change anything as far as the  
9 petition for judicial review, this hearing, anything along  
10 those lines.

11 MR. DOTSON: And indeed, my board still needs to take  
12 corporate action and vote on it and approve it, and it needs to  
13 be put into writing.

14 THE COURT: So just for the record, you can state  
15 what --

16 MR. DOTSON: What the terms are.

17 THE COURT: Yeah, what the terms are, and then Mr.--

18 MR. ROBISON: Your Honor. Your Honor.

19 THE COURT: Mr. Robison, yes.

20 MR. ROBISON: The cases have been consolidated. He  
21 has to make a motion so we get to view it and comment.

22 MR. DOTSON: I'm getting to that, but you couldn't  
23 wait until I finished.

24 THE COURT: Okay.

25 MR. DOTSON: But I also have an obligation and candor

1 to all of you to describe once we have reached that agreement  
2 because I don't --

3 MR. ROBISON: When the Court approves it in the  
4 process, yeah.

5 MR. DOTSON: Yeah, but this is not --

6 THE COURT: I'm not -- and I'm not making any  
7 decisions about approving anything right now or anything today.

8 MR. DOTSON: Right. And we would proceed as normal.

9 THE COURT: Sure.

10 MR. DOTSON: Today. I intend to conclude my  
11 arguments today, assuming we get to it, and so I don't -- but  
12 each -- the consolidation, as I understand it, each matter did  
13 retain its separate and distinct nature. That's why we had the  
14 number of case numbers that we have, but he's correct. We've  
15 also intervened in each case.

16 MR. ROBISON: You've intervened.

17 MR. DOTSON: -- and it has been consolidated. And I  
18 am not taking -- but I have an obligation, I believe, to  
19 describe the fact that we have reached this so that you don't  
20 hear my arguments today not knowing that we had reached a  
21 tentative agreement with the State.

22 THE COURT: Okay.

23 MR. DOTSON: It doesn't sound like counsel is  
24 interested in hearing that, but --

25 THE COURT: Let me just have him put it on the

1 record, and then you can make any comment after he's done that.

2 MR. ROBISON: Okay. But if they've settled and  
3 they're going to argue, what's the -- what's going on? They  
4 entered into a settlement, resolve all their claims, and then  
5 they want to stand up here at this lectern and argue?

6 THE COURT: So they -- so what he's saying is they  
7 have reached at least an oral settlement, but even if they are  
8 at the preliminary stages of reaching this oral settlement, in  
9 order for them to even actually settle, it would need to be  
10 voted on. So it's just the terms, but it doesn't look like  
11 it's actually firmed up yet.

12 Is that accurate?

13 MR. DOTSON: It's not even in writing yet.

14 MR. ROBISON: Your Honor, if you put a settlement on  
15 the record, it's binding.

16 MR. DOTSON: Yes, if they agree.

17 MR. ROBISON: Binding and executed or put on the  
18 record of the court constitutes a binding settlement. We all  
19 know that.

20 MR. DOTSON: Yeah. As soon as I -- but I also have  
21 an obligation. You're saying I should have just done this like  
22 a Mary Carter and not told the Judge that I have an agreement  
23 in principle?

24 MR. ROBISON: Well, no, I'm not going to talk to  
25 counsel. I'm talking to the Court.

1 THE COURT: Okay.

2 MR. ROBISON: The rules require that a motion be  
3 filed, and the other parties get served because we've  
4 intervened.

5 And then we get to comment on whether or not the  
6 settlement is a Mary Carter type settlement and prejudicial to  
7 us.

8 THE COURT: So let me distinguish what I believe  
9 Mr. Dotson is putting on the record versus what, you know, what  
10 you were talking about as far as the settlement.

11 I think what Mr. Dotson is saying is he just wants to  
12 inform the Court as to the tentative settlement that they've  
13 reached. This is not something that I would be inquiring as to  
14 the parties is this the agreement, you know, are you settled,  
15 that kind of thing to make it officially a settlement that is  
16 binding.

17 MR. DOTSON: Exactly, Your Honor. In fact, if you  
18 canvassed me --

19 THE COURT: So usually when I --

20 MR. DOTSON: -- I'd say no.

21 THE COURT: -- when there's a settlement agreement  
22 reached, I say are these the terms of the settlement that you  
23 reached.

24 MR. ROBISON: Right.

25 THE COURT: You know, do you agree with everything

1 regarding these terms? Yes. Yes. You understand that you're  
2 bound by this? Yes. Yes. That is not what I'm going to be  
3 doing today.

4 MR. ROBISON: Well, then why are we putting it on the  
5 record?

6 THE COURT: I think he's just putting it on the  
7 record to inform the Court that they have tentatively reached a  
8 settlement agreement, but it's not changing these proceedings  
9 in any way at this point because they're still going to be  
10 arguing. They're still going to be moving forward with the  
11 hearing as we're going, but, you know, maybe at a later date,  
12 if something happens, then, you know, they can put a motion on  
13 and that kind of thing.

14 MR. DOTSON: We would put it on the record, Your  
15 Honor, in the interest of transparency and candor to the Court.  
16 If counsel objects to it being on the record and no one else  
17 would like to have it on the record -- I'll speak with the  
18 other parties, but I guess we don't have to put it on the  
19 record right now.

20 MR. ROBISON: Your Honor, I don't think Mr. Dotson is  
21 listening.

22 MR. DOTSON: Oh, I think I'm listening very  
23 carefully.

24 MR. TAGGART: Your Honor --

25 MR. ROBISON: It has to be a motion under Rule 41.

1 We've intervened in this case.

2 THE COURT: So it needs to be a motion if it's going  
3 to be officially approved by the Court.

4 MR. ROBISON: Correct.

5 THE COURT: Right. That is not what we are doing  
6 today. I'm not approving the settlement. I'm not -- there's  
7 nothing along those lines that from a legal standpoint would  
8 make it binding on them. I think it's just an informational  
9 record that they are making. So there's nothing that's binding  
10 on any of these parties as far as this Court is concerned as  
11 far as the information that they are going to be putting on.

12 MR. DOTSON: Right.

13 MR. TAGGART: Your Honor, Paul Taggart for the  
14 Authority and the District.

15 And we also echo Mr. Dotson's comments, and we've  
16 reached an agreement with the State.

17 I think the point is, is that we do have to file a  
18 motion unless nobody objects. We could have announced it here  
19 in open court, and no one objected, and then we could put it on  
20 the record, but if people are going to object.

21 THE COURT: Which I think that's pretty safe -- safe  
22 assumption?

23 MR. TAGGART: Then absolutely, absolutely motions  
24 would be filed, and we'll debate what the consolidation means  
25 with respect to rights of parties to, you know, object or

1 whether they have veto power or what or how you judge what  
2 another party's rights are to object to our settlement.

3 But I think -- so we all expect that that process  
4 will be followed.

5 THE COURT: Okay.

6 MR. DOTSON: So maybe the question an inquiry should  
7 be to the Court. It is -- you are the Judge in this case.  
8 Would you like further detail, or is this transparency  
9 adequate.

10 THE COURT: I think this transparency is adequate.

11 Mr. Balducci, yes.

12 MR. BALDUCCI: Yeah. The only -- I'll come to the  
13 podium.

14 THE COURT: Sure.

15 MR. BALDUCCI: The only concern I would have, and I  
16 echo Mr.-- actually, everyone's comments here, if we're dealing  
17 with a truly false party that is adversarial solely for this  
18 case that has a side deal with the engineer, we need to know  
19 about that. We need to comment on that. I don't know what's  
20 going to come of it. I'm interested to hear the terms, how it  
21 may or may not affect my client. Is it something I need to  
22 comment on today? I don't know. But I think for the sake of  
23 transparency and for evaluating whether the irrigation company  
24 and the Water District are still actual parties with a  
25 controversy in this case or a false party that are basically



1 bootstrapping the engineer, we need -- and I say that in the  
2 most kindest way possible.

3 THE COURT: No, I understand.

4 MR. BALDUCCI: That's what the case law says. And  
5 when we talk about Mary Carter, it goes way back to some case  
6 in, like, 1998 where a defendant settled out, didn't tell  
7 anybody and basically provided testimony in support of the  
8 plaintiff. We need to know about that. And I agree for the  
9 sake of candor and to make sure there's a level playing  
10 field -- I think your --

11 Is it a public company, the --

12 MR. DOTSON: Yeah. Yeah.

13 MR. BALDUCCI: So it would be something that's --

14 MR. DOTSON: Well, it's not public public. They're  
15 just whatever -- there's more than -- it's still closely held,  
16 but it's like 300 shareholders or something like that.

17 MR. BALDUCCI: Okay. That's fair. I think we should  
18 know about what the terms are.

19 THE COURT: All right.

20 And, Ms. Peterson, is there something else --

21 MR. DOTSON: 250.

22 THE COURT: -- you would like to add?

23 MS. PETERSON: I did. This is Karen Peterson from  
24 Allison MacKenzie.

25 And again, these parties are helping other parties

1 with their arguments. It's obviously very clear what's been  
2 going on in this courtroom, and so if they're going to settle,  
3 but still help other parties with regard to their cases, that's  
4 not right.

5 THE COURT: So -- okay. So let me just -- let me  
6 just -- so and I haven't read the Mary Carter case. Just, you  
7 know, in full transparency. I assume that in the Mary Carter  
8 case that there was an actual full and final settlement that  
9 was done between the parties. Is that correct, that they had  
10 actually settled?

11 MR. DOTSON: There was actually an agreement, and  
12 they didn't disclose the fact that there was an agreement.

13 THE COURT: Okay.

14 MR. DOTSON: But what you can do is appropriately  
15 have, like, say reach a high low in a civil case, which is what  
16 I'm more used to.

17 THE COURT: Right.

18 MR. DOTSON: And but you -- at least my practice has  
19 been that you inform the Court once that agreement has been  
20 reached, but you still need the determination from the jury as  
21 to where -- well, where it falls.

22 Here we haven't actually got an agreement, but we  
23 came -- we have an agreement in principle as of this morning.  
24 And so I felt like we need to disclose it to everybody for all  
25 the reasons that have been listed.

1 THE COURT: Okay.

2 MR. ROBISON: Your Honor, Mary Carol -- Mary Carol.  
3 She's my secretary.

4 The Carter case, Your Honor, was a settlement that  
5 was made between one defendant and the plaintiff to the  
6 prejudice of the other defendants because this defendant as  
7 part of the settlement agreed to testify in a certain manner  
8 that hurt the codefendants. That's a Mary Carter settlement.

9 And the reaction is that those are void. Those are  
10 invalid, and our legislature responded, as did our Supreme  
11 Court by invoking rules that the full terms of the settlement  
12 has to be submitted to the Court by a motion. And all of the  
13 other parties have the opportunity to respond to the motion.

14 Well, what's happening here, Your Honor, as  
15 Ms. Peterson pointed out, we've got a collaboration between  
16 these parties, and now they want to say we don't have a dog in  
17 the fight, but we want to argue against the other parties, like  
18 the Vidler and Lincoln County and CSI. That is getting very  
19 close to Mary Carter type settlement.

20 THE COURT: So --

21 MR. DOTSON: We're past that though, Your Honor,  
22 respectfully. We're, at this point, the arguments that are  
23 left are my arguments against the State.

24 MR. ROBISON: Well, then there's no arguments.

25 MR. DOTSON: Well, there is until there's a deal, and

1 the point is there isn't a deal. So unless we want to just  
2 recess and all come back after it's memorialized, which I  
3 wouldn't suggest is the best judicial efficiency.

4 THE COURT: I agree.

5 MR. DOTSON: I think that's where we're at.

6 MR. ROBISON: Well, there's no prejudice for us going  
7 forward right now. Let me argue. Let them argue against the  
8 State. Let everybody do their reply argument, and he can make  
9 his motion and put it on the record. Nobody is accusing them  
10 of not being transparent. It's just the timing and effect.

11 THE COURT: So why don't, for the -- well, kind of  
12 the mushy record at this point, but why don't we do it this way  
13 if that makes it procedurally better. We go through with the  
14 arguments. At the end, if you would like to put on the terms,  
15 unless the other parties wish to know the terms now as far as  
16 if they think it would affect their argument.

17 MR. ROBISON: We don't need the terms because he's  
18 going to argue anyway as though there's not a settlement.

19 THE COURT: Okay.

20 MR. ROBISON: So let's just go forward, Your Honor.

21 THE COURT: All right.

22 MR. BOLOTIN: I just had one point, Your Honor.

23 THE COURT: Yes.

24 MR. BOLOTIN: I don't think -- and this is James  
25 Bolotin for the record.

1 I don't think there would be a false party situation  
2 because they're still intervenors in the case anyway. So  
3 there's still parties to the case, no matter what.

4 MR. ROBISON: Well, not in reply, not in rebuttal.

5 MR. BOLOTIN: No, I don't -- I -- I'm not disagreeing  
6 with that.

7 MR. ROBISON: Okay.

8 MR. BOLOTIN: I'm just saying -- yeah. They would  
9 still be --

10 MR. TAGGART: Yeah. I share the point. I mean, to  
11 the extent my client is a respondent supporting the State  
12 Engineer, if we settle the case that we have with them where we  
13 were a petitioner, we're still responding. We can still  
14 participate in the proceedings as a supporting party that is in  
15 defense of the State Engineer's decision on the areas that we  
16 agree. So we're not done with the case, and we're not  
17 collaborating improperly with anyone if we're the defending the  
18 decision of the State Engineer.

19 THE COURT: Okay. Mr. Lake.

20 MR. LAKE: Your Honor, I just want to echo  
21 Mr. Balducci's comment. It would be helpful for me to know the  
22 terms in order to determine if they are affecting my client's  
23 position.

24 THE COURT: Okay.

25 MR. LAKE: That's all.

1 MR. BALDUCCI: Just for the record, Your Honor, so I  
2 can provide you with the cases you may need if you want to take  
3 some time.

4 THE COURT: Okay. I'll look them up, and I'll read  
5 them.

6 MR. BALDUCCI: *Lum versus Stinnett* --

7 THE COURT: Wait. Wait. Wait. Wait. Hold on.

8 All right. I have Westlaw in my chambers. Okay. If  
9 you could...

10 MR. BALDUCCI: Yeah. *Lum versus Stinnett*, 87 Nevada  
11 402. That's a 1971 case that first laid out the groundwork.  
12 And to be clear, the Nevada Supreme Court has never expressly  
13 adopted the Mary Carter rule, but it has referred to it in  
14 various cases and acknowledged those settlements are void.

15 The next case is *NAD, Inc. versus Eighth Judicial*  
16 *District Court*, cite 115 Nevada 71.

17 Don't ask me why I have all these cases saved in my  
18 Dropbox.

19 THE COURT: I'm thankful.

20 MR. BALDUCCI: And an unpublished decision Norden  
21 (phonetic) Company versus Fergustrohm (phonetic) (2001)  
22 Westlaw 1628302. I can tell you at the time that I looked  
23 these up it must have been in 2017. That was the entire  
24 universe of Nevada cases I found myself, personally.

25 And just a final comment in terms of what these terms

1 are. I'm curious to know what they are because I'd like to  
2 know does the irrigation company have standing to raise certain  
3 arguments in response? That's one of the biggest areas that  
4 I'm most curious about.

5 THE COURT: Okay. So let me do this. I'm going to  
6 e-mail myself my link to Westlaw so I can look it up in here,  
7 and then I'll be right back.

8 (Pause in the proceedings.)

9 (Off the record at 8:53 a.m., until 8:57 a.m.)

10 MR. ROBISON: ... people that are on the enlightened  
11 side of this case.

12 THE COURT: Yes.

13 MR. ROBISON: And we will welcome that that be put on  
14 the record.

15 THE COURT: Okay. All right. So then --

16 MS. PETERSON: Well, maybe we --

17 THE COURT: Yes, Ms. Peterson.

18 MS. PETERSON: Under your terms, Your Honor, that  
19 it's just to inform the Court, it's not that the Court is --

20 THE COURT: Just to, yeah. Yes.

21 MS. PETERSON: -- yeah.

22 THE COURT: Yes. This is just to inform the Court.  
23 There is no motion. This is not a formal determination. I'm  
24 not going to be asking the parties if that's the terms of the  
25 agreement and that they are bound by it. It's just

1 informational only to place on the record.

2 All right. So then go ahead.

3 MR. DOTSON: All right. Thank you, Your Honor. And  
4 I appreciate that. And I'll -- yes.

5 In the interest of transparency, I'm going to  
6 articulate what I understand to be the agreement, and then I'll  
7 welcome the State and SNWA if they believe I misstated or want  
8 to add to the terms.

9 So the Nevada State Engineer would stipulate to  
10 essentially strike the two paragraphs in Order 1309 that were  
11 the focus of the petition for judicial review for MVIC. I  
12 believe those are found on pages 60 and 61 of the document.  
13 Actually, it's -- yes, it's pages 60 and 61, 61 and 62 of the  
14 record. So it's the second first paragraph on page 60, and  
15 then the last paragraph on that page rolls over to the next  
16 page.

17 And this, of course, not surprisingly, includes the  
18 language capture or potential capture of the waters of the  
19 decreed system does not constitute a conflict with decreed  
20 right holders if the flow of the source is sufficient to serve  
21 decreed rights.

22 And basically it also includes the mathematical  
23 analysis of the consumptive use calculation that we believe was  
24 improper. So that would be Element Number 1.

25 Element Number 2 would be that the -- there would be



1 an agreement and the State Engineer would stipulate to a  
2 biannual, so every two years, or biannual assessment of the  
3 pumping of and water levels and flow levels of the river to  
4 determine if further reduction below the 8,000 acre-feet annual  
5 cap that is articulated in 1309 would be appropriate.

6 And for that assessment, Muddy Valley Irrigation  
7 Company and Southern Nevada Water Authority would have the  
8 right to provide input and review the data upon which that  
9 status check, is really what we're talking about is a status  
10 check type situation, occurs. And that first status check  
11 would occur within a year.

12 Is that -- well every two years, but when is the  
13 first one?

14 MR. BOLOTIN: I believe, Your Honor -- this is James  
15 Bolotin for the record.

16 MR. DOTSON: I don't think we talked about that.

17 MR. BOLOTIN: No. I think it was April 2024.

18 MR. DOTSON: Okay. April 2024 is agreeable.

19 As you can see, we have not exactly finalized this.

20 And the third element would be that there would be in  
21 future hearings either related to this or separate, but likely  
22 related to the continuation of the 1309 process, the State  
23 Engineer would be acting within your authority as a special  
24 master of this court, the decree court, and would continue with  
25 the original plan of completing a conflicts analysis, and that

1 conflicts analysis would seek to determine and adjust pumping,  
2 determining what pumping may be interfering with flow of the  
3 Muddy River and to what extent that occurs. With the concept  
4 at least of hopefully returning the decreed flows to the river  
5 and to the water users who have decreed rights on the river.

6 Obviously SNWA and Muddy Valley Irrigation Company  
7 would be invited to participate in that proceeding as well.

8 Importantly, there will be no stipulation, and so to  
9 the extent that my statements here authorized by my client to  
10 stipulate to the flow, predevelopment flow at 33,900, that  
11 would be withdrawn, and my client would be free to argue that  
12 that flow was in excess of that.

13 This should allay the fears that have been described  
14 by some parties because that would also allow the State  
15 Engineer to determine freely, without being tied to that  
16 number, what the flow -- predevelopment flow is as well and  
17 what is being impacted by pumping versus other sources.

18 What else is -- am I forgetting?

19 MR. TAGGART: Your Honor, Paul Taggart for the  
20 District and the Authority.

21 MR. ROBISON: Your Honor, may I interrupt?

22 MR. TAGGART: And --

23 MR. ROBISON: This is argument. This is asking the  
24 Court to approve 8,000?

25 THE COURT: I'm not -- I'm not.

1 MR. TAGGART: No.

2 THE COURT: I'm not doing that.

3 MR. ROBISON: They say we want you involved in future  
4 proceedings to enforce and interpret our settlement regarding  
5 the 8,000 and continued monitoring with the flows in the river.  
6 That's what this case is about, and now they're trying to  
7 influence this Honorable Court --

8 THE COURT: Well, that's -- okay. So --

9 MR. ROBISON: -- by saying it's a settlement.

10 THE COURT: That is -- that's not what I heard. So  
11 what I heard is that they are tentatively reaching this  
12 settlement, one which would be that that conflict language and  
13 the mathematical analysis of the consumptive use would be  
14 stricken, that biannually they would do an assessment of the  
15 water levels and the flow levels of the rivers, and to  
16 determine if further reduction below the 8,000 cap would be  
17 appropriate, which Muddy Valley and Southern Nevada would be  
18 able to provide input and that in the future hearings regarding  
19 talking about the continuation of 1309 as far as the conflicts  
20 analysis that Muddy Valley and Southern Nevada would be able to  
21 participate, but they are also stipulating that they would  
22 be -- there would be no stipulation as to the 33,000  
23 acre-feet --

24 MR. DOTSON: 33,900, yeah.

25 THE COURT: -- that are regarding the original

1 predevelopment --

2 MR. DOTSON: Predevelopment flow.

3 THE COURT: -- predevelopment flow. So the Nevada  
4 State Engineer would not be tied to that number as far as  
5 determining the predevelopment flow. That's what I've heard.  
6 So I haven't heard anything about me making any decisions on  
7 that.

8 MR. DOTSON: The only thing was we would ask that  
9 you --

10 MR. TAGGART: Your Honor, so Paul Taggart for the  
11 record.

12 THE COURT: Okay.

13 MR. TAGGART: Your Honor, we agree, but I just want  
14 to clarify that based upon some comments that were made  
15 yesterday and based upon some positions that we've taken, we  
16 believe the decree court is the proper place to have the  
17 conflicts determination made.

18 THE COURT: So you're saying you are agreeing that he  
19 would be acting as a special master --

20 MR. TAGGART: Well -- well --

21 THE COURT: I mean, that's not something that I'm  
22 making a decision on today.

23 MR. TAGGART: No, you're not.

24 What we're contemplating is that we would file a  
25 petition with the decree court asking the decree court to

1 direct the State Engineer as the decree court special master to  
2 do a conflicts analysis.

3 THE COURT: So that would be all part of a motion  
4 that is done --

5 MR. TAGGART: Exactly. Exactly.

6 THE COURT: -- and everything --

7 MR. TAGGART: Exactly. There would be a process  
8 where we -- I mean, Ms. Peterson made some comments yesterday  
9 about notice to all decree owners and whether the decree is  
10 being interpreted or whether it's being modified. So we  
11 believe that it's the decree court's job to enforce water  
12 rights if they're being impacted under the decree.

13 So what we're contemplating is having that process  
14 initiated in the decree court and then having the State  
15 Engineer authorize a special master directed to make  
16 recommendations back to the Court on conflicts.

17 THE COURT: Okay.

18 MR. TAGGART: That's it.

19 THE COURT: Okay. And this is obviously with the  
20 assumption if this Court affirms the order -- I mean, affirms  
21 the, yeah, the order, Order 1309. If I do not affirm the  
22 order, if I reverse it and remand or if I strike it, then that  
23 all kind of goes out the window I assume.

24 MR. TAGGART: Yeah, we talked about that, but we  
25 can't quite play it forward clearly on where that would be in

1 that role.

2 THE COURT: Sure.

3 MR. TAGGART: But, yeah, that's definitely an unknown  
4 on what would happen without 1309.

5 THE COURT: Okay. So is there -- does anyone else  
6 want to place anything on the record with their -- Mr.--

7 MR. BOLOTIN: Your Honor, this is James Bolotin for  
8 the State Engineer.

9 I just wanted to clarify that obviously this would be  
10 a settlement with MVIC and SNWA so they want to protect their  
11 interests and be involved, but any affected party would have a  
12 chance to be involved to the extent conflicts were shown to be  
13 related to one of the other parties' water uses, and I want to  
14 clarify something Mr. Dotson said. I believe that you would  
15 have to strike those two paragraphs. Your Honor, would have to  
16 strike those two pair paragraphs. It wouldn't be something the  
17 State Engineer can do because the jurisdiction is no longer  
18 with the State Engineer. It's with the Court.

19 THE COURT: Well, and that would be done upon a  
20 motion where you're requesting the Court --

21 MR. BOLOTIN: Yes.

22 THE COURT: -- and everyone else would have an  
23 ability to comment on it and that kind of thing.

24 MR. BOLOTIN: That's correct.

25 THE COURT: And I could reject it if I wanted to.

1 MR. BOLOTIN: Correct, Your Honor.

2 THE COURT: All right. So is there any -- are there  
3 any other issues that other parties would like to place on the  
4 record regarding this information?

5 Yes, Mr. Herrema.

6 MR. HERREMA: Herrema. Your Honor, I've just been  
7 told that the folks on BlueJeans can't hear Mr. Bolotin very  
8 well. So we'd just ask him to step closer to a mic if he's  
9 going to speak.

10 THE COURT: Sure.

11 MR. ROBISON: Or not say anything.

12 THE COURT: Mr. Bolotin, did you want to just repeat  
13 what you said closer to a mic --

14 MR. BOLOTIN: Yeah, sure.

15 THE COURT: -- so that the other folks can hear that.

16 MR. BOLOTIN: Yes, Your Honor. James Bolotin for the  
17 State Engineer.

18 I just wanted to clarify that any affected party  
19 would be able to be involved in that process, but obviously  
20 this is the proposed settlement with SNWA and MVIC, which is  
21 why they want to ensure that they specifically would be able to  
22 be involved in that process.

23 And that because Order 1309 is now in the  
24 jurisdiction of the Court due to the petitions for judicial  
25 review, I just wanted to clarify something Mr. Dotson said, and

1 that is the State Engineer can't unilaterally strike those  
2 paragraphs that he cited. It would have to be done by the  
3 Court pursuant to a motion approving the settlement.

4 Thank you, Your Honor.

5 THE COURT: Okay. Thank you.

6 And I know that there were other parties that had  
7 stood up, and it looks like I think you wanted to make some  
8 commentary.

9 MR. BALDUCCI: Yes, Your Honor. Christian Balducci  
10 on behalf of Apex and Dry Lake.

11 When people come to find me at court, they usually  
12 look on the third floor in front of the business courts or  
13 med-mal sweeps.

14 I'd request just a brief period of time to consult  
15 with my client to ascertain how, if at all this may or may not  
16 affect the rights.

17 THE COURT: Okay. And, yes.

18 MR. ROBISON: Oh, I'd just like to proceed with  
19 argument.

20 THE COURT: Oh, okay. All right.

21 Mr. Balducci, do you need that time now, or are you  
22 okay if we do it like during the break before you argue?

23 MR. BALDUCCI: I could probably place a call while  
24 they're --

25 THE COURT: They're arguing. Okay.



1 MR. BALDUCCI: -- Mr. Robison is arguing. I think  
2 that's fine.

3 THE COURT: Okay. Great. All right. So then are  
4 we --

5 MR. LAKE: Your Honor.

6 THE COURT: Oh, yes, Mr. Lake.

7 MR. LAKE: I'd like to request the same thing.

8 THE COURT: That you would like to have a little bit  
9 of time to consult with your client?

10 MR. LAKE: Yes.

11 THE COURT: That's fine.

12 All right. So let's see. Looking at the -- so I  
13 think just so that everyone is clear on the order, we've got  
14 Coyote Springs. Next is Apex. After that is the Center for  
15 Biological Diversity. So I don't know if -- I mean, what I  
16 could do is after he finishes, Mr. Robison finishes, I could  
17 take a quick five-minute break.

18 MR. LAKE: That works. I would like to observe  
19 Mr. Robison's argument. So just as long as it's before my  
20 argument it would be okay.

21 THE COURT: Okay. No problem. All right.

22 All right. So now we are ready.

23 Or is there anything else?

24 (No audible response.)

25 THE COURT: No. Okay. All right. Now we are ready.

1 Are you ready, Mr. Robison?

2 MR. ROBISON: Yes, Your Honor, I am.

3 THE COURT: Okay. Great.

4 **CONTINUED ARGUMENT FOR COYOTE SPRINGS**

5 MR. ROBISON: Your Honor, I just want to, so we're  
6 clear, I understand what happened today under the theme of  
7 transparency, but what we heard we're pretty sure that we're  
8 filing oppositions with respect to the approval of that  
9 settlement.

10 THE COURT: Oh, I do not doubt.

11 MR. ROBISON: Okay. And I'd like to proceed without  
12 prejudice.

13 THE COURT: Absolutely.

14 MR. ROBISON: And clear my mind that I'm not talking  
15 to some special master who is regulating the water flow in the  
16 Muddy River as I argue my case. So I'm just going to put that  
17 out of my head although and my blood pressure will come down a  
18 little bit and I'll argue.

19 May it please Your Honor. Good morning.

20 THE COURT: Good morning.

21 MR. ROBISON: I'd like to show the Court, again  
22 CSI 43 please. And going to the prayer appropriation  
23 situation. The Court asked me yesterday whether or not CSI  
24 would be willing and a good faith participant in a conjunctive  
25 management and the answer is, definitively, definitely,

1 absolutely, yes, we are and we would. We have to.

2 So we're in 210, and if I can show you the inventory,  
3 the list of the priorities on 44 and 45. Here I've put them  
4 together, Your Honor, but as you go down to the blue line, what  
5 I want you to see, Your Honor, is what happens to this 8,000  
6 foot limitation restriction.

7 So, Mark, could you show us where we are in 8,000.

8 If all the seniors were given rights over us as  
9 junior rights on this particular exhibit, we'd be left with 500  
10 acre feet. And what would happen to the rest and underneath  
11 if, as it's stated, the juniors are wiped out, that's what's  
12 left in the mega basin right there.

13 The intervenors, Bedroc, which Bedroc's best position  
14 of anybody because they've got the best of rights, oldest, and  
15 they're first in time of everybody. But and that black area  
16 represents what once was first in time in 210 and now last in  
17 time or nonexistent in the mega basin. So, Your Honor --

18 THE COURT: What slide?

19 MR. ROBISON: I'm sorry?

20 THE COURT: What slide is this?

21 MR. ROBISON: That's 44 and 45. 45 has the blue area  
22 that indicates the holdings of CSI. But, more importantly, if  
23 you go to the top --

24 I don't know if you can enlarge that, Mark.

25 -- but the way you read across this document it

1 doesn't talk about acre feet, it talks about duty.

2           So, Your Honor, the first column identifies the basin  
3 in which water rights were provided, were given, permits were  
4 issued. And then the second -- third column over from -- going  
5 left to right is the priority dates. So you can see, Your  
6 Honor, who was first in time according to the State Engineer on  
7 this chart, and it carefully delineates who's first in line and  
8 therefore first in right.

9           And then, Your Honor, you go two more columns over  
10 where it says annual duty.

11           THE COURT: Uh-huh.

12           MR. ROBISON: Annual duty is the AFA, the acre feet  
13 annually. And so that's going to show you what we've been  
14 permitted. And just so we're clear, Your Honor, on that blue  
15 area, on 45, give me back the blue area.

16           THE COURT: So let me ask because there's an annual  
17 duty and a cumulative duty?

18           MR. ROBISON: Yes. What -- look at that cumulative.  
19 All that does is add up. So you take the next line below, you  
20 add it and it's a cumulative.

21           THE COURT: Oh, I see.

22           MR. ROBISON: But that's where you get to 8,000, Your  
23 Honor.

24           THE COURT: So it is the cumulative duty for everyone  
25 or just for that right holder?

1 MR. ROBISON: For everyone. So if you look --

2 THE COURT: So it'll just keep adding up all the way  
3 down? Okay. I see.

4 MR. ROBISON: Yeah, if you look at the bottom it's  
5 like -- what is it, 15,000 or 25,000 acre-feet.

6 THE COURT: I see it. Okay.

7 MR. ROBISON: That is the cumulative duty. But if  
8 you look, just go back up and you find 8,000 which in my  
9 example here on --

10 THE COURT: I see. So that's where you're saying  
11 that you would be limited to the 500 acre-feet --

12 MR. ROBISON: That's all that would be left.

13 THE COURT: -- annually because everything else had  
14 added up before you.

15 MR. ROBISON: If the seniors wipe us up we're left  
16 with 500 --

17 THE COURT: Okay.

18 MR. ROBISON: -- acre-feet.

19 THE COURT: And then what is the one all the way to  
20 the right? What is the --

21 MR. ROBISON: The cumulative percentage?

22 THE COURT: No, pumpage. Pumpage. What is --

23 MR. ROBISON: Yeah.

24 THE COURT: -- explain to me what the pumpage  
25 indicates.

1 MR. ROBISON: I wish I could; I don't know.

2 THE COURT: Oh, okay.

3 MR. ROBISON: But I do know 8,000 is a big part of  
4 this case and I know where 8,000 is on this chart, and that's  
5 what I'm trying to illustrate here, Your Honor.

6 THE COURT: Okay.

7 MR. ROBISON: But let's take a look at the next  
8 slide, Exhibit 14, CSI 14. That's what's been appropriated for  
9 the various basins that are at issue in this case. 16,000  
10 acre-feet has been appropriated for Coyote Springs Valley.  
11 That's where we live. That's where we are. That's where we're  
12 building our development. And as I told you yesterday, all but  
13 about 5,000 acre feet of that is junior to us and Bedroc.

14 So the flows of the water, as I indicated, flows to  
15 the east, Warm Springs, flows to the south. South doesn't  
16 affect habitat, doesn't affect the decree rights.

17 So let's talk then about conjunctive management, Your  
18 Honor. If we look at NRS 533.024, this is the policy decision  
19 that you've been shown and read a million times in this  
20 hearing, and I'm just telling you, we're in.

21 The legislative policy, and we have no dispute with  
22 it, is that the policy of this state is that we are encouraged  
23 as a sustaining juror to manage conjunctively what water is  
24 available. Now, the water availability in Basin 10 has  
25 completely different criteria and characteristics as the

1 availability of the water for the mega basin.

2           So what we do is say we have to conjunctively manage  
3 if we get the opportunity to eliminate 1309 and sit down and  
4 work with the State Engineer on Basin 210, which gives us some  
5 pretty good leverage, I think, to talk to the engineer and this  
6 Court about what happens if 1309's invalid.

7           We're putting up two, please -- or 33, excuse me.

8           Can you enlarge that, Mark? Thank you.

9           Your Honor, on the top, I wrote out on Kane Springs  
10 because this was a slide I use to explain what had happened  
11 with 1609 and the ruins --

12           THE COURT: Which slide is this again?

13           MR. ROBISON: This is 33, Your Honor, CSI 33. Kane  
14 Springs was out on the 16 -- 1169 analysis, the pump test  
15 wasn't pumped. And then the other basins, Lower Moapa Valley,  
16 it was in, but then when we came out in 1309 it reversed Lower  
17 Moapa Valley even though there's transmissivity and even though  
18 there's hydrological connections, State Engineer took that one  
19 out and put Kane Springs in.

20           Now, we have five -- we have a thousand acre feet  
21 that we've purchased and have options for out of Kane Springs,  
22 and that's why Kane Springs is a pretty crucial and important  
23 issue to us. But look -- let's take a look at this. What the  
24 tests and what the testimony has shown, Your Honor, is that the  
25 effect on the aquifers and the Warm Springs. It kind of has

1 concentric circles of influence. Right out of the bat we know  
2 that the pumping in the Warm Springs area, Moapa Valley Water  
3 District, dramatically affect water levels. And they're junior  
4 to us.

5 But if you go on to another concentric circles, there  
6 is clear evidence that there's less and less of an impact  
7 necessarily on Warm Springs, the habitant and the decreed  
8 water. So when you sit down with the State Engineer and say  
9 1309 went by the wayside, but we've got to come back anyway.  
10 We are going to be back in front of the State Engineer no  
11 matter what happens at this level with this Honorable Court, we  
12 are. And we go conjunctively manage Basin 210 with us.

13 We have two primary objectives; protect endangered  
14 species. We don't have a choice. We've heard endangered  
15 species act. We've heard what the concern is and none of us  
16 have a choice about that. So our pumps on the eastern side of  
17 210 are more influential to Warm Springs than are the pumps  
18 that we -- the wells that we've pumped on the west side. And  
19 the west side, and according to our theories, where there's  
20 more water. We'd have to prove this at a conjunctive  
21 management type process, and we're prepared to do that.

22 So if we conjunctively manage it, reduce or eliminate  
23 our wells on the east side of 210 and we focus our project on  
24 the wells on the east side and pump there, which is water that  
25 goes from north to south, bypasses Warm Springs, comes off the



1 Sheep Range; we have a plan that says we'll get our 4140 --

2 THE COURT: And so -- wait, hold on. I thought you  
3 said that your pumps on the eastern side are more influential  
4 on the Muddy Valley floor --

5 MR. ROBISON: Have more of an effect.

6 THE COURT: What was that?

7 MR. ROBISON: Have more of an effect.

8 THE COURT: More of an effect.

9 MR. ROBISON: I guess influential but --

10 THE COURT: Yeah, more of an effect than the western  
11 side.

12 MR. ROBISON: -- they're the ones we'd have to -- I'm  
13 sorry, Your Honor, I interrupted you.

14 THE COURT: So you're saying that they're more --  
15 yeah, more of an effect than the western side --

16 MR. ROBISON: Right.

17 THE COURT: -- but then I thought I heard you say  
18 that you would be pumping more from the eastern side?

19 MR. ROBISON: That -- if I said that, I definitely  
20 misspoke.

21 THE COURT: Okay. Maybe I misheard.

22 MR. ROBISON: I think I misspoke.

23 THE COURT: Okay.

24 MR. ROBISON: No, the idea on a conjunctive  
25 management with others, we know that we're connected, but we

1 know also that we could conjunctively manage 210 in such a way  
2 as to mitigate as we have in the past with the 460 acre-feet  
3 that we've dedicated to the dace, and we could mitigate if we  
4 do a conjunctive mega plant in 210.

5           And then no one's concerned about the definition of  
6 basin, designate, delineate; we're doing what the State policy  
7 asked us to do to mitigate. Reducing the pumpage or  
8 eliminating the pumpage on the east side, focusing the  
9 management plan on the west side and proceeding accordingly.

10           We don't get wiped out under that kind of analysis.  
11 And that is why this basin by basin analysis is so important  
12 and is the spirit and intent of the legislation so that you can  
13 make these adjustments in a basin by basin basis even though  
14 there's hydrological connection and transmissivity, but it can  
15 be managed in the basin if this 1309 has gone away.

16           What happens on the other basins is the same thing.  
17 We know there are effects if there's excessive pumping, if they  
18 pumped all 1600 acre-feet that would not be a good day for the  
19 endangered species. But that is a basin by basin management  
20 proposition.

21           Would we get a haircut, as they say, would we get  
22 curtailed under that conjunctive management plan? Perhaps,  
23 perhaps, but it would be a process which has been in place for  
24 decades in this country -- excuse me, in this State.

25           So, Your Honor, 1309 is a restriction to being able

1 to allow the people in their respective basins to manage  
2 together with the State Engineer for the protection of all  
3 rights; senior rights, us, the dace and the decreed water.

4           The challenge in this case is really an  
5 interpretation issue as Ms. Winston argued yesterday, but I  
6 want to reemphasize we cited several cases in our brief about  
7 whether or not the State Engineer's entitled to any deference  
8 on purely questions of law. Most important of which is the  
9 Town of Eureka, and in that case we're told that the review of  
10 the legal issues by a Court on a petition for judicial review  
11 procedure is *de novo* and that questions of law are to be  
12 decided by the Court, and according to the town of Eureka case  
13 that we've cited, the State Engineer is not entitled to a  
14 deference with respect to the questions of law in this case.

15           And the big, the big elephant in the room, Your  
16 Honor, is whether or not the statutory configuration of all  
17 these statutes referring to basins and areas within basins is  
18 to prevent or be construed in such a way the State Engineer did  
19 not have the legal authority to invoke 1309. I've made that  
20 point many times.

21           So, Your Honor, let's just take a look at where we  
22 are. I had this pretty well set in my mind until this morning.  
23 One, 1309 is void. The State Engineer did not have the  
24 authority to create a mega basin, which incidentally they say  
25 is a mega mess now and would not be a mega mess if 1309 were

1 honored.

2 Well, Basin 210 would not be a mega mess if it were  
3 monitored and that we've had monitoring wells and a conjunctive  
4 management plan in Basin 210. So we eliminate that.

5 But if 1309 is declared to be void because of  
6 authority issues, due process, prior appropriation issues that  
7 we brought to this Court, we go back. We have to go back to  
8 the State Engineer. And we have to negotiate whatever comes  
9 out of that effect of it being void. We've got to. In fact, I  
10 think, all of us would have to, but hopefully it's going to be  
11 on basin by basin basis with the same objective and the same  
12 criteria in mind that led to 1309; that allegedly protects  
13 things, it doesn't protect existing priorities. It does not  
14 protect existing priorities. So we're going back if this order  
15 is void.

16 What if it's partially void? I think that is nearly  
17 moot because of the collaboration between the Southern Nevada  
18 Water Authority, the Muddy Water Irrigation District and the  
19 State Engineer. That, apparently, has been put on the record  
20 subject to approval of various public boards. If it's  
21 approved, we'll have to see what it looks like. So we can't  
22 address it, but what they took position is this; SNWA and the  
23 Irrigation District says it's partially void, and we want just  
24 a little bit of it on the decree issue to be remanded and  
25 cleaned up. But that means we're going back. We're going

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1 back.

2 And finally, what happens if 1309 is declared  
3 entirely valid? We're going back. Everybody said if this  
4 thing's valid, we got to go back. We're going to see whether  
5 or not there's a formal, finally, curtailment procedure put in  
6 place. We're going to go back to see whether or not the  
7 parties can agree to conjunctively manage the entire seven  
8 basins together as one basin.

9 The point is, Your Honor, we're going back. Under  
10 any result in this case, we're going back to the State Engineer  
11 and trying to work for the benefit of the existing rights, for  
12 the benefit of constructive management, the dace and decreed  
13 water. But we're going back to protect existing priorities.

14 THE COURT: Let me ask a procedural question because,  
15 you know, I know with everyone's conflicting positions, no  
16 matter what I do, this is going to get appealed. So what is  
17 your position of what would happen procedurally that way  
18 depending on --

19 MR. ROBISON: On an appeal?

20 THE COURT: -- well, yeah, at what point is it  
21 something that is ripe for appeal versus if it gets remanded?  
22 What would be the next procedural steps in your view regarding  
23 procedure?

24 MR. ROBISON: It's going -- I'm sorry I keep  
25 interrupting you. I apologize, Your Honor.

1 THE COURT: No, no, that's fine.

2 MR. ROBISON: It's going to depend on how you -- what  
3 conclusions of law you include in your final judgment. And if  
4 there's partial resolution, and also it depends on what is set  
5 forth in the specific notices of appeal or notice of appeal.  
6 The procedure is if only a partial part of your order is  
7 appealed, I don't know whether there'll be motions to stay in  
8 this Court if denied motion to stay in the Supreme Court given  
9 the influence that one part of your decision may have on the  
10 other parties or other parts of your decision. So I wish I  
11 could be more specific and more clear.

12 THE COURT: You know what, that gives me a little bit  
13 more clarity.

14 MR. ROBISON: Yeah. It -- and I don't know if the  
15 mandatory mediation process with the Supreme Court would apply  
16 to this case. The moment we file a notice of appeal, boom,  
17 we're sent to mediation.

18 THE COURT: That's true.

19 MR. ROBISON: Be interested to know whether we would  
20 be referred to mediation then we're calling in a special master  
21 and maybe you won't come in and try to settle this thing.

22 THE COURT: Okay. I just wanted to at least be aware  
23 of the practical aspects of what happens afterward.

24 MR. ROBISON: Well, and I appreciate your point. I  
25 can tell you what the --

1 MR. BOLOTIN: Your Honor -- you can pause  
2 Mr. Robison's time. I'm not trying to take his time.

3 THE COURT: Okay.

4 MR. BOLOTIN: I just wanted to clarify some of the  
5 procedural questions, if that's okay. I didn't know if it was  
6 part of Mr. Robison's argument.

7 MR. ROBISON: Your Honor --

8 THE COURT: Oh, could we have you get closer to the  
9 mic? But -- or maybe what we could do is we could have -- I  
10 mean, this is not something that's like burning in my brain  
11 right this minute.

12 MR. ROBISON: Yeah.

13 MR. BOLOTIN: Okay. I apologize.

14 THE COURT: So maybe we could do that, we could do  
15 that right after Mr. Robison is done.

16 MR. ROBISON: I'm more than willing to give one  
17 minute of my time to Mr. Bolotin to clear up --

18 THE COURT: That's okay. We'll --

19 MR. ROBISON: -- anything I said. But I would like  
20 to finish.

21 THE COURT: Sure.

22 MR. BOLOTIN: Yeah, no problem, Mr. Robison.

23 MR. ROBISON: I was at a point where the Court asked  
24 me what will happen in the event of different resolutions of  
25 this -- these petitions. Not quite sure, but I do know what

1 will happen. I know that CSI and Mr. Seeno will be stuck.  
2 They will be paralyzed. They will not have a project. They  
3 will have payroll. They will have taxes. They will have fees  
4 to pay, but that project will be stuck, and it will be  
5 crippling, and if you give any deference to the equitable  
6 arguments in the Pickering decision that should alone require  
7 and justify officiation of 1309. That's what I know is going  
8 to happen if you validate 1309, Your Honor.

9           Finally, and I would be remiss and I'm not attempting  
10 to curry favor, but I think I speak on behalf of everybody in  
11 this courtroom. Thank you for taking on this massive  
12 assignment. I'm glad --

13           THE COURT: I was kind of voluntold.

14           MR. ROBISON: I'm glad I'm not there. I'd much  
15 rather be at this lectern. But, Your Honor, with the volume of  
16 material that we've dumped on you and the issues involved,  
17 you've done an incredible job, and thank you very much for  
18 entertaining our case.

19           THE COURT: Thank you. Thank you. I appreciate it.

20           All right. So with that, do we want to take the  
21 break so that --

22           Oh, Mr. Bolotin, sorry, let me just -- no time or  
23 anything like that. So, Mr. Bolotin, what is your view then as  
24 far as the procedural aspects?

25           MR. BOLOTIN: Yes. James Bolotin for the record for



1 the State Engineer.

2 I just wanted to talk a little bit about the history  
3 because we've had some -- the State Engineer has had some of  
4 these big cases that go up --

5 THE COURT: Okay.

6 MR. BOLOTIN: -- and down and up and down. And the  
7 key thing is if Your Honor remands the case it's not going to  
8 be --

9 THE COURT: A full panel.

10 MR. BOLOTIN: Yeah, it's not going to be able to  
11 go --

12 THE COURT: Okay. I see.

13 MR. BOLOTIN: -- to the Supreme Court at that point  
14 and there's been cases -- I think Mr. Taggart can help with the  
15 names of the cases because we were both involved in them, but  
16 they were --

17 THE COURT: Okay. I assume that if I affirm, it's  
18 appealable, if I strike, it's appealable, but then I wasn't  
19 sure what would happen as far as, like, it was sort of partial.

20 MR. ROBISON: It's always writable.

21 MR. BOLOTIN: Yeah, and there --

22 THE COURT: Oh, that's true.

23 MR. ROBISON: Okay. So this is, this is --

24 MR. BOLOTIN: No, but there was a case, Your Honor,  
25 that the State, I think, SNWA tried to appeal and then it said

1 it was a remand so it's not appealable and then there's parties  
2 that tried to file writs and the Supreme Court still --

3 THE COURT: Didn't hear it.

4 MS. BROWN: -- said no, go back and have it at the  
5 State Engineers.

6 THE COURT: All right. Mr. Taggart.

7 MR. TAGGART: Yeah, I think Ms. Peterson's probably  
8 (indiscernible) she knows as much about this as I do.

9 THE COURT: Right.

10 MR. TAGGART: But it really depends on the nature of  
11 the order and even if you completely -- well, if you gave  
12 remand instructions, then almost definitely that's not  
13 appealable, and we filed writs in a case like that and the  
14 writs were denied because there was a legal remedy.

15 THE COURT: I see.

16 MR. TAGGART: And the legal remedy was going back  
17 down to the State Engineer, exercising the remand instructions,  
18 going back up to the Court again --

19 THE COURT: And then going back up. Okay.

20 MR. TAGGART: -- and then going to the Supreme Court.  
21 So that was the legal remedy, and they found that our writs  
22 were improper and they denied them.

23 The harder question is even if you -- even if you  
24 uphold 1309, whether that's appealable, you know, I would say  
25 there's a good argument it is --

1 THE COURT: Uh-huh.

2 MR. TAGGART: -- but there may be an argument that --

3 THE COURT: But it's still not finished because  
4 there's a conflict.

5 MR. TAGGART: -- it's just factual and now we have to  
6 go back -- now the State Engineer has its factual decisions. I  
7 mean, I don't want to concede, I guess, you know, then the  
8 State Engineer would have to take those factual determinations  
9 and do the next phase, but I just don't want to concede  
10 anything on the record. But anyway --

11 THE COURT: No, no, I understand. And I understand  
12 this through Robison's -- I mean, if it was affirmed, it would  
13 be probably an appeal on whether or not the State Engineer has  
14 a legal authority --

15 MR. TAGGART: Uh-huh.

16 THE COURT: -- which I think would probably be  
17 something that was --

18 MR. ROBISON: Not to mention, appropriation.

19 THE COURT: Yeah.

20 MR. TAGGART: Yeah, most likely that type of issue, I  
21 think, would be appealable.

22 THE COURT: Okay. And then let -- you know, while  
23 we're talking about it. So I've never had a case where there  
24 were multiple petitioners with multiple petitions. In the  
25 order, do I need to be specific as to what parts of the

1 petitions are granted or denied or -- I mean, if I do one --  
2 so, you know, I had you all prepare proposed findings of facts  
3 and conclusions of law so I didn't have to start from scratch.

4 MR. ROBISON: Remember our stipulation to  
5 consolidate, Your Honor?

6 THE COURT: Yes.

7 MR. ROBISON: Each and every one of us said that each  
8 of our petitions were retained as separate and distinct legal  
9 and factual characteristics.

10 THE COURT: Okay.

11 MR. ROBISON: So I respectfully suggest that there's  
12 going to have to be, if there is a set of findings, broken out  
13 petitioner, petitioner.

14 THE COURT: By petition.

15 MR. ROBISON: There could be joint findings --

16 THE COURT: Okay.

17 MR. ROBISON: -- and separate findings per petition.

18 THE COURT: Okay.

19 MR. TAGGART: And I -- typically, we don't see a  
20 Court go through the petition and address each claim in the  
21 petition.

22 THE COURT: No, what I -- I mean --

23 MR. TAGGART: They, you know, they address the case  
24 as it is; right?

25 THE COURT: Right. So, I guess, my question is would

1 I, you know, I -- as far as structuring the order, I would have  
2 the, you know, findings of fact, conclusions of law and then at  
3 the end I would be looking at, you know, petitioner Coyote  
4 Springs' petition is granted as to this, denied as to this  
5 based on the, you know, findings above. Is that, I mean, is  
6 it -- would that -- I just want to make sure that I'm doing it  
7 clean.

8 MR. ROBISON: That's fair, and I think then whoever  
9 gets the short stick on that's going to have to worry about,  
10 you know, 54B certification and all those type of more  
11 complicated issues. So let's wait until we see it.

12 THE COURT: Okay.

13 MR. TAGGART: Well, I -- just not to overly  
14 complicate it. We -- since they're consolidated --

15 THE COURT: Yes.

16 MR. TAGGART: -- if the caption has all the case  
17 numbers on it.

18 THE COURT: Yes.

19 MR. TAGGART: And then in the order you go through,  
20 you know, at the beginning, maybe, each petition, you know,  
21 so-and-so filed petition, so-and-so filed --

22 THE COURT: Right, right, right. The procedural  
23 history --

24 MR. TAGGART: -- then I think the --

25 THE COURT: -- and then it was consolidated.

1 MR. TAGGART: And I think the meat of it could be --

2 THE COURT: Together.

3 MR. TAGGART: -- the same for everyone --

4 THE COURT: Uh-huh.

5 MR. TAGGART: -- but then at the end you may need to  
6 go petition by petition --

7 THE COURT: Right and that's kind of --

8 MR. TAGGART: -- and grant or deny. And then it's,  
9 in a sense, eight separate orders and it's all in one. Sounds  
10 kind of familiar. But --

11 MR. ROBISON: Let's not go there.

12 MR. TAGGART: Okay. But you do have to rule  
13 independently --

14 THE COURT: Right.

15 MR. TAGGART: -- on each petition because they still  
16 retain their independence.

17 MR. ROBISON: Now, I don't want to drop a bomb and  
18 then ask but when this -- if this goes Supreme Court, there --

19 THE COURT: Let's just be honest. When this goes to  
20 the Supreme Court. And we all know in this room.

21 MR. ROBISON: Well, I don't know -- they'll probably  
22 appeal, you're right. But, Your Honor, I have to disclose  
23 this, we're up in the Supreme Court right now in a petition for  
24 judicial review and it's de novo. So they're not looking  
25 necessarily at you. They're looking at the State Engineer with

1 fresh eyes.

2 THE COURT: Oh, I see. Okay. All right. Good to  
3 know. All right.

4 MR. TAGGART: Yeah.

5 THE COURT: All right. Well, thank you for that  
6 clarification. I appreciate it because it will help me when  
7 I'm putting together the order.

8 So why don't we take a five-minute break so that you  
9 all can talk to your clients. And then we'll be back at a  
10 quarter to.

11 (Proceedings recessed 9:38 a.m., until 9:47 a.m.)

12 THE COURT: All right. So we'll be back on the  
13 record.

14 Okay. The floor is yours.

15 **ARGUMENT FOR APEX HOLDING AND DRY LAKE**

16 MR. BALDUCCI: Thank you. Thank you, Your Honor.  
17 Christian Balducci appearing on behalf of Apex and Dry Lake.

18 And before you, as you've seen each and every day  
19 with growing numbers of lawyers in the courtroom and client  
20 representative, there are a lot of parties in this case and  
21 there's certainly are a lot of issues for phony issues, for  
22 that matter, for the Court to sort through, and while you do  
23 know this, I think it's important to emphasize that at the end  
24 of the day this case really isn't any different than any other  
25 petition for judicial review that you've had appear before you

1 up to this date and after.

2           The main issue with respect to this administrative  
3 agency and the engineer is did he have the authority, at least  
4 from my client's perspective that we've raised since I don't  
5 want to be too repetitive, the main issue we have is did the  
6 engineer have the authority to take these seven different  
7 basins or really five individual basins and then apportions of  
8 two other basins and by delineation turn them into one.

9           After listening to all the arguments that have gone  
10 on throughout this case, I've kind of (indiscernible) down to  
11 what I see this case as and how I characterize it. This case  
12 is about the engineer deleting by delineation. The question is  
13 did he -- and what I mean by that is deleting the boundaries of  
14 separately identified basins on the map there of 233 different  
15 maps to combine and conjoin them into one, mixing up the  
16 priority rights of all the various rights holders.

17           THE COURT: And this is slide what?

18           MR. BALDUCCI: This -- so Slide 1 was just the  
19 title --

20           THE COURT: Okay.

21           MR. BALDUCCI: -- and this is what happens when I use  
22 a PowerPoint for the first time of the last day hopefully,  
23 hopefully last day. This is Slide 2, page 2. I will have  
24 this -- I have a lot of time so I can talk about slides. I  
25 will have this filed, and I will do my best to circulate it to



1 all the parties. And I didn't bring it with me earlier today  
2 because the version I would have brought would have been  
3 different than the one I'm showing you right now.

4 THE COURT: Okay.

5 MR. BALDUCCI: So when I -- I tried to come up with  
6 some kind of analogy as to what this did. And where I'm from,  
7 out of the northeast, we have more than just one large unified  
8 school district. We have lots of school districts. And, for  
9 example, my graduating high school class, at least in  
10 Pennsylvania, was just under 2,000 people, but there were lots  
11 of different school districts. I went to Parkland. There was  
12 Whitehall. There was Allen. There was (indiscernible). And  
13 when I was trying to be on the varsity hockey team which many  
14 would say was a bad idea, I knew who I was competing against.  
15 I knew who I could playing with.

16 What happened in this case is the engineer took all  
17 the different school districts and so me and my hockey tryouts  
18 that -- against 30 other people, I figured, okay, 20 on the  
19 team, I only got to beat 10. Took all the school districts, by  
20 delineation, deleted their lines, threw us all in a pile and  
21 now I'm trying out against 150 different, maybe 200, and the  
22 rules now are saying well, we're going to determine who's on  
23 the team by who's most senior. So that means the tenth year  
24 senior is going to get on the team even though he's probably  
25 35, has a beard, at this point has a bum knee and, you know,

1 I'm 17 years old and in much better shape than he is. But  
2 well, because he's a tenth year senior in high school, he gets  
3 to play on the team and I don't. And those are rules I didn't  
4 know about when I applied to be on the team and tried out for  
5 the team.

6 That's what happened. That's what the engineer did.  
7 But there's no statute saying he can do that. Just like  
8 there'd be no statute saying that's what would happen in  
9 Pennsylvania for me.

10 So let's start with one thing I think everyone in  
11 this case agrees on. Pulling up Slide 3. Everyone here agrees  
12 that all the water in Nevada it belongs to the public. And I  
13 think that needs to be the start of the analysis.

14 Rule Number 1, water belongs to the public and the  
15 legislature, not the engineer, represents the public, the  
16 people of Nevada. The engineer's authority to do anything is  
17 rooted only in that which is designated by the legislature.  
18 And if he wants more tools for his toolbox, he has to go to the  
19 legislature.

20 And I understand and I've heard the arguments it's  
21 not that hard. No, sorry, it is very hard. 8051 was a  
22 disaster. It's not just so simple to walk across the street  
23 from the engineer's office in Carson City to the legislature.  
24 It's a tough process. Well, there's a reason it's tough.  
25 Because it's impacting the rights of the people of Nevada and

1 the rights holder of each of these basins. It's intended to be  
2 tough. It's not an easy thing. But at the end of the day,  
3 something not being easy is not a reason to avoid the proper  
4 legal channels.

5 Again, these arguments, I want to thank Your Honor  
6 when we first had these arguments that I thought to myself two  
7 weeks of oral arguments about water. My goodness, there's not  
8 enough solitaire I could play to capture my time. But I found  
9 what was being said to be illuminating because sometimes the  
10 things that come out in the briefs come out far differently  
11 when said in person.

12 And, in particular, as I've highlighted, on February  
13 15th at this point I don't know how far into February we are,  
14 could be nine weeks for all I know, but on the 15th at roughly  
15 1:56 p.m. I heard counsel for the engineer say something that  
16 caused me to rethink about how the engineer looks at his  
17 authority. What was basically said I tried to do apostrophes  
18 but I couldn't write down that quickly, not because Mr. Bolotin  
19 didn't say it slowly enough; it's just because my hand was  
20 cramping from all the solitaire.

21 Basically, what he was saying was the policy  
22 statements are referring to the 533024 statute. This policy  
23 statement from the legislature provides the engineer the lens  
24 to look at his authority when he's using his powers. Okay. So  
25 let's take a step back. It's basically like the glasses he

1 puts on before he reads the statutes. So he can figure out  
2 what they can and cannot say in his opinion which brings me to  
3 really my next slide and why I do have a lot of criticisms of  
4 the engineer and the way he's approached this. Because what I  
5 think is he didn't just approach this as one global process, he  
6 broke this down with these lenses and engaged in a three-step  
7 process.

8 And so we have The Hulk. This is who the engineer  
9 thinks he is when he puts on the NRS 533.024 what I would call  
10 them rose-color lenses. He becomes something different. He is  
11 able to take a broad legislative statement of intent that in  
12 his opinion says, I have the power to go and accomplish this  
13 intent and now when I look at these different statutes to  
14 determine what my authority is I can now look at them even  
15 broader than what they are.

16 And so that's why I do call it a three-step process.  
17 Number 1, the engineer has to put on his lenses. The  
18 legislative intent, which in my opinion in particular in this  
19 case with respect to Order 1309 is very rose colored, probably  
20 the rosiest there is when it comes to reviewing the statutes  
21 and what they mean.

22 If he puts these glasses on and he sees that a  
23 particular statute might fall within his field of vision, to  
24 him, he can then take it and look at it even broader than what  
25 it would mean when looked at alone. So that's Step 2.

1           And then here with 1309 he took a third step after  
2 putting on his glasses, reviewing the different statutes, the  
3 mosaic of power which I'm going to get to next. And then do  
4 something no statute says he can do. So let's look at the  
5 mosaic of power, and I think it's important that we focus on  
6 what the lawyers are saying which we're going to do first.

7           THE COURT: And this is slide?

8           MR. BALDUCCI: This is Slide Number 6.

9           THE COURT: Okay.

10          MR. BALDUCCI: It's important to look at this mosaic  
11 of power that the lawyers have come up with, but next we're  
12 going to look at what the engineer says his power was. So  
13 let's look at what his lawyer said. And, in fact, not just his  
14 lawyers but also the lawyers he's now settled with and told  
15 this Court about today; okay?

16          So let's start with the mosaic of powers that the  
17 Water District talked about. Mr. Taggart talked about it. I  
18 think Mr. Taggart did an excellent job cobbling together  
19 various statutes to try to come up with it, and I think as he  
20 explained these are different swatches, and when you look at  
21 the swatch alone, it may not mean a lot but when you put them  
22 all together, you can see the entire tapestry.

23          And that's why I have picture here of this cat and  
24 the stoplight and the A and the 2; okay? This is the tapestry  
25 that not even a parent would be proud of. If you tie them all

1 together, it doesn't say what they want it to say. They have  
2 to try to cobble these things together and say, okay, let's  
3 read all these together. Let's merge them into one. Let's  
4 just -- let's not just look at one chapter, let's span three  
5 different chapters. And then apply the legislative intent to  
6 mean we can do even more than what it says.

7           That's not how it works. And that's why I started  
8 with this case really isn't any different than any other  
9 petition for judicial review for an administrative agency  
10 you've ever had before you or will ever have before you.

11           There's one question to decide here. Is there a  
12 statute or administrative code that says, dear engineer, you  
13 can, as I like to call it, deletion by delineation. There's  
14 nothing. He can designate basins. In fact, my client's  
15 basins, Garnet and Black Mountain, those are designated. But  
16 he can't delete my boundaries. He can't -- I need to know what  
17 sandbox I'm in.

18           I mean -- and here's deal. I just want to be clear  
19 because this came up a few times. I agree that the engineer  
20 can manage on a basin by basin level and the way that they have  
21 been forever. Certainly longer than I've been around. But he  
22 can't throw us into the unified school district. He can't do  
23 that. There's no statute that says he can do it.

24           So let me just cover some of these. I don't want to  
25 be too repetitive, but I probably will be for which I

1 apologize.

2           On the top, the five bullet points are some of the  
3 statutes that Mr. Taggart, the Water District, had cited and  
4 below was what the engineer's lawyers said. So I'll just hone  
5 in on that for a moment. NRS 532, 534.120, real naked; okay?  
6 1309 doesn't look like a rule. It's not a rule to delete my  
7 lines. 532.167, duty to perform estimate around water  
8 investigation. Okay. Cool. That's great. You can go pump  
9 water, investigate and see what it does with the flows. That's  
10 fine. I don't have a problem with that. Doesn't say you can  
11 delete my lines. Doesn't say you can throw me in a big pool.

12           532, 534.110 doesn't say he can do what he did.

13           53403 -- I think I switched those around. One is how  
14 you designate basins which he did for Black Mountain and  
15 Garnet. Can't delete my lines though. And then 533.024, I  
16 guess I switched them, manage conjunctively, which again is a  
17 point I'm not going to repeat. I think CSI's attorneys did an  
18 excellent job yesterday distinguishing between joint and  
19 conjunctive. So I'll defer to them on those authorities and  
20 arguments.

21           THE COURT: Let me just ask you a question.

22           MR. BALDUCCI: Yes.

23           THE COURT: So I know that you say that, you know, it  
24 says manage conjunctively, not jointly. What is your position  
25 as far as whether or not the State Engineer can take into

1 consideration the connectivity between the basins and then  
2 within the basins, you know, it -- what -- a decision in one  
3 basin may affect a decision in another basin. What is your  
4 position on that? Do you think he has the power to do that?

5 MR. BALDUCCI: As long as I'm only dealing with those  
6 in my basin, that's okay. I just want to know who I'm playing  
7 pool with.

8 THE COURT: Okay. But some of the connectivity  
9 issues from the basin next door may affect what happens in your  
10 basin. Do you find that he has the power to do that?

11 MR. BALDUCCI: Through the curtailment process.

12 THE COURT: Okay.

13 MR. BALDUCCI: So up there is what the engineer's  
14 attorney said, and what's more to the point, look at what the  
15 engineer said himself in his own order, 1309.

16 THE COURT: And this is Slide 7?

17 MR. BALDUCCI: This is slide -- yes, this is Slide 7.  
18 The engineer we see he starts out with the legislative intent,  
19 and this is where, I believe this is when he's putting his  
20 glasses on to read these statutes broader than can or should be  
21 read.

22 He then goes on to the one thing we agree with,  
23 534.020, the water belongs to the public. I agree. No problem  
24 with that.

25 Slide 8, 532.120, rule making. Okay. Sounds good.



1           534.110, his investigation. All right. Although he  
2 does go on to tell us, and if there is a finding as set forth  
3 in the proceeding whereas he may restrict withdrawals to  
4 confirm priority rights. I really hope he's saying he's going  
5 to put me through the curtailment process. I hope that's what  
6 he's saying. I'm not sure, not sure anyone's really sure.

7           And he goes to 534.030, designating basins. Okay.  
8 That's great. It's in a footnote. Not sure what that means.

9           And then he repeats 534.110.

10           This is the authority the engineer said he had when  
11 he entered 1309 before any lawyers, that I'm aware of, got  
12 involved in this courtroom. This is what we need to evaluate  
13 when ascertaining did the engineer have the authority to do  
14 what he did as opposed to relying on ad hoc, postlawsuit stuff  
15 that lawyers, that are very creative and very intelligent, came  
16 in and made up. The engineer either had the authority or he  
17 didn't.

18           I want to move on to the next slide, Slide 9. This  
19 is something, I guess, another thing that the engineer and I  
20 actually agree on. 1309 is the order that tells us what these  
21 boundaries are and what happens. And I want to deal with this  
22 very briefly. I don't think it's worth a lot of lip service.  
23 The concept that we should have appealed 1303, 1169, 999. I  
24 don't know.

25           Let's focus on 1303. It's an interim order, by its

1 very term, it's interim. It's not final. It's subject to  
2 change, rescission, which is actually what happened here,  
3 withdrawal and modification. Anybody seeking relief on that is  
4 basically looking for an advisory opinion, which we all know  
5 are not appealable. And even then look around this courtroom  
6 and how many lawyers there are from all across the state.

7           If there was a basis to move to dismiss any of these  
8 petitions on lack of timeliness, you can absolutely, 100  
9 percent guarantee that would have happened. The fact that no  
10 one did that tells us the one unspeakable truth we all  
11 acknowledge that appealing from 1309 was the proper way to  
12 raise each and every one of the issues that are presently  
13 before you. And I just wanted to blow it up on the screen. I  
14 know you've seen it a million times, and I've said it at least  
15 probably 11 from Order 1309, SEORA 66. This is where he says,  
16 I'm delineating you all as one single basin. This is why  
17 everybody appealed 1309.

18           THE COURT: This is slide?

19           MR. BALDUCCI: This is Slide 10.

20           THE COURT: Okay.

21           MR. BALDUCCI: And I'll be moving to Slide 11. This  
22 is also part of Order 1309, and I raise this because I heard  
23 some in passing, some a little more forceful that hold on,  
24 Judge. Hold on. Hold on. Prior appropriation isn't here yet,  
25 and we don't know the priority. We don't know whether we're

1 going to do it by day. Maybe we'll mix up the basins. Maybe  
2 we'll do something else.

3 That's for another day, Judge, don't you decide.  
4 Okay. That's bologna. That really is. It's just a way to try  
5 to get you to not make a decision on this core issue that we  
6 believe the engineer made a massive mistake on. Because in  
7 1309 what he's saying, he's telling all of us, hey, all  
8 applications for movement of existing ground water rights,  
9 yeah, you got to process them here. How are you going to  
10 process them? How are you going to figure that out? What are  
11 you going to do? This isn't something for down the road. This  
12 is here. This is today. This is before you.

13 Going on to Slide 12, and I pulled this from Order  
14 1303. It's rescinded. It's no good. I get that. But I think  
15 it tells us what the engineer was thinking and where he may be  
16 going, okay.

17 He tells us in Order 1303 -- again, rescinded, no  
18 good -- that the water rights in this White River Flow System  
19 will be administered based on their respective date of  
20 priorities in relation to other rights within the other  
21 regional groundwater unit.

22 What does that tell us? He's already said back in  
23 1303, years ago, hey, yeah, you're going to go (indiscernible)  
24 prior appropriation, but in this massive basin, right, deleted  
25 the lines by delineation.

1           What does that mean? That means a lot for me. In  
2 Black Mountain, Dry Lake is right holder one, two and three.  
3 You compare me to all the others, I'm way down the list. He  
4 need only take a look at the chart that Mr. Robison circulated  
5 yesterday that was in the record SEORA 8511, 8512 to see -- I  
6 don't even think Dry Lake shows up on the first page. We're  
7 way down on the bottom.

8           Order 1309 effectively curtails my client's rights.  
9 It is very damaging to my clients.

10           If you have any questions for me, I'm happy to answer  
11 them.

12           But I'll leave with the thing I've said 13 times. My  
13 view, this is deletion by delineation which is not authorized  
14 by any statute. The order is void, and this Court should enter  
15 an order saying 1309 is void.

16           Thank you.

17           THE COURT: Okay. I think, Mr. Lake, you're up next.  
18 So, yes.

19           And you don't have a PowerPoint?

20           MR. LAKE: I don't.

21           THE COURT: I mean no pressure. I just wanted to  
22 make sure just for my clerk's sake.

23           MR. LAKE: If you would like a PowerPoint, I can put  
24 my slides from Monday back up.

25           THE COURT: No, that's okay.

1 MR. LAKE: But I'd rather simply state our case and  
2 not worry about what slide I'm on.

3 THE COURT: Absolutely. The old-fashioned way.

4 MR. LAKE: Yeah.

5 THE COURT: Okay.

6 **ARGUMENT FOR CENTER FOR BIOLOGICAL DIVERSITY**

7 MR. LAKE: I'm going to try to be brief here. I  
8 think we share a lot of commonalities with some of the  
9 arguments -- well, arguments that were made yesterday, and, you  
10 know, there's one particular interest here that the Center  
11 uniquely represents, and that's the Moapa dace. So I'm going  
12 to focus on that.

13 I'm going to start with Order 1303. That's  
14 essentially why we're all here. The State Engineer entered  
15 Order 1303, decided to have this is fact finding proceeding,  
16 which precipitated the hearing, although he had some reports,  
17 all the evidence and Order 1309.

18 What the State Engineer said in Order 1303 about why  
19 we were doing this in the first place I think is worth noting,  
20 and that's on record on appeal, page 70. The State Engineer  
21 said,

22 This interim order aims to protect existing  
23 senior rights and the public interest in  
24 endangered species and to limit development  
25 actions that are dependent on a supply of water

1           that may or may not be available in the future.  
2           So protecting existing senior rights in the  
3           public's interest in the Moapa dace.

4           And we think Order 1309 takes some positive and  
5 necessary steps toward achieving both of these purposes, up to  
6 and including joint administration of the various basins,  
7 however you characterize that. From what I've heard, it sounds  
8 like basin by basin or joint administration is largely a form  
9 over function, a distinction without a difference.

10           You know, I think it's telling that we haven't really  
11 heard a clear answer to the question of, well, can the State  
12 Engineer curtail in Coyote Springs Valley to protect surface  
13 water rights in the Muddy River Springs area? And our position  
14 is that whether you consider that a joint management decision  
15 or a basin by basin decision, the answer to that question has  
16 to be, yes, ultimately because of the interests at stake in the  
17 Muddy River Springs area and the Muddy River Decree, which I'm  
18 sure Mr. Dotson is going to talk about. I sure hope he will in  
19 a few minutes and the Moapa dace.

20           So for the sake of brevity, I'm just going to jump  
21 into the 8,000 acre-foot cap as it relates to the Moapa dace in  
22 the Muddy River Springs.

23           We talked a lot about the standard of review.  
24 Basically what the standard of review says is an administrative  
25 agency, when it makes a decision, it has to provide a rational

1 explanation for that action. It has to draw a connection  
2 between the facts found and the choices made. And while  
3 Order 1309 takes some very positive steps toward recognizing  
4 the problem and addressing the problem, ultimately it fails to  
5 do that thing. It's internally inconsistent. It says it's  
6 going to do a thing. It says it's going to protect senior  
7 rights and the public's interest in the Moapa dace.

8           Ultimately, it declines to do what by its own terms  
9 it says is necessary to do those things. This doesn't call all  
10 of the order into question, and I'm going to address remedies  
11 at the end of my presentation, but it does raise some issues  
12 that do need to be addressed by this Court.

13           So why -- why is 8,000 too high? Well, let's go  
14 through the facts. The Lower White River Flow System is  
15 unique, and we've heard a lot about this. I don't think this  
16 can be emphasized enough. There's concern, and I think this  
17 applies equally to our argument about limiting pumping as it  
18 does to the State Engineer's authority because, you know, if  
19 8,000 is too high, we're looking at a tighter restriction than  
20 is already in place.

21           But, you know, to assuage the fears that this is  
22 setting some kind of statewide precedent, I think it's helpful  
23 to look at the factual basis behind the State Engineer's  
24 decision and talk about this very unique nature of the Lower  
25 White River Flow System.

1 First, you have generally low recharge. It's also  
2 variable over time. So and then this hasn't really been  
3 addressed in detail in these proceedings in court, but what was  
4 found below is that most of the time, most years, there is no  
5 recharge to the system. Most precipitation doesn't make it  
6 into the aquifer. It's only in years where we have above  
7 average precipitation and really, you know, extraordinary  
8 years, like 2005, where you can look at these hydrographs that  
9 we've been looking at all week and -- excuse me.

10 THE COURT: My bad.

11 MR. LAKE: Okay. You can look at these hydrographs  
12 and actually see the levels rise.

13 So recharge is low and recharge is variable. You  
14 have the remarkably flat and transmissive aquifer that's  
15 feeding the Muddy River Springs and providing habitat to the  
16 Moapa dace.

17 There's been some discussion about heterogeny in the  
18 system and maybe the system is heterogenous. So if you -- if  
19 you pump in one place, it's not going to effect the dace, but  
20 that doesn't really reflect the evidence. There was a  
21 distinction drawn in the hearing between having geologic  
22 features that affect the transmissivity to 1 degree or another,  
23 having water flowing in 1 degree or another and the  
24 connectivity. And the connectivity is what's important. And  
25 nothing that's been presented here refutes the conclusion that



1 this system is interconnected. The system my -- so Coyote  
2 Springs tries to characterize a separate flow path.

3 Now, first of all, one expert agreed with that  
4 conclusion at the hearing. It was Coyote Springs' expert, and  
5 we've heard a lot about how this Court isn't supposed to be  
6 reweighing the evidence.

7 THE COURT: So I see Mr. Herrema.

8 MR. HERREMA: Herrema, yes.

9 THE CLERK: Yeah.

10 MR. HERREMA: Your Honor, this is the time for the  
11 Center to be addressing its response to the opposition by the  
12 State Engineer to its challenge, not to be taking on CSI's  
13 positions.

14 MR. LAKE: Your Honor, two points. This is the  
15 Center's time to rebut arguments that have been made by the  
16 other petitioners. Also, to the extent that we argue based on  
17 impacts from pumping to the Moapa dace, that the limit should  
18 be lower, which is the basis for our petition, we should be  
19 able to address evidence that's contrary to that position.

20 MR. HERREMA: This is their reply to the --

21 THE COURT: To the State Engineer.

22 MR. HERREMA: Correct.

23 THE COURT: So I would ask you to limit your comments  
24 to the State Engineer, what you disagree with. As far as if  
25 the -- let me think about this.

1           If the findings of the State Engineer are -- or  
2 actually, if what was presented in the State Engineer's  
3 answering brief touched on what you are talking about, then I  
4 think it's fair game, but I'm not sure that it did.

5           MR. LAKE: Okay.

6           MR. HERREMA: Thank you, Your Honor.

7           MR. LAKE: I'm just going to continue with the  
8 discussion of the aquifer, setting aside what the issue with  
9 Coyote Springs' presentation.

10          THE COURT: So you were actually talking about the  
11 fact that the connectivity is the most important part.

12          MR. LAKE: The connectivity is the most important  
13 part. The State Engineer did recognize that. And I guess this  
14 goes back to the order being internally inconsistent because  
15 all these things were recognized. I'm just reciting them to  
16 establish essentially the foundation of what we're going to  
17 talk about in a second.

18          So connected, transmissive. And at the end of the  
19 system, you have a fully decreed water source. So all the  
20 water rights in that system are, you know -- every bit of water  
21 in the Muddy River has been appropriated by decree.

22          And finally you have this endangered, very site  
23 specific, very endemic species in the Moapa dace. And it's  
24 important to consider I think the difference between -- the  
25 differences and the similarities between the Muddy River Decree

1 and the Moapa dace here in terms of the interest.

2           You know, naturally protecting the natural spring  
3 flow of the Muddy River also protects the dace. So there is to  
4 some degree a coincidence of those interests; however, as I  
5 clarified on Monday, the Moapa dace is dependent on these high  
6 elevation spring flows that are far more vulnerable to pumping  
7 impacts than the flow of the Muddy River as a whole.

8           And I think that calls for a consideration  
9 specifically of how pumping is going to impact the spring  
10 flows, not the overall river flow, but the individual spring  
11 flows from the Muddy River Springs.

12           The State Engineer also acknowledged in Order 1309  
13 the need to maintain at least 3.2 CFS. I'd like to talk about  
14 this for a second as well. You know, there's a concept in ESA  
15 case law called historic range where you look at the where a  
16 species has historically existed compared to where it exists  
17 now.

18           And it's one factor in determining whether a  
19 species -- and this is highly litigated. So if you go to the  
20 case law it's going to be all over the place, but the basic  
21 concept is you can look at the historic range compared to the  
22 current range and look at what impacts, you know, the degree of  
23 impacts occurring to the species. And here with the Moapa  
24 dace, you see that historic Warm Springs west flows are around  
25 4.0 CFS.

1 THE COURT: So I need you to translate that for me.

2 MR. LAKE: Okay. This is the flow of the stream at  
3 the Warm Springs west gage, and this is the gage that collects  
4 the flow from all of the higher elevation springs.

5 THE COURT: So you're just saying then that  
6 historically at the west gage area, the flow was at 4.2 CFS,  
7 and that is part of the habitat conditions that help it  
8 propagate?

9 MR. LAKE: Yes. And at the time the dace was  
10 abundant in the system, those are the kind of flows that were  
11 occurring. That's the baseline.

12 3.2, you know, while 3.2 is important to, you know,  
13 given current conditions, and we would argue that it's  
14 absolutely, you know, a necessary floor to maintain here, it is  
15 not the baseline. 3.2 is already a 20 percent loss in spring  
16 flow. And I discussed on Monday that the relationship, the  
17 direct relationship between spring flows and habitat loss. So  
18 with all of those reductions in spring flows you're also seeing  
19 an equivalent habitat loss.

20 Now, there is consensus among experts at the hearing,  
21 at least those that address the dace, not all experts talked  
22 about the dace, but those that did recognize that 3.2  
23 absolutely needs to be maintained. And this was -- this was  
24 somewhat of a revision of what was understood before. Again,  
25 the pumping test gave us new information about how this system

1 behaves.

2           One of those pieces of information was that when you  
3 pump from this aquifer, it doesn't recover. It doesn't come  
4 back up. You're not going -- simply stopping pumping or  
5 reducing pumping isn't going to lead to a restoration of  
6 prepumping spring flows. And this is different than a lot of  
7 other aquifers in the State. In, you know, your typical  
8 alluvial basin aquifer, what I'm talking about, like a  
9 precipitation fed aquifer in a basin, I mean, you give it time  
10 to recharge, and the levels come back up.

11           In this system, we're seeing a different kind of  
12 behavior. And that's significant because it means that if you  
13 drop below that 3.2, you know, that could very well be a  
14 permanent loss to the species. We don't really know how to  
15 recover that.

16           You know, we've had some arguments in relation to a  
17 decree about predevelopment flows. Mr. Dotson said, you know,  
18 nothing in 1309 tells us how we're going to recover to  
19 predevelopment flows, and that's true.

20           And on the other side, CSI says there's no need to  
21 recover predevelopment flows. But the consensus there is that  
22 we're not -- once it's removed, it's not coming back.

23           So that is the basis for maintaining 3.2 as set out  
24 in Order 1309, not the MOA, which came before the pump test,  
25 which came before we had this information, and not any of the

1 analyses -- any other of the analyses that were done before the  
2 pump test. The pump test really changed the playing field here  
3 with regard to spring flows and the impacts of pumping.

4 Another thing that's not in dispute is the continuing  
5 decline in spring flows, and this is acknowledged by the State  
6 Engineer both in Order 1309 and in the State Engineer's  
7 briefing on appeal. Just to be specific, at Record on Appeal  
8 58, in Order 1309, the State Engineer says,

9 Water levels may be approaching a steady  
10 state, but the trend is of insufficient duration  
11 to make this determination.

12 In briefing, the State Engineer also says,

13 Data from some Lower White River Flow  
14 Systems (indiscernible) cut against the  
15 conclusion that the system is at equilibrium.

16 A downward trend in these wells is acknowledged.

17 And finally, the State Engineer concludes:

18 A continuing monitoring of groundwater is  
19 necessary to determine whether further  
20 reductions in maximum pumping are required.

21 And this is where Order 1309 becomes internally  
22 inconsistent. Because the State Engineer has established  
23 what's necessary to protect the dace and what's necessary to --  
24 we have to maintain spring flows 3.2.

25 But then the State Engineer fails to do anything in

1 Order 1309 to maintain the spring flows at 3.2. The State  
2 Engineer says essentially we will maintain spring flows by  
3 monitoring and adjusting. That is not substantial evidence.

4 And I'm going to discuss the *Eureka County* decision  
5 again -- the citation is 131 Nevada 846 -- because I think that  
6 case is very informative about the situation that we have here.  
7 Mr. Taggart pointed out that there are some factual differences  
8 in that case yesterday. We acknowledge those, and there is  
9 no -- this isn't the same situation. The State Engineer isn't  
10 saying we're going to come up with a mitigation plan that does  
11 not yet exist.

12 But what the State Engineer is saying though, and  
13 this is why *Eureka County* is informative, is the State Engineer  
14 is saying, we don't have the information in front of us right  
15 now. We'll get it later.

16 Well, *Eureka County* said the State Engineer can't do  
17 that. The State Engineer's decision, and I'm quoting now,  
18 "must be made upon presently known substantial evidence rather  
19 than information to be determined in the future." Now,  
20 presently known substantial evidence is that spring flows are  
21 declining. And the spring flows aren't recovering once they've  
22 gone below a certain level.

23 You know, the Court asked me on Monday, you know,  
24 where do we draw the line? And I think that's an important  
25 question. We agree that a line has to be drawn. We think a

1 cap is a good step forward. It's better -- it's certainly  
2 better than no cap at all.

3 But the bottom line is that the State Engineer never  
4 makes a finding that this cap is going to maintain 3.2. The  
5 State Engineer never even says that the system is in a steady  
6 state. The State Engineer acknowledges that there is not  
7 evidence to support the conclusion.

8 Now I don't think it's appropriate for me to stand  
9 here in an appellate proceeding and tell the Court the  
10 appropriate number is. At the hearing, the Center's expert  
11 recommended the carbonate pumping -- no carbonate pumping  
12 should occur if we're going to fully protect senior rights and  
13 flows from the Muddy River Springs area.

14 Now, as myself and Mr. Dotson and Mr. Taggart have  
15 stated, Order 1309 doesn't fully protect those senior rights  
16 and those spring flows, but, you know, that's what we told the  
17 State Engineer below, no carbonate pumping and no more than  
18 4,000 acre-feet of alluvial pumping.

19 I don't think the difference between carbonate and  
20 alluvial is particularly relevant to the current discussion,  
21 but for the record, that was our position below.

22 But that's also I think kind of beside the point  
23 because it wasn't necessary for the State Engineer to come to a  
24 specific conclusion on steady state or equilibrium. The State  
25 Engineer just needed to draw a rational conclusion from the



1 evidence in front of him.

2 THE COURT: So needing -- drawing a rational  
3 connection between the 8,000 and the 3.2?

4 MR. LAKE: Exactly. And the State Engineer found  
5 that 3.2 was necessary. So how do we maintain 3.2?

6 And so and how do we protect senior rights too? So,  
7 you know, it's our position that that could be made. That  
8 decision could be made based on any number of any amount of  
9 factual information in the record. But it can't be made on the  
10 basis that the system is approaching equilibrium because  
11 there's not evidence that the system is going to equalize. I  
12 mean, it could. It could not. The point is we don't know.  
13 There is no presently known substantial evidence.

14 The Court might also wonder, you know, why be so  
15 precautionary. Is there really -- is there really a  
16 requirement that the State Engineer, you know, honor these  
17 limits so strictly? And our answer is yes.

18 First, the pumping test revealed new information  
19 about the nature of the aquifer, which I already discussed, you  
20 know, and before the pumping test, we thought, everybody  
21 thought well, you know, this is not necessarily a permanent  
22 impact. Flows could recover. But what the pumping test told  
23 us is that, oh, it called that into question. It said, no, the  
24 levels aren't recovering. It looks like we have some degree of  
25 permanent loss to storage as a result of the pumping test.

1           So, you know, that changes the calculation. That  
2 means that the State Engineer does have to consider the fact  
3 that if we drop below that 3.2, it might not get back up above  
4 that 3.2 again. We're certainly not getting back to 4.0, where  
5 it was initially.

6           And, you know, the State Engineer's duties in this  
7 regard, again, are, you know, various. But due to the public  
8 ownership of water, the State Engineer is acting in the  
9 capacity of a trustee, a trustee, who according to the express  
10 language of the Nevada Supreme Court in the *Mineral County*  
11 decision has to maintain the trust for future generations.

12           Now, allowing a permanent depletion of this water  
13 source to the detriment of communities, businesses and of this  
14 endangered species is not maintaining the trust for the benefit  
15 of future generations. And that's why the State Engineer has  
16 to be precautionary here.

17           If we are actually too in a long-term drought, as  
18 some parties have argued here, you know, the Center hasn't  
19 taken a position on this. We have observed that there were  
20 some above average precipitation years following the pump tests  
21 that probably buffered the amount of decline to make it look --  
22 to make it be less than it normally would be.

23           But if we are indeed in a long-term drought and  
24 there's a long-term drying trend, this only argues for more  
25 caution. It means that, you know, the State Engineer was

1 correct in 1309 to say that he can't control climate. He can  
2 only control pumping. And if climate is going to have an  
3 adverse impact here, that only means that we need to control  
4 pumping even more to protect these substantial interests in the  
5 Muddy River Springs area.

6 And that is, in light of Mr. Herrema's objection, I  
7 think that's the extent of my presentation.

8 THE COURT: Okay. Thank you, Mr. Lake.

9 All right. Next step we've got Muddy Valley.

10 MR. DOTSON: Court's indulgence. It might take a  
11 moment. I don't know.

12 (Pause in the proceedings.)

13 MR. TAGGART: Your Honor, while he's doing that can I  
14 give you the -- or give the clerk the documents from yesterday?

15 THE COURT: Go right ahead.

16 (Pause in the proceedings.)

17 **ARGUMENT FOR MUDDY VALLEY IRRIGATION COMPANY**

18 MR. DOTSON: Good morning, Your Honor. There is no  
19 way that I would use the hour and 55 minutes allotted. I would  
20 like to start, and I'll probably conclude with joining my  
21 colleague and thanking you, and Mr. King has asked me to thank  
22 you as well.

23 It's been clearly obvious to all of us in the room  
24 that you have read the briefs, that you've grappled with this  
25 issue, and we really appreciate your informative questions and

1 your time.

2 This is the time for my rebuttal argument. That, as  
3 I understand the ground rules, and, you know, I will be to  
4 respond to the defense from the State and also to respond to  
5 the statements of some others that have spoken --

6 Well, that's not working.

7 THE COURT: That spoke in the intervenor part.

8 MR. DOTSON: That spoke in the intervenor in a  
9 position contrary to ours to what we have advocated.

10 It's totally locked up.

11 (Pause in the proceedings.)

12 MR. DOTSON: All right. Sorry about that. I think  
13 when I switched --

14 THE COURT: And this is slide?

15 MR. DOTSON: This will be Slide 2.

16 And, in fact, Your Honor, I think what we -- what was  
17 telling about the State Engineer's presentation was the absence  
18 of a direct response.

19 Now, there are briefs, and those are certainly part  
20 of the record, but we're here for oral argument. And at least  
21 with regard to oral argument, candidly, and we're going to talk  
22 about some of these things, the response from other parties was  
23 stronger in contradiction to the positions that we have  
24 asserted and advanced on behalf of Muddy Valley Irrigation  
25 Company than that of the State Engineer's.

1           But definitely certain parties it would seem, seek to  
2 limit MVIC's decreed rights. The irrigation company is not  
3 going to allow that to happen, at least that is their goal.  
4 That is my job.

5           And to be clear, this proceeding, as I understand it,  
6 is a petition for judicial review. When I referred to this  
7 proceeding, that was my intent. It wasn't 1303 or the 1309  
8 hearing. I understand that conceptually this isn't a  
9 continuation of that same legal conduct or this same string of  
10 decisions, but this proceeding is insular and discrete insofar  
11 as there's a record that has been identified. There are issues  
12 that have been raised in however many petitions for judicial  
13 review -- seven I think, something like that -- and the  
14 intervening briefs as well. And that's what's at issue, as I  
15 understand it, in this proceeding.

16           In this proceeding, in our petition for judicial  
17 review filed by MVIC, it did invoke the decree. It's all over  
18 our petition for judicial review. So and I think it's clear  
19 when you look at the record that -- and it should be important  
20 that the decree was important in the consideration of the  
21 issues that are up on review. So I don't think it's -- and I'm  
22 not saying anybody is claiming a surprise on this, but it isn't  
23 a surprise.

24           Now, this was not an original action in the decree  
25 court. I would agree with that, but our arguments, as I hope

1 have been clear, and apparently maybe they haven't been, are  
2 grounded in the decree, and our arguments have remained  
3 constant and have remained the same.

4 Now, as I conceded, I think, both in the briefs and  
5 in oral argument here this week, the ruling that came out from  
6 the State Engineer was enlightening for my client that maybe he  
7 couldn't -- he -- it could not rely upon the State Engineer to  
8 the extent that it had. But that's a long ways from a  
9 position -- excuse me, Counsel -- suggested by Vidler  
10 yesterday, which happens to be a shareholder, that if we are  
11 seeking to benefit from the decree, we need to file an original  
12 action.

13 The whole purpose of the statute that, well, what we  
14 would argue, the primary purpose of the statute that directs  
15 the State Engineer to do nothing, that injures the decree or  
16 injures a decree or a Court order -- and we'll get to that in  
17 specifics -- is to prevent and avoid every party who has  
18 decreed rights having to enter an action whenever they think  
19 those rights may be in jeopardy. They shouldn't have to have a  
20 District Court action in the decree court to enforce the decree  
21 when they think there may be a problem in the future.

22 THE COURT: So let me ask the question. Because when  
23 you're talking about decreed rights, you're talking about  
24 really the conflict of rights; correct?

25 MR. DOTSON: I am talking about any water right that

1 has been adjudicated by a District Court in an actual decree or  
2 order.

3 THE COURT: Oh. So I know that that's the basis --

4 MR. DOTSON: So I'm speaking generally.

5 THE COURT: So but what I'm talking about is when you  
6 are saying that you are invoking the decree for this Court to  
7 make decisions on, that is part of the conflicts analysis; is  
8 it not?

9 MR. DOTSON: It is insofar as it seems clear to us  
10 from the record below that the State Engineer made the  
11 determination that there was an impact and therefore a conflict  
12 with the decreed rights, that not all of the decreed rights  
13 were being delivered, and therefore there must be a  
14 determination as to what pumping, assuming it was pumping that  
15 was causing the conflict, and he found that as well, is  
16 actually causing that conflict and what we can do about it.

17 THE COURT: So this is really only to the limited  
18 issue of the conflicts analysis that's within the decree that  
19 you are saying is -- that was outside the scope of this  
20 proceeding; correct? So when you're talking about -- when  
21 you're talking about asking the Court to make a decision about  
22 the rights about the decree that you have, that is based on the  
23 limited scope of the portion of 1309 that the Nevada State  
24 Engineer made -- did a conflicts analysis saying, you know,  
25 it's not affecting the Muddy Decree River rights or whatever

1 along those lines; is that correct?

2 MR. DOTSON: Right. Exactly. Exactly. What we're  
3 saying is that the -- well, actually, let's go -- I think  
4 actually what I'm going to say next is going to be helpful, and  
5 we are now at Slide 2, 3, 4, 5. I guess I should have written  
6 the numbers on this.

7 So to be clear --

8 THE COURT: What slide is this?

9 MR. DOTSON: This I believe is Slide 5.

10 THE COURT: Okay.

11 MR. DOTSON: So he's wrote 5. This is 5.

12 MVIC contends that, and I think this kind of goes to  
13 the issue you're raising, that the Nevada State Engineer cannot  
14 modify the decree. In fact, nobody can modify the decree. We  
15 don't think you can modify the decree. That period to do so  
16 has passed.

17 And we're not suggesting that 1309 does that. It  
18 acts to do that. It's not literally modifying the decree. He  
19 cannot modify the decree. And, in fact, I think Nevada state  
20 law now and public trust doctrine being in -- and being  
21 consistent with that has identified in *Mineral County versus*  
22 *Lyon County*, that Stiglich opinion, that, and this is a portion  
23 that Vidler's counsel cited to, has identified that those are  
24 consistent. I cited to it in my opening as well. That even  
25 considering the public trust doctrine, even considering that



1 the water is owned by the public, and the public has an  
2 interest in it, the public's interest is served by the  
3 certainty in the understanding of prior appropriation. These  
4 concepts and the statutes that are built upon them are in  
5 harmony.

6 And so the reason why we filed our petition for  
7 judicial review is because we read 1309 as running contrary to  
8 those established rights from the decree, which it cannot do.

9 And so we sought this petition review, which happens  
10 to also be with the decree court, which is why I say I invoked  
11 the decree. What I'm saying -- I'm not saying that I filed a  
12 new action here based on the decree. That has not occurred.  
13 And, in fact, my contention is it shouldn't have to, but maybe  
14 it does. But it is -- it has been raised. So I feel like I  
15 had to deal with that.

16 Now we're at Slide 6 consistent with the argument we  
17 just said.

18 MVIC is not asking for a modification to the decree;  
19 however, it was notable that when Vidler filed this action,  
20 their petition for judicial review -- they originally filed in  
21 Lincoln County. The Court I know is aware of this.

22 THE COURT: I think I actually just read the opinion  
23 again last night. So I'm fully aware of --

24 MR. DOTSON: Okay. So you know -- well, that's what  
25 I was going to ask you to do.

1 THE COURT: No. I already read it last night.

2 MR. DOTSON: Thank you.

3 Moving to Slide 7. MVIC's position differs from  
4 SNWA, and MVIC did not adopt the SNWA positions below. I want  
5 to refer you to exactly where in the record we have our report.

6 So the report and the portions -- the report starts  
7 at record on appeal 39714. It's very short. And ends at  
8 39717, and I would suggest the brevity of this is indicative of  
9 my client's belief that really its involvement in this hearing  
10 was optional. It shouldn't have been necessary at all to be  
11 there, but there are at least three spots on the record on  
12 appeal 39,716 and 717 where MVIC concurs with the discussion  
13 points at certain sections of the Southern Nevada Water  
14 Authority report that I've referred to a number of times in  
15 this case, and it's not coincidental that that has occurred.

16 But I think has been clear, and I would be lying if I  
17 didn't say that as Mr. Taggart borrowed my computer to prepare  
18 and present his report when he was speaking in support of the  
19 8,000 cap, I thought about clicking it off just for fun.  
20 Because we don't agree with that.

21 And there's -- MVIC is much more protective of its  
22 rights than that particular shareholder, and obviously more  
23 protected perhaps than -- well, this is a note from my  
24 colleague and cocounsel Steve King. It's very interesting that  
25 in this room, just to be again clear and transparent, there are

1 five shareholders of my client: The LDS Church, Vidler, Coyote  
2 Springs Investment, SNWA and Moapa Valley Water District.

3 So what are those rights that each of those  
4 shareholders we just described have a certain percentage  
5 interest in. They are to the Muddy Valley Decree, and to those  
6 decreed waters. And I have in the past referred to the Decree  
7 and really mostly the holdings, but I want to also direct the  
8 Court that it's interesting maybe to read at the beginning of  
9 the Decree the stipulation that is contained therein because it  
10 is in that stipulation that the parties who are actually  
11 litigating this case in the Muddy Valley Irrigation Company is  
12 the plaintiff in that case are recognizing even in the  
13 stipulation this prior appropriation concept, the fact that the  
14 water was put to beneficial use in all instances of these  
15 people and entities before 1905.

16 Oh, I thought there was an alarm.

17 THE COURT: Oh, no, no. It's just the --

18 MR. DOTSON: And -- sorry. I lost my train of  
19 thought.

20 THE COURT: You were saying that the water was put to  
21 a beneficial use before 1905.

22 MR. DOTSON: And it also recognizes the rights and  
23 the usage of the Muddy Valley Irrigation Company, as I've  
24 described here and this -- this two-tier type circumstance,  
25 these two specific type of grants.

1           Now, in the stipulation not all the water had been  
2 included, because the order, as you recall, includes certain  
3 certificates. At least this is my understanding.

4           I will tell you that I have -- I found it -- this  
5 case is so historical, right, and I find it interesting that I  
6 stand in the shoes, and I stand on the shoulders really of this  
7 guy named A.S. Henderson, who represented the Irrigation  
8 District and who no doubt negotiated that stipulation. And  
9 candidly I'm trying just not to screw anything up that he did  
10 because what he did was he preserved and he placed in a decree  
11 in an order rights that have already stood for over a hundred  
12 years and hopefully will stand for hundreds of years in the  
13 future. And that is the concept of prior appropriation, Your  
14 Honor.

15           The fact that -- and it is consistent with the public  
16 trust because it is important for planning, for future  
17 generations, whether it's an individual. Now, there's a guy in  
18 here who has part of this water named Knox. One of the lawyers  
19 in the case for the -- though he hasn't spoken -- for the power  
20 company is a guy named Knox. I was ready to get some joke  
21 about Mr. Knox's water. But I don't know who owns that water  
22 now. But the point is that it allows for certainty and that  
23 every one knows how much water it is and that it can be used  
24 for beneficial use.

25           And it was recognized then subsequent to that in

1 statutes. This decree predates the water law that you've been  
2 discussing, predates the statutes that we ask you to look to  
3 and we think are in harmony with this, but it's important that  
4 Nevada's -- that it is appreciated, and I think everybody  
5 agrees that Nevada's water law is based upon common law and  
6 statutory law that hopefully is in harmony.

7 In this instance, it grants to MVIC specific  
8 diversion rates for specific periods of times, the winter and  
9 summer that we talked about in the opening and again the time  
10 to revisit it has long past.

11 Now, I don't think that statute that gave the three  
12 years existed. Obviously it didn't exist at the time the  
13 decree was entered, but even if it was just a -- well, I think  
14 counselor for Vidler said it well yesterday. It's a Court  
15 order. It's a final order. And you can only -- we want  
16 finality in our courts as well.

17 So again, it's a seamless web, which is what the law  
18 is supposed to be. And it plays upon each other.

19 So moving quickly through this, because I know I've  
20 stated it ad nauseam. This is the specific allotment of cubic  
21 peak feet per second, 36.2588. This is what we seek to have  
22 the State Engineer return. This is the remand instructions  
23 that we have asked, which is that you strike that portion of  
24 the decree which is found on page 60 and 61 and remand with  
25 instructions that the State Engineer is to calculate an amount

1 of pumping that can occur without conflicting, which is exactly  
2 where that question that you rose -- you raised I think came  
3 from, without conflicting with those decreed rights, whether by  
4 location and amount, and we'll at least eventually return the  
5 river to its predevelopment decreed flows, whatever that may  
6 be.

7           As a -- we read and so we would ask that you would  
8 strike and then remand with instructions, strike those portions  
9 of Order 1309.

10           As we read the order, the State Engineer made very  
11 clear and supported factual findings about the 36,900 acre-feet  
12 annually of flow in the river predevelopment and the fact that,  
13 which is just stating a fact from the measurements, that the  
14 flow, at least since 2015, at the time of the hearing obviously  
15 had averaged 30,600; thus leaving a deficit of 3,300 acre-feet  
16 annually.

17           But then the State Engineer fails to apply, and this  
18 is the inconsistency where we align very closely with the  
19 Center for Biological Diversity and not as much so with SNWA  
20 where we don't think the math can possibly therefore work out  
21 that you can conclude that there's a deficit in decreed water  
22 rights and yet allow a level of pumping that you acknowledge  
23 may or may not even have reached steady state yet. We need to  
24 do better than steady state to return the decreed flows.

25           And those are the flows that my client has the right

1 to under the decree, the specific allotment and whatever the  
2 flow of the river was. And this is where the geography of  
3 where my client takes on the river is important because we're  
4 at the end. We get what's left, and there's this catchall  
5 phrase that I know others dispute the significance of it, but  
6 from my client's position, it is its understanding that any  
7 water that reaches it at that point it is to put to beneficial  
8 use. I will tell you that they even think it's their  
9 obligation to do so. I don't think the decree sits quite that  
10 hard, but that's what they think.

11 I'm not waiving privilege beyond that point, by the  
12 way, for the record.

13 So what we seek is that this Court's remand provide  
14 instruction that the State Engineer take action to protect the  
15 decreed water rights at 33,900 acre-feet. And those are not  
16 just our rights. Those are everybody's rights on this river,  
17 not just Muddy Valley Irrigation Company.

18 Now --

19 THE COURT: And this is slide?

20 MR. DOTSON: This is -- thank you, Your Honor.

21 THE COURT: We've been going through slides and I  
22 don't believe we've made a record of it.

23 MR. DOTSON: Let's see what slide it is.

24 The last one was 9, and this is 10. And I'll provide  
25 this copy to the Court when I'm done, and I have yesterday's as

1 well.

2           What didn't we hear from the State Engineer even in  
3 response to a question from you, and that was a defense of the  
4 consumptive use analysis and how the State Engineer can legally  
5 apply such a consumptive use analysis in any portion of its  
6 work and holding of 1309 in light of the statute specifically  
7 disallowing such an analysis on the Muddy River.

8           I did not hear, and maybe I dozed off, but I did not  
9 hear, and I was waiting for it, an explanation as to how that  
10 would be appropriate or make sense.

11           I did not hear the State Engineer make that, and I  
12 know the Court asked a question where it was basically  
13 deferred, and I think it was deferred because there is no  
14 explanation as to how it's okay.

15           NRS 533.3703 specifically outlaws that sort of an  
16 analysis to be applied to these waters. Here's the provision  
17 in the section. This is Section 2. These provisions of this  
18 section do not apply to any decreed, certificated or permitted  
19 right to appropriate water which originates in the Virgin River  
20 or the Muddy River.

21           Now, Vidler seemed to suggest that that was all right  
22 and that some analysis in that regard should be done. And it  
23 seems transparently obvious that the reason why any party would  
24 be a proponent of this is to reduce the amount of water that  
25 MVIC and others holding water on the Muddy River and through



1 the decree are allowed to use and to change the calculation.

2 And it's a multistep. You have to, you know, do that  
3 first so that you can either segment it by basins or do some  
4 sort of a budget analysis. I don't prepare -- I don't pretend  
5 to understand exactly where it's going, and I don't need to.  
6 All I need to know is that you can't do it. And so any  
7 analysis that allows a justification for a reduced sum to be  
8 delivered of decreed water rights is improper and illegal.

9 Now, we're at Slide 11, Your Honor, prior  
10 appropriation. First in time, first in right.

11 THE COURT: Well, let me ask a really quick question.

12 MR. DOTSON: Please.

13 THE COURT: So, you know, I know they you have this  
14 sum of 33,000 -- is it 900?

15 MR. DOTSON: 900. That's the predevelopment decreed  
16 flows.

17 THE COURT: Okay. And I know that there were some  
18 different calculations that were done by Coyote Springs and  
19 Vidler regarding -- because it sounds like you're looking at  
20 historic grants of water and the way that they calculated water  
21 then. And now we have different ways of calculating that  
22 water. Can you kind of walk me through that a little bit as  
23 far as how it relates to the predevelopment flows.

24 MR. DOTSON: I will. I will. To the best of my  
25 ability.

1           And again, there are -- there's different submissions  
2 of evidence in this regard, but the -- oh, I grabbed the wrong  
3 thing.

4           The --

5           THE COURT: And just to be clear, so the  
6 predevelopment flow number that you have is based on your  
7 calculation; is that correct?

8           MR. DOTSON: No.

9           THE COURT: No. Okay.

10          MR. DOTSON: So the 33,900 comes from page 61, I  
11 believe, of the decree. This is the State Engineer's  
12 conclusion. And indeed I think I mentioned earlier --

13          THE COURT: The decree or the --

14          MR. DOTSON: Or on the order of 1309. It came from  
15 1309. And the State Engineer, I argue that number -- I've  
16 argued in this proceeding that that number is supported by  
17 substantial evidence.

18          THE COURT: Okay. But that is also -- I mean, I  
19 guess what I'm trying to get at is this number, the 33,900 is  
20 based on taking prior historic sort of ways of calculating  
21 water and then trying to, you know, put that in more modern  
22 terms. Is that correct?

23          MR. DOTSON: Well, sort of and not really.

24          THE COURT: Okay.

25          MR. DOTSON: Let me -- I'm going to direct you to --

1 well, first I'm going to explain where I think it came from.

2 THE COURT: Okay.

3 MR. DOTSON: And because I've got an hour and  
4 20 minutes. I'm not going to need it all, but we can  
5 definitely take some time here to have a discussion.

6 THE COURT: Okay.

7 MR. DOTSON: The 33,900 is found at 1309 and in  
8 Order 1309, and it is a number arrived at by the State Engineer  
9 that we have argued in this case is supported by substantial  
10 evidence. I've alluded to the fact that we may withdraw that  
11 position, and I have actually directed the Court to Order 1169,  
12 which was the 2002 pump test order. And in particular to I  
13 think it's Footnote 12 of that order where at that time the  
14 State Engineer Ricci used a 36,000 acre-foot annual number for  
15 the Muddy River. So there are different estimates, and --

16 THE COURT: But it's all based on what was originally  
17 contained in the Muddy Water River Decree and how they measured  
18 the water then?

19 MR. DOTSON: Sure. So, yes. When they litigated  
20 this in the -- well, I guess it would be it's, like, '17, well,  
21 through '20, the -- they had evidence as to how much water was  
22 being diverted at that point in time, and they're basing it on  
23 that, and they're claiming these uses. And, you know, I  
24 haven't read the record that existed. I don't know if a record  
25 exists from that. There's charts at the back that counsel has

1 referred to, and I've read those, and I, in fact in one of my  
2 prior slides, it might have been the middle one I put the  
3 summary of the water that was awarded, and those cubic feet per  
4 second, you can run a calculation over that, but obviously a  
5 river like this in an arid climate is going to vary from year  
6 to year.

7           And so in looking at the record from this proceeding  
8 at 41,930 through 42,029, there is an analysis that describes,  
9 and I'm going to try to find the exact spot, how those SNWA  
10 hydrologists, they used historic data from the period of the  
11 decree and since the decree, and there were criticisms in the  
12 record below of how accurate that is, and there are years where  
13 there's no data kept as to how much water is running through  
14 the river, and we have numbers now, and there's been  
15 discussions of ICS credits in this case. SNWA has made a big  
16 deal about the ICS credits, which are certified every year, and  
17 they're used to determine that intentionally created surplus  
18 that goes into Lake Mead and then is relied upon apparently by  
19 them.

20           And so no doubt, which maybe is what you're asking,  
21 the calculations should be better today than they were in 1920,  
22 though what is funny, and I think this was an anecdote that I  
23 think Mr. Taggart related, which was sometimes using a tape  
24 measure and a stick is a pretty accurate way to figure out some  
25 quantity of anything. And when I was a kid, we used to -- I

1 worked at a service station, and we had a computer, early  
2 computer that tracked how much gas was supposed to be in the  
3 underground storage tanks.

4 But every day, we took a stick, and we dumped that  
5 stick down, and we put on a spiral notebook the amount. And  
6 you know what one was more accurate? The stick, right, because  
7 there's -- you know, I don't know what's happening. I think we  
8 figured out that eventually there were holes in the tanks.  
9 Different story.

10 But here's the thing. They put the water, and  
11 there's been some pictures of this, into a channel at various  
12 points, right, or they -- and when it goes through the channel,  
13 and if the channel -- it depends on the nature of the water  
14 source, obviously, the channel has a known width. I wish I had  
15 a picture I could put up. And then that creates a gage because  
16 you can tell how -- because they know the volume of water that  
17 is now moving through this usually concrete channel. They can  
18 see the height of the water, and then they can record it. And  
19 that's when they were talking about, oh, this has a faulty  
20 transducer and things like that, and so you have --

21 Now, some areas where the measurement is constant,  
22 right, so you have a record, a hydrograph, that's what these  
23 hydrographs are, right, because really, when I was sticking the  
24 tanks back in the '80s, that kind of created a hydrograph  
25 too. It just was of petroleum. And we could see where the

1 tank was. And then when we had to order more gas. Well, it's  
2 the same thing really except now it's a natural thing. It's a  
3 river, and at least this is how I -- now, you're inside my head  
4 knowing how I've been thinking about this, right, but --

5 THE COURT: Well, I mean, in the historic  
6 information, it was more about diversion rates; right?  
7 Diversion rates as --

8 MR. DOTSON: Well, originally it was diversion rates,  
9 but they're still making estimations of how much water is in  
10 the river.

11 Now they know they're using the whole river, and it's  
12 clear from the fact that we had a decree that there started  
13 being disputes over well, you're using water that I've been  
14 using, and I'm no longer getting as much water as I should get.  
15 And really, that's what's referred to yesterday, and I'm  
16 rebutting, which is, well, wait a second. What's your remedy?  
17 Your remedy is you can't go and sue. That doesn't seem very  
18 efficient to my client or to me that you go sue preemptively  
19 before you allow the State Engineer to do its work.

20 But -- let me see if I -- maybe one of these  
21 stickies.

22 Court's indulgence. I'm just going to take a moment  
23 to look at the spot.

24 Okay. So if you look at the beginning of this  
25 report, it starts out with the decree and some historical

1 information, and then we have some reports that are contained  
2 in Section 2. And I want to see. Because one of the things,  
3 and I think I actually cite to this in one of our briefs is  
4 there are periods of time where the flow is much higher, and  
5 that's why I -- I think I stated in my first opening that -- I  
6 might be getting some help here as to where to look, but that I  
7 like to settle cases, and I like to compromise, but sometimes  
8 you can't compromise.

9           But one thing I thought we could compromise on,  
10 because I have permission to was that predevelopment flow at  
11 33,900. And that was based upon historic information, but --  
12 and it is supported by substantial evidence. It doesn't mean I  
13 actually think it's right, you know. It's like well, can I  
14 stipulate that my client has been injured? Yes. Can I  
15 stipulate that my client has been injured to at least a million  
16 dollars? Sure. Do I think it's 2 million? Yes. Will we  
17 settle for a million five? Okay. Right? It's that analogy to  
18 me.

19           And so I'm not -- I'm not finding it.

20           THE COURT: I took you way far off.

21           MR. DOTSON: No.

22           THE COURT: I really just -- I think you've answered  
23 my question on historic --

24           MR. DOTSON: I'm pleased to ask -- try to answer any  
25 question you have.

1           The point is that as you look in the record, and I  
2 don't know if you're going to do posthearing briefs at all. If  
3 you do, I can try to slip you the --

4           THE COURT: I hadn't thought of that.

5           MR. DOTSON: -- slip you the --

6           Do we have the number?

7           No. You would think I'd be able to find the stupid  
8 page. I'll find it as soon as I sit down, of course.

9           But the point is it's based upon historical  
10 information, and there are, I will concede, that there are  
11 years where, to my recollection, there were periods of time  
12 where they had no data, and then there were years, and most of  
13 it was older information where they had a number. They had an  
14 estimate. It's still going to be an estimate, and it's still  
15 going to have to be averaged over time.

16           And so that's where you rely upon the expertise of  
17 the State Engineer to make those sort of determinations.

18           Okay. Yeah. So if you turn to record on appeal  
19 41962, and if we had this ELMO, but let me just tell you. So  
20 there's a hydrograph there, and it shows the gage flow, and it  
21 shows the flood flow, and the first thing that is highlighted  
22 either by me or Tom O, whoever Tom O was, the mean annual flow  
23 measured at the --

24           MS. PETERSON: Your Honor, I am going to object to  
25 that because he's reading from evidence that has -- it sounds



1 like it has interlineations in it, and that's the documents  
2 we're not supposed to be looking and referring to.

3 THE COURT: So I --

4 MR. DOTSON: The text --

5 THE COURT: Correct me if I'm wrong.

6 MR. DOTSON: Yeah.

7 THE COURT: Is it that they were highlighted, and now  
8 they're just plain text that were put in on the amended, or are  
9 there actual notes on them?

10 MR. BOLOTIN: Your Honor, this is James Bolotin from  
11 the -- representing the State Engineer.

12 The document that has highlighting also has some red  
13 notes by someone with a last initial --

14 THE COURT: Tom O or whatever?

15 MR. BOLOTIN: Well, that's what shouldn't -- I kind  
16 of --

17 THE COURT: Should not be considered?

18 MR. DOTSON: I will not read the notes.

19 THE COURT: Okay. So --

20 MR. DOTSON: There's no notes on the screen.

21 THE COURT: Do you have an objection to the  
22 highlighted portion even though it's highlighted?

23 MS. PETERSON: I do have an objection to the  
24 highlighted portion. And it sounds like the record on appeal  
25 that was filed is blurry, and the amended record or -- I can't

1 remember what it's called, is blurry, and you can't see it.

2 MR. BOLOTIN: Yeah. So the amended record is what we  
3 were talking about earlier this morning that needs to be fixed  
4 again with the -- we probably need to withdraw the amended  
5 record and file a -- an errata or something to fix those pages  
6 in a way that everybody can read, but also doesn't have the  
7 highlights or the notes.

8 THE COURT: Well, the amended record is not in our  
9 Odyssey.

10 MR. BOLOTIN: It's -- I spoke with --

11 THE COURT: Well, I know you spoke with them, but  
12 when I pull it up, is not in there at all. So -- what I can  
13 see.

14 MR. BOLOTIN: And there was a --

15 MR. DOTSON: Can I respond to the objection?

16 THE COURT: Yes, you may respond to the objection.

17 MR. DOTSON: Your Honor, the page which we are  
18 referring has no interlineation. There are only  
19 interlineations that -- of a few pages of the entire text. And  
20 they are easily obvious because they are of a different nature  
21 than the text of the report.

22 THE COURT: Okay. So then if you just --

23 MR. DOTSON: Read --

24 THE COURT: -- the text of the report, which is  
25 something that would be in the amended --

1 MR. DOTSON: Right.

2 THE COURT: -- I think that would be proper.

3 Is there a response to that?

4 MS. PETERSON: There's not, but Mr. Dotson just said  
5 I'm not going to read the interlineations. So it sounded like  
6 he was reading -- I mean, now he just says it's not -- the  
7 interlineations --

8 MR. DOTSON: Well, there's no interlineations.

9 MS. PETERSON: -- are not on the report or on that  
10 page. So I don't know what he's talking about.

11 MR. DOTSON: No. I said I was reading the report.  
12 I'm sorry if it was misunderstood.

13 THE COURT: All right. So just the text of the --

14 MR. DOTSON: Just the text of the report.

15 MS. PETERSON: And I don't think it was  
16 misunderstood. I think it was misstated.

17 THE COURT: Okay.

18 MR. DOTSON: That's very possible. Oftentimes my --  
19 we are, in oral argument, not as perfect in our words and our  
20 speech as we should be.

21 THE COURT: So you were talking about the mean annual  
22 flow measures.

23 MR. DOTSON: Yeah. I'm going to make -- I'm going to  
24 just read some portions from 41962.

25 And so the mean annual flow measured at the Moapa

1 gage in 1946 was 46.8 CFS, cubic feet per second, 33,900  
2 acre-feet. I don't know what was in the State Engineer's mind,  
3 but I find it remarkable that that's the exact number he  
4 eventually arrived at.

5 The --

6 THE COURT: Did you say 36 or 46 --

7 MR. DOTSON: I'm sorry. 33,900 acre-feet.

8 THE COURT: Okay.

9 MR. DOTSON: 33,900 acre-feet.

10 THE COURT: And that was in 1948?

11 MR. DOTSON: That was 1946.

12 THE COURT: All right.

13 MR. DOTSON: The bottom of that paragraph, the  
14 average flood adjusted mean annual flow was 47 cubic feet per  
15 second, which is, in parentheses, 34,000 acre-feet. This says  
16 AFY, which I assume it means per year.

17 THE COURT: Per year.

18 MR. DOTSON: The next paragraph,

19 The 1946 predevelopment base flow also  
20 corresponds with information compiled by Eakin,  
21 a guy we've heard a lot about, parentheses,  
22 1964. Eakin, 1964, reported a 25-year average  
23 flood adjusted mean annual flow of 46.4 cubic or  
24 CFS, parentheses, 33,600 AFY, parentheses.  
25 Using intermittent -- this is why I said I could

1 tell there was gaps in the data -- data between  
2 1914 and 1962.

3 In addition, Eakin, 1964 estimated that  
4 approximately 2,000 to 3,000 AFY of spring flow  
5 was being consumed by phanerophytes (phonetic)  
6 between the spring orifices and the gage.

7 And these are a type of plant, by the way, Your  
8 Honor, that does well in the desert.

9 MS. PETERSON: Your Honor, I am going to object, and  
10 I'd like this noted for the record that SNWA, whose time has  
11 already passed to present their case, is now helping MVIC and  
12 providing him documents to support his oral argument, his  
13 rebuttal.

14 MR. DOTSON: I'll put it on the record. I'll use my  
15 time.

16 Counsel for SNWA just provided me a unhighlighted  
17 page to offer to the Court. So it is -- and allows me -- well,  
18 I assume that's why he gave it to me. It also allows me to  
19 confirm that the text is the same on the document that I'm  
20 looking at as on the document that will be in your amended  
21 record.

22 THE COURT: All right.

23 MR. DOTSON: So --

24 THE COURT: Your objection is noted for the record,  
25 and I will note that this was sort of in response to my

1 question, and I have totally taken him far off from your  
2 argument.

3 So I'll have you just get back to your argument.

4 MR. DOTSON: All right. I'm going to read the last  
5 sentence here, and then I will -- because I think I am really  
6 at the end of your -- of answering the question.

7 Because there's an Eakin and more report you'll see  
8 in the middle of that page. And just you can obviously just  
9 read the page, that has the 36,000 AFY, which I'm going to  
10 guess is what Mr. Ricci was relying upon.

11 All right. Back to what I was talking about.

12 So it's been long recognized -- it's recognized from  
13 the decree, that the Muddy River was fully appropriated.  
14 That's the whole importance of that second grant to MVIC.  
15 There's no more water to give. The water is fully  
16 appropriated, and any water not put to beneficial use for those  
17 above MVIC are to be put to beneficial use by MVIC.

18 And notably, the other parties in the litigation,  
19 which is why I described the page that has the stipulated  
20 portion of the order, concurred, apparently, since they signed  
21 the stipulation, with that sort of a process.

22 Our State's water rights statutes forbid the  
23 reallocating adjudicated water rights, and that's the case that  
24 counsel and I have also have both been citing to. And that  
25 would not be appropriate here. It's not appropriate to -- but

1 our objection to 1309 is not only is it because it's not  
2 appropriate to reopen and modify the decree, it's also not  
3 appropriate through an order by the State Engineer to  
4 circumvent the intent and holding of the decree. And that's  
5 what 1309 did, and that's why we object to it, and that's why  
6 we filed a petition for judicial review.

7 NRS 533.085, nothing contained in this chapter shall  
8 impair the vested right of any person to the use of water, nor  
9 shall the right of any person to take and use water be impaired  
10 or affected by any of the provisions of this chapter where  
11 appropriations have been initiated in accordance with the law  
12 prior to March 22, 1913.

13 I think that MVIC's are the only water rights that  
14 come before the nonimpairment statute. And so I cite to this.  
15 I cited to it in my opening. I'm citing to it now because it's  
16 not that we're relying just on one statute. It's not that  
17 we're just relying on the common law of prior appropriation.  
18 It's not just that we're relying upon sound public policy and  
19 public interest. It's not just that we're relying on common  
20 sense. It is all these things together that support and  
21 protect these decreed rights.

22 Okay. Now, we're moving to 12.

23 But you know what, even if it was just the decree and  
24 this -- frankly, just if it was the decree and the enabling  
25 act, that would be enough. But I don't have to stand just

1 there. It's the decree, the enabling act for the State  
2 Engineer, and it's this statute. You can stand just on those.  
3 You don't need all of the things I just listed.

4 533.0245, the State Engineer is prohibited from  
5 carrying out duties in conflict with the decrees or orders.  
6 That's what this did. The 8,000 acre-foot cap is inconsistent  
7 with well supported elements of 1309.

8 In other words, this is where I say you can't come to  
9 conclusions which are supported with lots of substantial  
10 evidence over years of measurement on amount of flow, say that  
11 that amount you're not even getting close to it any more and  
12 then develop a level of pumping that you're going to allow  
13 that -- where you think well, it might actually keep going down  
14 if we allow this, but that's what we're going to do. Those are  
15 inconsistent with logic.

16 It's a violation of 533.0245, and that's what --  
17 sometimes it's easier in the law just to rule on exactly what's  
18 in front of you, and then the pieces together make the bigger  
19 picture. I'm not saying you can't look at the big picture  
20 because you have to obviously, but even if I'm just looking at  
21 this narrow, simple thing, the ruling is clear. That part  
22 of -- well, we hope it's clear, that part of 1309 is improper,  
23 illegal and must be stricken and reversed with instructions to  
24 follow the decree, follow the order, follow the statute.

25 Again, with the 8,000 AFA, it's based only on the



1 fact that the Muddy River is nearing equilibrium. It doesn't  
2 speak to at all in the analysis what it takes to get the flows  
3 back to what they were. It simply is an acknowledgment that  
4 they aren't where they should be.

5 It's incorrect to contend that a separate legal  
6 action should be necessary. That would ignore this entire  
7 statute. It may be necessary. It may be appropriate, but it  
8 shouldn't have to be. You shouldn't have to have a decreed  
9 right, and it would defeat kind of the whole concept of public  
10 policy of having a State Engineer if every decreed right owner  
11 had to separately, we have two parallel systems where you had  
12 to separately move in and enjoin somebody before they drill  
13 their well because you think it's going to impair you.

14 You don't have to do that. That's not what the  
15 system is. That would ignore the statute and the purpose of  
16 having the State Engineer's office where you have a group of  
17 experts, and you have an administration of the waters of the  
18 State of Nevada by those experts which take into account these  
19 decreed rights, which are the supreme highest rights in that  
20 system.

21 Moving on to 13, which is the last. What are we  
22 asking for? I've got to look at Steve's notes. I've not got  
23 them all yet.

24 Okay. We're asking you to remand with instructions  
25 to strike the illegal portions of 1309, and the factually

1 unsupported conclusions while leaving the supported  
2 conclusions.

3           It was argued that you can't do that. Well, I think  
4 that's exactly what we do. We see appellate courts do this all  
5 the time where they say, well, this is right, but I'm going to  
6 remand this to you because you have to consider X, right, say  
7 it's a different context that I have dealt with before. You  
8 didn't provide enough support for your attorney fee motion,  
9 right. So it's remanded. The attorney's fees have been  
10 granted. They didn't change that part, but you've got to  
11 provide this additional support for your attorney fee motion.  
12 You have to provide the invoices, whatever.

13           I'm just drawing an analogy to something else that's  
14 much simpler. But maybe it's not actually simpler. Because  
15 what am I really asking you to do? I'm asking you to remand  
16 with instructions to follow the law, which that is the law, by  
17 the way. You're supposed to submit your attorney's fees with  
18 your affidavit and your confirmation of this and give the other  
19 side your, although redacted, attorney fee invoices, and that's  
20 what I'm asking you to do here.

21           I'm asking you to remand, tell the State Engineer to  
22 follow the law, acknowledge that certain things he did were  
23 right and seem to be supported by substantial evidence, but  
24 these other things, these other conclusions you had can't be  
25 supported by substantial evidence if -- because they're

1 inconsistent with the base conclusions. Specifically you can't  
2 conclude that 3,300 acre-feet a year is not flowing into the  
3 river, which is fully decreed and still say, but we're going to  
4 do -- allow pumping that we know won't change that. That's --  
5 you know, that's a circumvention of the decree.

6 And so it is entirely appropriate, in our view, that  
7 you remand with these specific instructions.

8 Thank you, Your Honor. And again I want to thank you  
9 very much for your time this week.

10 THE COURT: Okay. Thank you.

11 So right now it's 11:30. Would you all like to do an  
12 early lunch break or -- I mean, I know Nevada Cogeneration, so  
13 since you are up, I don't know how long you're looking at, if  
14 you --

15 MR. FLAHERTY: I would not be done by noon, Your  
16 Honor.

17 THE COURT: Okay. So should we take our lunch break  
18 now and then come back at 12:30? Would that work for everyone?

19 MR. FLAHERTY: Yes, Your Honor.

20 MR. BALDUCCI: Your Honor, I did have slides  
21 delivered. I don't -- I can deal with this after lunch or  
22 before.

23 THE COURT: I'll let the boss decide.

24 (Proceedings recessed at 11:29 a.m., until 12:33 p.m.)

25 THE COURT: Okay. I think everyone is here.

1 (Pause in the proceedings.)

2 THE COURT: Okay. The floor is yours.

3 **ARGUMENT FOR NEVADA COGENERATION ASSOCIATES NOS. 1 AND 2**

4 MR. FLAHERTY: Well, thank you. Good afternoon, Your  
5 Honor. Frank Flaherty here on behalf of Nevada Cogeneration  
6 Associates Numbers 1 and 2.

7 I would like to start with a little housekeeping of  
8 my own. I just want to let the Court and the parties know that  
9 I did provide a copy of the PowerPoint slides I presented  
10 Tuesday morning to the clerk. I e-mailed them to her, and I  
11 asked my assistant to e-mail them to all counsel.

12 And if anybody didn't get it, I would just request  
13 that they let me know, and I'll make arrangements.

14 THE COURT: Okay. Thank you.

15 MR. FLAHERTY: I did not compare notes with counsel  
16 for Dry Lake in preparing my presentation, and I probably  
17 should have because a lot of what I say is going to sound very  
18 similar. I thought about editing myself, but then I've got  
19 three hours and 13 minutes, and I didn't -- I didn't want to  
20 run the risk of editing myself out of an important point.

21 THE COURT: Sure.

22 MR. FLAHERTY: So bear with me if it gets redundant,  
23 please.

24 THE COURT: No problem.

25 MR. FLAHERTY: And the first redundancy, I will pare

1 it down. I think Dry Lake already spoke to the point raised by  
2 Muddy Valley Irrigation Company, MVIC, that the challenge to  
3 the formation of what I call the superbasin in Order 1309 is  
4 not timely. It should have been filed after Order 1303. 1303  
5 was an interim order. It was not appealable. You and I  
6 discussed this a bit Tuesday morning, Your Honor. And the only  
7 thing I think I'll add to that -- I'll add a couple of things.

8 One is I can give you a cite. It's to a -- it  
9 concerns a District Court decision and whether or not that was  
10 final. But it's *Lee versus GNLV*. That's 116 Nevada 424. And  
11 basically unless an order disposes of all the substantive  
12 issues and leaves nothing but miscellanea, like attorney's fees  
13 for a later time, it's not final. It's not appealable.

14 And then also echoing what Dry Lake said, if we  
15 imagined a situation were all eight of these petitions -- there  
16 were no intervenors, all eight of these petitions were against  
17 the State Engineer, and the only issue before the Court was,  
18 was there authority to form this superbasin, and we had I think  
19 20 plus briefs, hundreds of thousands of dollars in attorney  
20 fees, you blocked out two weeks in your calendars, and then  
21 Mr. Bolotin stood up here yesterday afternoon and told you you  
22 had to throw the whole thing up (indiscernible) it was  
23 untimely, I think if there was a stapler up there on the bench,  
24 Your Honor, you'd be tempted to throw it at him. So the idea  
25 that this can be raised now is nonsense.

1           The argument that the challenge to the superbasin  
2 formation is untimely is untimely in itself, okay. And since I  
3 just said the word superbasin, I want to kind of define the  
4 parameters when I use that term. I have to confess that I  
5 hadn't been thinking about joint administration as an issue  
6 until you brought it up the other day on the bench, Your Honor.

7           When I say superbasin, this is what my client's gripe  
8 is. We have several formerly separately administered  
9 groundwater basins now combined --

10           THE COURT: Into one.

11           MR. FLAHERTY: -- with a surface water source and by  
12 imposition of the 8,000 acre-foot cap or maybe less,  
13 conjunctive management.

14           So when I say superbasin, that's shorthand for all  
15 that, okay.

16           The first thing I want to do is I want to talk about  
17 some concessions the State Engineer made in oral argument. And  
18 some of them might be better characterized as confirmations  
19 rather than concessions.

20           And before I do that, as an initial matter, there's  
21 only one attorney here in this courtroom with authority to  
22 speak for the State Engineer. So if that attorney makes a  
23 concession deliberately or inadvertently, right -- it could  
24 have been a strategic decision in consultation with his client,  
25 that's binding essentially on us, right. And so an intervenor,

1 such as SNWA, doesn't have any right to get up here and try to  
2 walk back a concession made by the State Engineer. That makes  
3 no sense.

4 So what are these concessions and confirmations?

5 Well, first of all, historically groundwater has been managed  
6 on a basin by basin basis. We got that this week. Previously  
7 it had already been established by way of the State Engineer's  
8 testimony before the legislature in 2019 that historically  
9 groundwater and surface water had been administered separately.

10 The other thing we now know there's agreement on, at  
11 least with the State Engineer and the petitioners, is that  
12 NRS 533.024 mandates, it doesn't just encourage, it mandates  
13 that the State Engineer use the best available science.

14 There's also been a concession that there is no  
15 explicit authority in the statutes for the State Engineer to  
16 engage in conjunctive management.

17 The last -- the last concession or confirmation might  
18 be a better term for this one is that the six criteria  
19 announced in Order 1309 were developed after the parties  
20 presented their evidence. And I want to just dwell on that one  
21 briefly.

22 SNWA says, well, that's okay, and I'm paraphrasing  
23 here, because essentially this was really something more akin  
24 to a science symposium where everybody was just getting  
25 together, sharing their science and trying to understand how

1 this system worked.

2 Well, if that were really the case, then this ex post  
3 facto application of these six criteria, well, that may have  
4 been okay. I talked Tuesday morning about the statement from  
5 the hearing officer at the outset of the hearing that led to  
6 1309 where she said it wasn't an adversarial proceeding, and it  
7 wasn't a contested case. If that were really true, it might  
8 have been okay to have the science symposium and then develop  
9 these six criteria, but that's not true because -- and we know  
10 that's not true, Your Honor, because we had eight aggrieved  
11 parties here in front of you.

12 I want to turn now to some items that are specific to  
13 my client, NCA.

14 Now we know as a starting point in the law the State  
15 Engineer's decision is considered prima facie correct. That's  
16 our point of departure in this proceeding.

17 Now, NCA has argued specific deficiencies in terms of  
18 substantial evidence in the State Engineer's decision to  
19 include the area encompassing NCA's production wells in the  
20 superbasin. That put the onus on the State Engineer to  
21 essentially rebut that, to point you to citations in the  
22 record, the substantial evidence, the best available science in  
23 the record that justify, that support the inclusion of NCA's  
24 production wells. But he didn't do it. He had his chance, and  
25 he didn't do it.



1 First, let's talk about the multiple linear  
2 regression analysis, the MLR analysis that was conducted by  
3 SNWA. As you may recall, Your Honor, NCA relied upon that in  
4 the hearing before the State Engineer because it demonstrated  
5 there was no correlation or a low correlation between water  
6 levels in the superbasin and what was going on with NCA's  
7 production wells, okay.

8 In response to that, the State Engineer had said,  
9 well, multiple experts criticized SNWA's MLR analysis, and  
10 therefore I didn't rely on it.

11 In response, not just Tuesday morning, but in the  
12 briefing, NCA said, no, that's wrong. Only two experts  
13 criticized SNWA's MLR analysis, and that criticism was limited  
14 to the application of that analysis in California Wash and in  
15 Garnet Valley, not in the Black Mountains Area.

16 But when the State Engineer came up and delivered his  
17 response, all he did was just say again many experts criticized  
18 the MLR analysis. He did not provide you to a citation in the  
19 record on appeal.

20 Your Honor, I suppose you already understand this and  
21 I -- but it's not your job to comb through the 50,000 plus  
22 pages of this record on appeal and start looking for -- you  
23 know, counting experts who are criticizing an MLR analysis.  
24 That was the State Engineer's job. And that makes sense;  
25 right? He built the record on appeal. He should be the one

1 most familiar with it, and he's the one making the argument  
2 about these multiple experts.

3           So in terms of the record, in terms of what's been  
4 presented to you, the best available science in the record is  
5 that SNWA's MLR analysis, as applied in the Black Mountains  
6 Area with regard to NCA's production wells shows no correlation  
7 or a low correlation and therefore justifies exclusion, not  
8 inclusion of NCA's production wells in the superbasin.

9           NCA also stated in its reply brief that there was no  
10 substantial evidence comprised of the best available science in  
11 the record to support the Muddy Mountain thrust fault as the  
12 basin boundary. Again, the State Engineer got up here and said  
13 there's substantial evidence supporting the Muddy Mountain  
14 thrust fault as the best boundary. But again, no citation to  
15 the record, nothing, nada, zip, zilch.

16           So these failures alone on the part of the State  
17 Engineer in this proceeding mean there was no substantial  
18 evidence for inclusion of NCA's production wells in the  
19 superbasin. That in itself, if you get past authority, which  
20 we're going to talk about as others have talked about, that in  
21 itself would entitle NCA to a remand on that question, a remand  
22 on what is the appropriate southeastern boundary of the  
23 superbasin, and does that boundary include or exclude NCA's  
24 production wells.

25           Now, the reason I have this up here is perhaps the

1 State Engineer thought that presenting this to you would be  
2 substantial evidence for inclusion of NCA's production wells,  
3 but there's a problem with that, Your Honor.

4           If you look at it, the very bottom of the map, and  
5 this is folded in half -- I'll state for the record this is the  
6 State Engineer's exhibit. It is derived from record on appeal  
7 Number 69 from pages 41982 through 41984. It's essentially a  
8 map of the superbasin, and there's several hydrographs, I  
9 believe is a term, superimposed on the map. And the hydrograph  
10 and the part of the exhibit we're interested in is the very  
11 bottom, BMDL-2, okay. That is a well, right, and the BM is for  
12 Black Mountains, and the DL is for Dry Lake, another party to  
13 this proceeding.

14           Now, the problem with that is that is not NCA's well  
15 okay. So that's one problem.

16           But the bigger problem is that well is to the west of  
17 the strike-slip fault that we talked about on Tuesday morning,  
18 Your Honor. You may recall that I presented you with a couple  
19 of slides. I presented you with Slides 17 and 20 for my  
20 presentation, and I think maybe this is a good point here.  
21 I'll go ahead and switch out. So just kind of you can see  
22 there it's BMDL-2.

23           I'm going to put a different exhibit in here. This  
24 was Slide 17, and it's from the record on appeal Number 973 at  
25 52605. And you may recall, just kind of bringing you back,

1 Your Honor, to Tuesday morning, we identified the Dry Lake  
2 regional thrust fault as this dotted black line trending  
3 southwest to northeast. And then to the right of that or to  
4 the east and south of that is the strike-slip fault. This is  
5 the one discussed at length during the hearing by NCA's expert,  
6 and we established that that arrow is not pointing to the  
7 horizontal red line. It is pointing to a dotted blue line  
8 trending northeast -- excuse me, southwest to northeast.

9 And then finally, further to the right, further to  
10 the southeast is the Muddy Mountain thrust fault, yet another  
11 dotted black line trending southwest to northeast.

12 All right. And so the significance of this is you  
13 can see the strike-slip fault, the dotted blue line. Sitting  
14 right on top of the dotted blue line is BMDL-1, okay. That's  
15 not the one we saw just a second ago on the exhibit I had up  
16 there, okay. That one is BMDL-2, all right. That is the one  
17 the State Engineer showed on that demonstrative exhibit for  
18 inclusion of the Black Mountains Area in the hydrographic  
19 basin.

20 And I'm happy to switch the slides back if you want.

21 THE COURT: No. I actually have this right here, and  
22 I'm looking --

23 MR. FLAHERTY: Perfect.

24 THE COURT: Yeah. So, yeah.

25 MR. FLAHERTY: And so here's the problem, right.

1 BMDL-2, well, sure, it justifies, you know, this is  
2 consistency, this correlation between the water levels and that  
3 well in the superbasin. It does, in fact, justify inclusion of  
4 a portion of the Black Mountains Area in the superbasin, but  
5 not the portion that includes NCA's production wells. Because  
6 right below that green dot, BMDL-1, you see the blue and the  
7 red squares. Those are NCA's production wells and monitoring  
8 wells, and they are sitting on the fault, in the fault.

9 THE COURT: Just so I'm clear, the point is that the  
10 BMDL-2 is actually within the strike-slip fault whereas BMDL-1  
11 and also the production wells sit on top of the fault?

12 MR. FLAHERTY: I can't confirm that. The point is --

13 THE COURT: Or close to it.

14 MR. FLAHERTY: The point is the BMDL-2 is to the west  
15 of the strike-slip fault?

16 THE COURT: Okay. West. Okay.

17 MR. FLAHERTY: -- which could be a boundary, right.

18 And NCA's production wells and monitoring wells are  
19 in the fault itself. I don't know where BMDL-1 is. I don't  
20 know if it's in the fault or if it's in the superbasin. I  
21 don't know.

22 THE COURT: Well, I guess you can't really tell. I  
23 mean, it looks very, very close to the fault.

24 MR. FLAHERTY: It does.

25 THE COURT: Maybe -- maybe it is a little bit to the

1 west of that. Okay.

2 MR. FLAHERTY: But apparently BMDL isn't cited on  
3 that State Engineer exhibit. Apparently they relied on BMDL-2  
4 and the hydrograph for that.

5 And then I just have another slide here, Your Honor,  
6 that makes it just a little bit -- this is Slide 20. And this  
7 is from the record on appeal.

8 Oops. So everybody can see it I'll move it a bit.

9 Record on Appeal Number 990 at 52909, okay. And as I  
10 recall -- as you may recall this was from a larger exhibit, and  
11 there was a little square that was blown up, and this is the  
12 blown up square.

13 And this just shows it to you again, Your Honor. The  
14 little red glob on the dotted blue line is NCA's production  
15 wells. And on this exhibit it shows BMDL-1 and -2 wells off to  
16 the -- off to the left and off to the west, okay.

17 And this has -- the dotted purple line is the  
18 proposed administrative adjustment to the boundary off the  
19 fault just to reflect the fact that NCA's wells are in the  
20 fault.

21 So the point of all that, Your Honor, was that that  
22 blown up exhibit with BMDL-2 in the Black Mountains Area, that  
23 is not substantial evidence comprised of the best available  
24 science in the record that would justify inclusion of NCA's  
25 production wells in the superbasin.

1           Now, and the significance of this will bring us back  
2 to Order 1309 itself, and I'm not going to try to put the  
3 slides up again, Your Honor -- or actually I guess I can use  
4 the ELMO. And just this is just a quote, a block quote from  
5 Order 1309, and you can see there --

6           THE COURT: The other way.

7           MR. FLAHERTY: Let me turn it the other way, please.

8           You can see there I highlighted Criteria Number 5,  
9 okay. And Criteria Number 5 is geologic structures that have  
10 caused a juxtaposition of the carbonate rock aquifer with low  
11 permeability bedrock are consistent with a boundary. So a  
12 geologic structure would be a fault, okay. So a fault is  
13 consistent with a boundary. It doesn't say it is a boundary,  
14 but it says it's consistent with a boundary.

15           And then Number 6, I'm going to try to paraphrase  
16 this one a little bit. It says, when there's uncertainty,  
17 right, there's information indicating a close hydraulic  
18 connection, but there's uncertainty, limited, poor quality or  
19 low resolution water data to determine the extent of the  
20 connection. It says a boundary should be established such that  
21 it extends out to the nearest map feature.

22           Well, if we extend out from the superbasin to the  
23 nearest map feature, the suggestion for the hydraulic  
24 connection is BMDL-2, as shown in the State Engineer's exhibit.

25           When we extend out, we don't go all the way out to

1 the Muddy Mountain thrust, as the State Engineer did. We go  
2 out to the strike-slip fault identified by NCA -- by NCA's  
3 expert, right. We talked about the slides, the pictures, the  
4 data. That was arbitrary and capricious.

5 And we already complained and made our case that  
6 developing the criteria after the fact was arbitrary and  
7 capricious and a violation of administrative due process, but  
8 we went a step further here in that he did not even apply the  
9 ex post facto criteria in the manner he said he would, yet  
10 another violation of the administrative due process.

11 I want to switch gears now and talk a bit about the  
12 Humboldt River and Assembly Bill 51. And don't worry I'm not  
13 going to get into -- I'm not going to tell you all about the  
14 Humboldt River. I really want to talk more about the failure  
15 of AB51.

16 It was interesting SNWA relied on a United States  
17 Supreme Court case for the proposition that you shouldn't read  
18 too much into the legislature's failure to enact a bill. But,  
19 of course, in the context we're in here, the United States  
20 Supreme Court, that's just persuasive authority. That's just a  
21 bunch of -- another bunch of judges, right, who have an  
22 opinion, right.

23 I found a Nevada Supreme Court case. I'm going to  
24 have trouble pronouncing the name here. It's Salaiscooper --  
25 S-a-l-a-i-a-s, Cooper -- versus the Eighth Judicial District



1 Court. 117 Nevada 892, and I'll say right now, Your Honor,  
2 it's not right on point, but I'll tell you about it, and it's  
3 more persuasive because it's our Supreme Court opining on the  
4 significance or not of failed legislation here in Nevada.

5 In that case, the appellant contended that the  
6 legislature's failure to pass a particular bill reflected the  
7 legislature's intent, okay. The Supreme Court said, no, it  
8 didn't, okay. So these Supreme Court disagreed with the  
9 appellant. But it said no. The reason the Supreme Court said  
10 no is because the legislature had not considered the bill. In  
11 other words, a bill was put in in front of the legislature, but  
12 then the sponsor of the bill pulled it, and the legislature  
13 never got a chance to consider it.

14 Well, that's not the case here. The Nevada  
15 Legislature did consider the bill in a lengthy committee  
16 hearing, and that's a committee where the bill died.

17 Now, I'm paraphrasing here. I'm not a stenographer.  
18 SNWA referred to that -- to AB51 or that hearing as a mess or a  
19 fiasco, and I just want to put a pin in that because I'm going  
20 to come back to it, okay.

21 So the *Salaiscooper* case stands for the proposition  
22 that legislative intent can be inferred from the legislature's  
23 failure to pass a bill after considering it, which it did in  
24 this case. The inference here as argued by NCA is that the  
25 legislature is not ready for conjunctive management. And I

1 think I made some arguments like that on Tuesday morning as  
2 well.

3 I want to talk now about the comment that the  
4 petitioners --

5 THE COURT: We'll let me -- so let me just ask you a  
6 question because, you know, you're talking about AB51.

7 MR. FLAHERTY: I am.

8 THE COURT: So, you know, as many bills are, many  
9 bills have different components to the bill, and that bill may  
10 fail for any number of reasons based on smaller components of  
11 the bill. How would a Court be able to look at a bill with all  
12 these other different kinds of components to it that may have  
13 ended up killing the bill to make a decision whether or not the  
14 legislative intent had to do with this portion or that portion  
15 or another portion? Do you see what I'm saying?

16 MR. FLAHERTY: I do. I understand, and I'm going to  
17 answer your question, but I'm going to start by encouraging  
18 you -- I know you have a lot of reading to do, but I would  
19 encourage you to take a look at the bill because it's only six  
20 pages.

21 THE COURT: Which is small.

22 MR. FLAHERTY: Right. And better yet, it's --

23 THE COURT: But how long is the testimony?

24 MR. FLAHERTY: Well, there's only about a page.  
25 There's only about a page of new text in the bill, and I'm

1 going to get back to that.

2           The testimony is basically a parade, and it's been a  
3 while since I read the legislative history myself, but I think  
4 there may have been already presentations, but it was a parade  
5 of people coming in in opposition, people with interest in the  
6 Humboldt River, Humboldt River Basin. And, you know, we can  
7 only speculate, right. And I would submit that's why the bill  
8 failed.

9           But to me that's a signal, especially after the State  
10 Engineer says, the (indiscernible) said to the legislature,  
11 hey, what you did in 2017 was helpful, right. That was the  
12 policy statement about conjunctive management. But he says I  
13 don't have the tools. I don't have what I need to move  
14 forward. He made it very clear. But then apparently these  
15 folks all came in, and the legislature said, well, whether you  
16 have the tools or not, we're not doing it.

17           THE COURT: Well, but that isn't fair to the Nevada  
18 State Engineer for me to speculate about what the legislative  
19 intent wasn't?

20           MR. FLAHERTY: What the legislative intent wasn't?

21           THE COURT: Right. Because you're saying that  
22 because -- well, I guess I should say because your argument is  
23 that this case stands for the idea that failure shows the  
24 legislative intent. And you said we can only speculate really  
25 as to why it sort of failed. So is that really a sound basis

1 for me to look at to see the legislative intent in not passing  
2 that bill?

3 MR. FLAHERTY: I think maybe we take one step to the  
4 left or the right here.

5 THE COURT: Okay.

6 MR. FLAHERTY: And instead of looking at it strictly  
7 in terms of legislative intent, we look at it in context  
8 because, I mean, the real reason I wanted to tell you about  
9 AB51, and I did, is because of what the legis -- excuse me,  
10 because of what the State Engineer said.

11 THE COURT: What his testimony was.

12 MR. FLAHERTY: He said he didn't have it, right. And  
13 we didn't get to 1329 on Tuesday. I'm not going to transgress  
14 your -- you partially sustained an objection from the State  
15 Engineer. I'm going to bring this up to the edge of that  
16 objection in a little bit and then stop, but --

17 THE COURT: So and let me just be clear. So the AB51  
18 really had to do with conjunctive management; correct?

19 MR. FLAHERTY: Right.

20 THE COURT: Okay. But so then do you disagree that  
21 in the legislative declaration that that implicitly gives him  
22 the powers to conjunctively manage and that there's previous  
23 case law that shows that he can -- that he has to consider  
24 conjunctive management?

25 MR. FLAHERTY: No, I wouldn't concede that, Your

1 Honor.

2 THE COURT: Okay.

3 MR. FLAHERTY: I would not. Because of -- not just  
4 because of the failure of AB51, but because of what the State  
5 Engineer said himself.

6 THE COURT: Okay.

7 MR. FLAHERTY: And some of the other practical  
8 realities we've been discussing in this case, and we're going  
9 to talk about that more today, the separation of powers and  
10 things like that. So I think I started that point on relating  
11 back to a blinders comment that the parties here are asking you  
12 to put blinders on and ignore the science.

13 To the contrary, I think the State Engineer and  
14 intervenors on his behalf are asking you to put blinders on  
15 with regard to the reality of AB51 and what was going on up in  
16 the Humboldt River basin in connection with AB51.

17 And I already encouraged you to take a look at AB51.  
18 I told you it's just about a page of text. And here's the  
19 important thing. When you look at that page of new text, it  
20 says nothing about the Humboldt River. It's plainly not  
21 limited to the Humboldt River, which is one of the things that  
22 was represented to you, Your Honor. They said, oh, this has  
23 nothing to do with the Humboldt River. That was a unique case.  
24 That has nothing to do with what's going on here in the Muddy  
25 River basin, but that's not what you're going to see if you

1 look at the text of AB51. It would've applied in the Humboldt  
2 River and related basins, the Muddy River and related basins.  
3 It would've given the State Engineer the tools he said he  
4 needed to go forward with 1309, but he didn't get them.

5 So that brings us up to Order 1309 -- excuse me 1329,  
6 and the objection you sustained in part from the State  
7 Engineer.

8 And you said you were -- you mentioned the *Mack* case,  
9 right.

10 THE COURT: The judicial notice.

11 MR. FLAHERTY: Yeah. So I went ahead, and I took a  
12 look at the *Mack* case that evening I believe. The citation for  
13 that is 125 Nevada 80. And I looked at -- I focused really on  
14 pages 91 to 92.

15 And just so there's no surprises, I'll state that the  
16 case was abrogated, but it was abrogated on other grounds. So  
17 it's still good law for the proposition we're debating here.  
18 And indeed, the general rule, as stated in that case, is  
19 Court's don't take notice of the record in a different case  
20 even if that different case is connected. That is, in fact,  
21 the general rule; however, the Court said, like any good  
22 judicial rule, it's flexible in its application.

23 THE COURT: Right. I mean, if it's closely  
24 connected.

25 MR. FLAHERTY: And we're going to parse words; right?

1 THE COURT: Yeah. But then who defines closely  
2 related; right?

3 MR. FLAHERTY: Right. So the Court said under some  
4 circumstances it will take judicial notice of records in  
5 another case, and the Court said, well, to determine whether or  
6 not there's an exception to the general rule, you have to  
7 examine the closeness of the relationship between the two  
8 cases.

9 THE COURT: Right.

10 MR. FLAHERTY: In the *Mack* case, it was Darren Mack's  
11 murder conviction. I guess that's case A.

12 So you're familiar with the facts.

13 THE COURT: Oh, I'm familiar with the facts, yes.

14 MR. FLAHERTY: Okay. So --

15 THE COURT: We get a lot of preaching about judicial  
16 safety based on that case.

17 MR. FLAHERTY: Oh, that's right. I forgot about that  
18 part of the case.

19 So back to the objection into 1329. Now Slide 2 from  
20 my presentation on Tuesday was already in the record. I've  
21 already put in the record, and I read it to you, and then the  
22 objection came up and was partially sustained. And so I'm not  
23 going to run afoul of your objection -- of your ruling just by  
24 repeating the only thing we talked about in Slide 2, which was  
25 just the title of Order 1329.

1 And the title of Order 1329 is --

2 MR. BOLOTIN: Your Honor, objection. The title is  
3 part of the exact -- this is James Bolotin for the State  
4 Engineer.

5 The title is part of the same document, and this *Mack*  
6 *V Mack* situation is -- I think your ruling, Your Honor, might  
7 be law of the case at this point. It's been ruled on on  
8 multiple judicial notice requests up to this point. And a key  
9 part of your rulings in those decisions was that you couldn't  
10 put stuff in that came after Order 1309. Order 1329 came after  
11 1309.

12 THE COURT: That is correct.

13 So here are the issues with me even considering 1329.  
14 Mr. Bolotin is right. It came after the record on appeal in  
15 this case.

16 Two, I don't find that they are closely enough  
17 connected under *Mack v. Mack*, and I will tell you why. Under  
18 *Mack v. Mack*, I think that case actually had to even do with  
19 two cases that were within the same jurisdiction. And they  
20 were very closely connected. They actually had to do with the  
21 same person. So I think one had to do with a civil case and  
22 one had to do -- or I mean the family case, and one had to do  
23 with the criminal case.

24 In this case you're talking about a case that's out  
25 in Humboldt County, which is a completely different



1 jurisdiction than our -- or not jurisdiction, different  
2 District Court, and it -- while it may involve the same type of  
3 legal argument, I don't find that the facts are so closely  
4 connected that I can take judicial notice of it.

5 MR. FLAHERTY: Well, Your Honor, I just -- I don't  
6 want to -- I certainly don't want to debate with you, but, I  
7 mean, the facts are physics, science, and if the state of the  
8 law can be a fact, that's a fact as well. I mean, there --  
9 things don't change. It's --

10 THE COURT: I mean, I can't even take judicial notice  
11 of, you know, cases that are in my own Odyssey system. You  
12 know, in order to make decisions, and I think, you know, even  
13 if it's like a, for example, you know, I've got a -- if I have  
14 a civil commitment case and I'm looking at the family court  
15 case, I don't necessarily -- I don't necessarily have the  
16 ability to take judicial notice of -- or actually I'll give you  
17 a better example.

18 I had a criminal case, a criminal case where the  
19 charges were child abuse and endangerment. There was a family  
20 case for termination of parental rights. I was not allowed to  
21 consider the termination of parental rights case in the child  
22 abuse and endangerment case, and it became relevant because --  
23 and I could not look myself independently in that case to see  
24 what was happening regarding the trial in the termination of  
25 parental rights case, not to find the facts of that case, but

1 just to know when it was happening because I was planning on  
2 having the defendants in my court get remanded.

3 So the instruction was that I was given from my chief  
4 because of the *Mack v Mack* case is that it is only if the  
5 criminal defense attorneys actually bring it up to me as their  
6 information to me. So I can't independently look even though  
7 it's involving the same two people and that -- so that is the  
8 kind of close connection that even under those circumstances I  
9 think I have to be very, very careful about.

10 And I think if you're talking about physics and  
11 science, I just don't find that that's quite close enough for  
12 me to be able to take judicial notice of that.

13 MR. FLAHERTY: Let me try it a little bit  
14 differently.

15 THE COURT: Okay.

16 MR. FLAHERTY: I promise you I won't spend all  
17 afternoon on this.

18 THE COURT: No problem.

19 MR. FLAHERTY: Well, first of all, 1329 is not a --  
20 it's not a District Court case, right. It's --

21 THE COURT: It's an order I guess.

22 MR. FLAHERTY: It's an order, right.

23 THE COURT: Which makes it even less so.

24 MR. FLAHERTY: Well, it's an order from an  
25 administrative agency. It's an order from an administrative

1 agency that is a party to this proceeding, okay.

2 THE COURT: And it still came after the record on  
3 appeal in this case. So I don't think it's really something  
4 that I can --

5 MR. FLAHERTY: All right. And just I will -- I won't  
6 run afoul of the objection. I just want to kind of preserve my  
7 point on the record.

8 THE COURT: Absolutely.

9 MR. FLAHERTY: If you were so inclined to revisit  
10 this later and change your mind, Your Honor, I would simply ask  
11 that you look at pages 6 through 7 of Order 1329, specifically  
12 the whereas paragraph that starts at the bottom of page 7 and  
13 carries over to the top of page 8 and consider what's stated  
14 there in the context of the issues before this Court and the  
15 State Engineer's testimony before the legislature in 2009  
16 regarding AB51.

17 And with that, I am happy myself to move off of 1329.

18 THE COURT: Okay. Thank you.

19 MR. FLAHERTY: I want to turn now to the State  
20 Engineer's authority. And I'm paraphrasing you now, Your  
21 Honor, but I believe you said from the bench perhaps more than  
22 once on this question of authority, I need you to spell it out;  
23 I believe is what you said, okay. But the State Engineer and  
24 their intervenors, and what you were asking to spell out was  
25 the authority to do the superbasin with conjunctive management,

1 but they failed.

2 Now, they're pushing really hard on the argument that  
3 the superbasin as a basin and the boundaries thereof is a fact  
4 issue. It's a science issue, right. Maybe. Okay, let's say  
5 we're going to give them that. If we give them that, that  
6 doesn't change or resolve the legal issue which is, does the  
7 State Engineer have authority to form this superbasin and  
8 engage in conjunctive management. That's a question of law,  
9 and you get your shot at that *de novo*, Your Honor.

10 And we've talked about a lot with statutes cited by  
11 the State Engineer and intervenors. We heard about  
12 533.024(1)(e), which the State Engineer has now informed us is  
13 just a lens that the legislature wants the State Engineer to  
14 look through. Well, whatever that means, a lens, that doesn't  
15 equate to authority to engage in conjunctive management.

16 We heard about the Muddy River Decree. We heard  
17 about 533.0245. That statute says it prohibits the State  
18 Engineer from impairing the Muddy River Decree, which makes a  
19 lot of sense because he's just an administrative agency, and  
20 that's a decree from the judicial branch. So he's prohibited  
21 from impairing that. But you cannot equate a prohibition on  
22 the one hand with authority on the other. The fact that you  
23 can't do this, the fact that you can't do A doesn't give you  
24 authority to do B. That's a non sequitur.

25 And the same can be said with regard to the

1 Endangered Species Act. The State Engineer -- I think we've  
2 heard testimony from CBD that, you know, prohibited from  
3 engaging in a take, right. They cannot do a take. Again  
4 though, the fact that you can't do a take doesn't equate to  
5 authority for conjunctive management.

6 And on that point, the State Engineer derives power  
7 from an express grant from the Nevada Legislature. He derives  
8 zero authority from the United States Department of Fish and  
9 Wildlife. He derives no authority from the United States  
10 Congress.

11 Now, don't get me wrong. With regard to the  
12 Endangered Species Act, we understand that the State Engineer  
13 has real and valid concerns regarding the Moapa dace, regarding  
14 what might happen if the federal government decides to get  
15 active. But concerns or fear, that's not a source of  
16 authority. The State Engineer doesn't derive authority from  
17 fear. No administrative agency does. He needs to express the  
18 concerns to the legislature, right.

19 Now, this brings me back to something I put a pin in  
20 earlier, the comment that AB51 -- it was a fiasco, okay. And I  
21 want to be careful with what I say here. I'm going to say  
22 something. I'm going to quickly kind of qualify it and put it  
23 in context: That's disrespectful to the legislature. Now,  
24 context. That's not a potshot at SNWA, you know. When I say  
25 disrespectful, I'm speaking in terms of the separation of

1 powers, okay.

2 We've got three coordinate branches of government,  
3 okay. The State Engineer is not a branch of government.  
4 Unless he's a twig. I don't know. There's three branches of  
5 government, right. And so it's not for the State Engineer to  
6 second-guess the legislature, okay. The State Engineer doesn't  
7 get to second-guess the legislature. The Governor can. The  
8 Governor has a veto. Court's don't really second-guess the  
9 legislature, but sometimes Court's intervene because the  
10 legislature perhaps has done something unconstitutional, but  
11 the State Engineer doesn't get to do that. It's not for this  
12 Court or the State Engineer to usurp the legislative function.

13 You know, at the outset of this hearing, Your  
14 Honor -- I want to hit a couple of points here.

15 I said that the State Engineer had created a  
16 situation where the irresistible force was colliding with the  
17 immovable object. Senior groundwater rights. Senior surface  
18 water rights or vice versa, right.

19 I want to use a different kind of visual now. I want  
20 to talk about that old expression the square peg in the round  
21 hole, okay. The round hole is the Muddy River Decree, right.  
22 It came around in 1920, right, 1920. There was water coming  
23 out of the ground and making a river. Nobody didn't spend a  
24 lot of time figuring out, hey, where the heck does that water  
25 come from? They were, like, wow, water. Let's get it, right.

1 Let's get it, you know, and we wound up with the Muddy River  
2 Decree. That's the round hole.

3 The square peg is reality. It's where we are today,  
4 Your Honor. We've got multiple groundwater users. You heard  
5 testimony about technology, population growth. You know, now  
6 we're getting water from the ground in the areas surrounding  
7 the Muddy River. And for purposes of this case, we're talking  
8 about 1100 square mile area. So things have changed, okay.

9 We've also heard a lot of talk about you're the  
10 decree court. You're the decree court. Now, although they're  
11 telling you you're the decree court, you're the decree court,  
12 and even though this decree originally came from this Court  
13 apparently, they're also telling you that you have no authority  
14 to change it either, right. The State Engineer can't change  
15 it. You can't change it. I guess the implication here might  
16 be nobody can change the Muddy River Decree. And maybe there's  
17 some heads nodding behind me, like, oh, yeah, right. Yeah.  
18 Right.

19 Okay. So let's proceed. Let's proceed on this  
20 basis. We heard this morning about a tentative settlement  
21 agreement among MVIC, SNWA and the State Engineer. And  
22 apparently under this tentative settlement agreement, you, as  
23 the decree court, are going to appoint a watermaster or a  
24 special master, and that special master is going to be the  
25 State Engineer who of course has already reached an arrangement

1 of sorts, tentatively reached an arrangement of sorts with MVIC  
2 and SNWA.

3 Now, Your Honor, I don't know if you use special  
4 masters a lot. I don't. I don't have a lot of familiarity  
5 with them.

6 THE COURT: So, I mean, the Eighth Judicial District  
7 Court does use special masters for specifically, you know,  
8 large cases, complicated discovery issues, things like that.

9 MR. FLAHERTY: Right. So my understanding then is a  
10 special master is essentially your proxy; right?

11 THE COURT: Correct. So usually they do -- they  
12 would make some sort of reports and recommendations that I  
13 would approve. So it's kind of like a hearing master. So we  
14 have lots of hearing masters, and I was a hearing master. So  
15 we do either a report or recommendation -- well, mostly it's a  
16 report and recommendation that is then approved by the Court,  
17 the District Court that oversees that special master.

18 MR. FLAHERTY: And I'll just speculate, Your Honor,  
19 that you were a hearing master because the Judge who appointed  
20 you thought you were reliable, a smart person, someone that can  
21 be counted on.

22 And so now if this settlement goes through, and, of  
23 course, this settlement presupposes that you haven't completely  
24 invalidated Order 1309 for lack of authority. But suppose this  
25 settlement goes through. So by appointing the State Engineer



1 as your special master, you're saying, okay, I'm comfortable  
2 with the State Engineer being my proxy. I have faith. I don't  
3 think he's in any way compromised and impartial of objectivity  
4 in this situation.

5 So let this -- so stop right there for a second, and  
6 now let's go back to 1920. Right. None of these -- well, I'm  
7 not going to say none of the petitioners because we have these  
8 intervenors and quasi-petitioners here, but so NCAA, of course,  
9 was not a party in 1920 in the Muddy River Decree, right.

10 So going back to this round hole, I guess the best  
11 analogy I can come up with is that the groundwater users in  
12 this new superbasin are essentially the equivalent of people  
13 who are, quote, unquote, stealing water, right. They don't  
14 have a decreed right, but they're intercepting this water.  
15 They're taking this water. And so it's like they're stealing  
16 water.

17 And, in fact, you saw a slide the other afternoon  
18 from SNWA I believe. They filed a notice of alleged violation  
19 with the State Engineer. And they said every groundwater user  
20 in the superbasin is stealing our water. Okay.

21 So now we're all going to go to the special master.  
22 All right. I know what I'm going to say when I get accused, my  
23 client is going to say when I get accused of stealing  
24 groundwater. I'm going to say, Judge, Your Honor, what are you  
25 talking about? You told me I could have that water. Well, how

1 is that going to work, Your Honor? They're trying to jam a  
2 square peg into a round hole, and it's not going to work.

3 But it works for them, of course, and I don't fault  
4 them. Water is a scarce precious commodity. They want every  
5 molecule they can lay their hands on, okay. But it's not their  
6 water. I understand it's not my client's water either. It's  
7 just not their water, and they keep on talking about the Muddy  
8 River Decree and how it can't be fixed -- excuse me, can't be  
9 changed. You can't change it. The State Engineer can change  
10 it.

11 Well, you know why they don't want to go back to the  
12 legislature, Your Honor, because the legislature can change the  
13 Muddy River Decree. The water belongs to the public. As  
14 counsel for Dry Lake reminded you, it belongs to the public,  
15 and the legislature represents the public, okay.

16 So this is an attempt to evade an inconvenient  
17 meeting with the legislature. I think inconvenient is an  
18 understatement.

19 So I've digressed a little bit, Your Honor, and just  
20 on that point, just the idea that my client is having to  
21 explain itself to a hearing master about why it's using water  
22 when the hearing master is the person, entity that said you  
23 could use the water, we're entering the theater of the absurd  
24 at that point.

25 But I want to continue with the discussion of

1 authority.

2           You heard about 534.110, sub 6. That's the authority  
3 you investigate. That doesn't equate to the authority to  
4 engage in conjunctive management.

5           534.110, sub 2, sub b, authority to engage in pump  
6 testing does not equate to the authority to engage in  
7 conjunctive management.

8           I believe Dry Lake covered 533.430, sub 1, and  
9 534.020, sub 1, the 533 statute being surface water and 534  
10 being groundwater. But those basically stand for the  
11 proposition that you got to protect existing rights. Well,  
12 Order 1309 does not protect existing groundwater rights. It  
13 guts them.

14           533.120 and 534.120, that was rule-making. But as  
15 you, yourself, observed, Your Honor, it's only rule making in  
16 furtherance of express powers conferred by law, by the  
17 legislature. We don't have that here.

18           534.030, that's an administration of a designated  
19 basin. That's no help because this is not about the State  
20 Engineer designating a basin. It's about creating a superbasin  
21 for purposes of conjunctive management.

22           We even heard a citation from the Water Words  
23 Dictionary. That's the State Engineer's own document. He  
24 can't rely on himself for authority in this context, Your  
25 Honor.

1           The arguments from the State Engineer and the  
2 intervenors in terms of statutory authority is the statutory  
3 equivalent, I guess, of throwing a bowl of spaghetti against  
4 the wall and hoping something would stick, right. The noodles  
5 are the different statutes, okay.

6           But it's just a big mess.

7           Now that's the way I've described it.

8           SNWA described it in much loftier terms, as a mosaic  
9 of power. Cue music, please.

10          Okay. Well, I -- you know, at least a mosaic I guess  
11 is typically made of tiles. That might be something solid, but  
12 that's not the case here.

13          Really what we're talking about is a house of cards,  
14 okay. It's a flimsy legal argument constructed on the gossamer  
15 threads of wishful thinking. Order 1309 is invalid. It's an  
16 invalid exercise of conjunctive management that the State  
17 Engineer does not have the authority to do. He couldn't get it  
18 from the legislature. He still doesn't have it.

19          Your Honor, I'm happy to be redundant now, and thank  
20 you for your patience, your diligence and your careful  
21 attention and consideration.

22          THE COURT: Okay. All right.

23          So next we've got Georgia-Pacific.

24          Mr. Foletta.

25          MR. FOLETTA: Yes. Thank you.

1           **ARGUMENT FOR GEORGIA-PACIFIC AND REPUBLIC ENVIRONMENTAL**

2           MR. FOLETTA: Thank you, Your Honor. Lucas Foletta  
3 for Georgia-Pacific and Republic.

4           I think the case has been pretty well argued at this  
5 point on both sides. That said, I do want to make a few points  
6 in a few different areas just to mainly respond to some things  
7 we've heard from the State Engineer and parties supporting the  
8 decision on the last phase of the case.

9           The first area I want to talk about, really, is the  
10 standard of review. There's been a lot of discussion about it.  
11 What I want to talk about is really what seems to be the State  
12 Engineer's principal defense of his evidentiary findings. What  
13 you see in his brief and what you hear in the argument a lot is  
14 that obviously he's entitled to peak deference. These are  
15 highly technical decisions. He proposes that there's sort of  
16 this spectrum of deference on which this case sits at the  
17 highest deferential end of the spectrum and that you should  
18 refrain from evaluating the evidence substantively. That's not  
19 how substantial evidence works, and if it was there wouldn't be  
20 a substantial evidence standard because you wouldn't be doing  
21 anything other than deferring to the State Engineer's factual  
22 findings.

23           We've said it a couple of times, more than a couple  
24 of times that the substantial evidence standard requires the  
25 Court to determine whether a reasonable mind would accept the

1 evidentiary basis of the State Engineer's decision as adequate.  
2 That does not mean that -- that does not -- what the State  
3 Engineer proposes, that essentially he can weigh evidence of  
4 one party more than another, he can be persuaded by whatever he  
5 finds to be persuasive, and that not being persuaded by  
6 someone's evidence is not a legal failing, it's just his  
7 decision not to be persuaded by that evidence. But that  
8 doesn't satisfy the substantial evidence standard because the  
9 question remains.

10           And what the function of the Court is is to determine  
11 that whatever the basis of the State Engineer's decision was  
12 must be -- must meet the objective standard of a reasonable  
13 person who is looking at the same evidence. And that  
14 reasonable person -- you have to decide that a reasonable  
15 person would have deemed that evidence to be adequate. That  
16 means you have to look at the evidence. You have to do your  
17 best to understand what the State Engineer was thinking, why  
18 they were evaluating the evidence they were, why the State  
19 Engineer was persuaded by what he was persuaded by, and you  
20 have to look at that in the context of the record as a whole.

21           The idea of deference is that -- and it's kind of  
22 slippery. It's hard to decide what that actually means when  
23 you're talking about substantial evidence. But what the Nevada  
24 Supreme Court has said in *Wilson v. Pahrump*, which is the case  
25 that the State Engineer cites for this proposition of kind of

1 peak deference, is that the deference owed is in relation to  
2 the rule that the reviewing court is not to substitute its  
3 judgment for that of the State Engineer. What that means is  
4 it's not your job to decide whether the State Engineer was  
5 right or wrong, it's your job to decide whether there is a  
6 legitimate basis for the State Engineer to have made the  
7 decision that he did. And that's where the notion of arbitrary  
8 and capricious in this comes in.

9           The reason I bring that up is I just want to talk  
10 about a few pieces of evidence that we haven't talked about in  
11 relation to the standard and give you a sense of how I think  
12 you can go about looking at the record. So we have talked in  
13 our briefs and other people have about the idea that some of  
14 the evidence that was presented to the State Engineer was not  
15 of a sufficient quality to allow him to reach the decisions he  
16 reached about the relationship of the basins and the pumping  
17 levels. And Ms. Peterson had talked about this, too. You  
18 know, there was evidence put in by Vidler at the hearing about  
19 the difficulty of measuring water levels in wells. You know,  
20 you heard about transducers and so forth.

21           There was also evidence put in at the hearing from, I  
22 believe it was North Las Vegas, that talked about the impact of  
23 barometric pressure on water levels and that what your  
24 barometric pressure is could have an impact on what your water  
25 levels are. The idea is that this is another factor that could

1 lead to a lower water level; something other than just the  
2 pumping going on. And so that raises the question of  
3 whether -- what was actually the cause of water levels  
4 changing.

5           We at the hearing also talked about the fact that  
6 there were disparate measurement techniques used to measure  
7 some of these water levels, groundwater levels and so forth.  
8 And that because those disparate measurement techniques were  
9 not calibrated to one another, it wasn't -- you couldn't  
10 reach -- you couldn't rely on the data because it wasn't clear  
11 that the data was measuring the same thing in the same way.

12           These are all faults that undermine the credibility  
13 of the evidence that the State Engineer relied on. And it is  
14 appropriate and, in fact, it is required that you look at that  
15 evidence that was put into the record as to the credibility of  
16 the evidence he relied upon and make a determination as to  
17 whether it was reasonable to rely on that evidence. That is  
18 the type of evidentiary review you should undertake.

19           You can do other things, too. It's not -- you know,  
20 a reasonable person wouldn't conclude that there is a rational  
21 basis to reach a particular factual conclusion if there's one  
22 fact in favor of that conclusion and a thousand facts against  
23 it; right? So the weight of the evidence is something else you  
24 can look at. And so you have a lot of tools at your disposal.

25           It is not an attractive task, but it is something the



1 Court has to do. And I'm not suggesting you're not going to do  
2 it and don't want to do it, but I do think the way that the  
3 standard has been talked about suggests that you're not  
4 supposed to do a review of that kind at all, and that's not the  
5 case.

6 The next area I want to talk about is the due process  
7 concerns that we've raised and that have been discussed. So we  
8 raised due process concerns, as we've talked about before, in a  
9 number of different -- or with respect to a number of different  
10 aspects of the case. Principally, our due process concerns  
11 relate back to the notice provided in the case. You know, I  
12 don't know Your Honor's career chronology, I don't know how  
13 much administrative law experience you have. Certainly you  
14 obviously have experience with notice.

15 THE COURT: Absolutely zero. I was a criminal  
16 defense attorney before this.

17 MR. FOLETTA: Okay. Well, perhaps something like  
18 criminal law, notice is a -- is the fundamental due process  
19 consideration, generally.

20 THE COURT: So as a criminal defense attorney, I am  
21 very familiar with due process.

22 MR. FOLETTA: Right. But in the context of  
23 administrative law, what's so important about notice is that  
24 unlike, perhaps, in a court proceeding, whenever a government  
25 agency, in particular the State Engineer, is going to undertake

1 a particular action, there's a requirement that they provide  
2 the public with notice; right? And sometimes the nature of the  
3 notice depends on the nature of the action, but the fact is  
4 that every consequential government action of the type that  
5 we're talking about here is initiated with a notice.

6           You know, I don't want to call it an antiquated  
7 requirement because it's not, but sometimes you could view it  
8 as impractical because, you know, how many people are running  
9 around the State Engineer's office checking bulletin boards to  
10 see if something is going to potentially happen to them. But  
11 that notwithstanding, the law is crystal clear that notice is  
12 an essential requirement of due process as it relates to  
13 administrative proceedings like this.

14           The thing that's important to keep in mind about  
15 notice, and I think this is a general principle that is kind of  
16 in response to some of the things we've heard about this  
17 argument, is that the harm associated with failing to properly  
18 notice an administrative proceeding is presumed and that's  
19 because the harm occurs with respect to the public generally.

20           Notice is very much about the person who's not at the  
21 proceeding, not so much the people who are there, right,  
22 because there's a lot of professional people here who watch  
23 this stuff, who show up to State Engineer proceedings all the  
24 time, keep an eye on things and will be there potentially  
25 whether there's an appropriate level of notice or not. But

1 there's a lot of people who don't, and so the protection that  
2 notice affords is for the public generally.

3           So if there is a deficiency in the notice, it cannot  
4 be cured because, you know, all the same players who show up at  
5 all the State Engineer proceedings showed up at this hearing  
6 and should have had a pretty good idea about what was going on.  
7 That doesn't work. If the notice was bad, the notice was bad,  
8 and the case has to be vacated, as we've talked about before.

9           The reason I'm bringing that up principally is in  
10 response to the argument of the other side, for example, with  
11 respect to the criteria, the six -- the criteria of six. I  
12 think it was Mr. Taggart who suggested that, well, the criteria  
13 shouldn't have been a surprise to anybody. This is the type of  
14 criteria anybody who's looking at this type of data or trying  
15 to make this type of decision would rely upon. And so -- and  
16 everyone was there at the hearing. You knew we were having a  
17 hearing on 1303 so, you know, you had your opportunity to put  
18 evidence in and, you know, you should have known where this was  
19 heading. That kind of goes to my point, which is that it's  
20 irrelevant what people who were at the hearing knew or should  
21 have known about what the criteria was or was not going to be.

22           *Southwest Gas* and *Dutchess* are very clear that the  
23 State Engineer has to give notice to the public of the factual  
24 basis that the decision will be relied upon, and in this case  
25 that did not happen. I was just going to read the paragraph

1 that kind of makes that point, which is that -- this is in  
2 Order 1309 where the State Engineer is talking about the  
3 criteria and he says, quote, "The State Engineer has considered  
4 this evidence and testimony." He's talking about the evidence  
5 regarding consolidating the basins. He says,

6           On the basis of a common set of criteria  
7           that are consistent with the original  
8           characteristics considered critical and  
9           demonstrating a close hydrological connection  
10          requiring joint management in Ruling 6254 to  
11          6261, and more specifically including the  
12          following.

13          And then he lays it out. The point here of reading  
14          that quote is that the State Engineer was clearly articulating  
15          the criteria on the basis of his review of the evidence after  
16          the fact. He wasn't articulating a criteria that everyone  
17          should have known was taking place. It was the product of  
18          thought.

19          The other way we've raised notice was just in  
20          relation to the fact that it's our contention that a management  
21          and policy decision was made in this case, in particular the  
22          decision to consolidate the basins and subject them to  
23          conjunctive management and joint administration. The principal  
24          rebuttal to that is that really didn't change anything. You  
25          know, when we subjected these basins to conjunctive management

1 and joint administration, effectively removing the basin lines  
2 from the map, you know, that didn't -- affect is my term, a  
3 cognizable injury on new water rights holders in those basins  
4 because the State Engineer hasn't taken the next step to  
5 actually engage in additional management of the basins that  
6 might affect you differently now because you don't have the  
7 same priority you had when we were doing this basin-by-basin.

8 I think Mr. Robison talked about this really well  
9 when he talked about the affect of the order on his client. So  
10 he talked about the subdivision map and being shut down, you  
11 know, his client's project being shut down and that 1309  
12 effected a clear and concrete, you know, deprivation on his  
13 client in that way.

14 My clients are a little differently situated but  
15 they're no less harmed by the action the State Engineer took in  
16 1309, which is to say I think it's misleading to suggest that  
17 just because the next step hasn't been taken, you haven't  
18 already been deprived of something, because water rights  
19 holders clearly have -- a water right is a paper right. It  
20 is -- but notwithstanding that it's a paper right, it's still a  
21 property right, as we've heard many times. So it's the same --  
22 it's a bundle of sticks like every other property right. But  
23 very much because a water right is a property right, it very  
24 much is the legal attributes that make up the right.

25 And so property rights, if you have a piece of

1 property, say a piece of land, you can sell it; you can build  
2 on it; you can not do anything with it; you can hold onto it.  
3 Property rights -- or, excuse me, water rights are the same.  
4 You can sell it. You can ask the State Engineer if you can  
5 pump. You can move the water from one place to another. You  
6 can make decisions about how to run your business based on what  
7 you think you can do with the water, what your options might  
8 be. The point is that the attributes of the right are the  
9 things you can do with it in the context of the legal framework  
10 that governs it. So the legal framework that governs it in  
11 part is based on prior appropriation.

12           Obviously, when you change the way that the State  
13 Engineer is going to address any request you might make in  
14 connection with your right, meaning if you change the framework  
15 or the backdrop that is going to frame his decision whether to  
16 allow you to pump or not, allow you to move your right or not,  
17 you have affected a change to the right. Right? You've made  
18 it different than it was before. And so just because they  
19 haven't come in with a second step and decided who's going to  
20 get water and who doesn't doesn't mean that nothing yet has  
21 happened. Clearly very much has happened.

22           People who are now in the position that my clients  
23 are, having to make decisions about where they're going to get  
24 the water, are they going to be able to get water, can they  
25 grow their business here, do they need to move, there are all

1 sorts of considerations now they have to make because the  
2 nature of their right changed. That is a -- you know, was  
3 proximately caused by 1309. And I think if you listen to some  
4 of the intervenors, they actually make that point for us.

5           You hear the -- like the Church, NV Energy, their  
6 kind of take is like, well, you know, if you hold on to water  
7 rights long enough in Nevada there's going to be some bumps in  
8 the road and what you've really got to understand is that all  
9 that really matters is how old is the right relative to every  
10 other right that comes after you, not just the ones in your  
11 basin.

12           But everybody on this -- you know, I'm going to  
13 regret this, but a new mega-list of water rights that is now  
14 the first water right ever issued in Nevada, and the person on  
15 the bottom is the last one. That may be conceptually accurate  
16 to some degree, but the fact is those basin lines have  
17 differentiated that list for decades. And so by changing that  
18 fundamentally, they've changed the nature of the rights that my  
19 clients hold. And consequently there clearly was an impact  
20 that gives rise to the due process consideration.

21           The other area we talked about due process in is --  
22 there's a couple and I'll go real fast. You know, Your Honor  
23 had highlighted this in some questionings. The other due  
24 process consideration was just the establishment -- or failure  
25 to notice the fact that a criteria is going to be established

1 at all. I won't talk about that, but that's just sort of a  
2 reminder that that's on the due process kind of checklist.

3 The other thing that's in our brief that I will talk  
4 about just probably for one minute is the idea that even the  
5 consideration of the Endangered Species Act and the specific  
6 impact on the dace was not noticed at all. So if you go back  
7 and you look at the notice, you've got the 1303 categories.  
8 There's nothing in there about the dace, endangered species,  
9 anything like that. There is a criteria about stream flows,  
10 but when you look at the decision the impact of stream flows on  
11 the dace is prominent. It's one of the key planks of why the  
12 State Engineer made the decision he made.

13 And again, going back to *Dutchess* and *Southwest Gas*,  
14 you've got to know what the factual basis of the decision is  
15 going to be. There was no specific notice of particular impact  
16 on the dace being at issue. And so -- or maybe not being at  
17 issue, but potentially serving as a fundamental reason why the  
18 State Engineer would take the action they did, and so there's a  
19 failing there as well.

20 The last area I really want to talk about is the  
21 question of authority. I think that the best place for Your  
22 Honor to -- or the best way to work through this is to in  
23 particular focus on the statutes that the State Engineer cited  
24 in the order; right? The statutes that the State Engineer  
25 cited in the order because there's, I think, four or so that



1 are in the section on authority. And then to consider the  
2 arguments that the State Engineer has made here as to what his  
3 authority was.

4 The principal argument that I heard or articulation  
5 of the source of authority is the idea that the State Engineer  
6 has got a duty to protect senior water rights. The State  
7 Engineer has got a duty to preserve decreed rights, or to not  
8 violate a decree, rather. The State Engineer follows the best  
9 science. That's the policy of the State. And so if the best  
10 science says that senior rights are going to be jeopardized or  
11 decreed rights will be violated in the absence of action from  
12 the State Engineer, then the State Engineer has the authority  
13 to take action and protect those rights. I think that's a very  
14 problematic view, and I'll say why.

15 But just in terms of the analysis itself, the reason  
16 I'm suggesting that you focus on the order and the State  
17 Engineer's arguments is not because I don't think other people  
18 have things to say about it, and I think people have pretty  
19 much dispatched with all these arguments. So they don't  
20 concern me.

21 But the question is did the State Engineer have  
22 authority to do what he did in this case? It's not a search  
23 and rescue mission to go out and try to find a statute, any  
24 statute, a principle, any principle that could somehow, some  
25 way be brought enough maybe to justify this action. The State

1 Engineer did what he did in this case for a reason and the  
2 question is, is the reason legitimate? Is the reason -- is the  
3 law that he provides you a basis to do it?

4           The reason I think that the way Mr. Bolotin  
5 characterized the legal basis here is so problematic is because  
6 it is -- it undermines the entire statutory scheme. And I  
7 talked about this before, but if the idea is that -- or the  
8 idea he seems to be expressing is like we've got this prime  
9 directive, we protect senior rights, we don't violate decreed  
10 rights, we follow the science. If the science says something  
11 bad is going to happen to those people, we do something. We  
12 have the authority to do something to stop it.

13           There is no rule of law that says that. There's no  
14 grant of authority that says, State Engineer, go forth and  
15 protect senior water rights. It reflects, I think, an  
16 over-generalization of the prior appropriation doctrine. What  
17 I mean by that is that we have a very specifically articulated  
18 regulatory scheme for water law. The State Engineer's  
19 authority is set forth in numerous statutes across several  
20 chapters. People have pointed out multiple times that  
21 virtually in every case or every statute that seems to be even  
22 relevant to this conversation, it articulates a basin by basin  
23 approach.

24           What the State Engineer is saying is that, well,  
25 that's all fine, that statutory scheme works as long as the

1 science doesn't tell us we need a different rule, because if  
2 the science says that basin by basin doesn't work because  
3 senior water rights will be undermined or jeopardized because  
4 of applying the rules in that way, then we get to do it a  
5 different way. We get to apply the management tools we have on  
6 a multi-basin basis, on a joint administration basis under  
7 conjunctive management. And that throws the baby out with the  
8 bath water, like completely, because it means that the entire  
9 regulatory framework we have only applies under a certain set  
10 of circumstances. But the Legislature didn't say that.

11           The Legislature doesn't say this is the system for  
12 when the science is consistent with the system, and when the  
13 science is not consistent with the system you can do whatever  
14 you need to do. Like I said, there's no rule for that.  
15 There's no rule that authorizes the State Engineer to sort of  
16 freelance and figure out ways to protect senior water rights  
17 holders.

18           The prior appropriation rule, which is where all this  
19 comes from, if you listen to the State Engineer, is  
20 specifically articulated in the statutes. And what's  
21 interesting about it, and you can kind of find this -- I'll  
22 give you a few. NRS 533.430(1), NRS 533.265, I think it's (2),  
23 and 533.090(1) and (2).

24           These statutes -- I got this from the *Walker River*  
25 case that people have been talking about the last couple days

1 where the court says,

2 Nevada water statutes embrace prior  
3 appropriation as a fundamental principle. Water  
4 rights are subject to existing rights. They're  
5 given dates of priority and determined based on  
6 relative rights.

7 So this is the Nevada Supreme Court articulating the  
8 source of the prior appropriation rule.

9 These statutes, again going to my point, don't say  
10 that the State Engineer can do what he needs to do to protect  
11 senior water rights. They articulate a clear basis for  
12 application of the prior appropriation rule. So it applies in  
13 a context; that's the point. And so the prior appropriation  
14 rule applies.

15 For example, if my client wants to go out and pump  
16 water, they've got to contend with the prior appropriation rule  
17 and the State Engineer can't let them pump water if it's going  
18 to jeopardize a senior right. It's not -- the prior  
19 appropriation rule isn't a grant of authority.

20 If you look at the State Engineer's brief, what he  
21 says is we've got an ongoing duty to protect senior water  
22 rights. End statement. No citation, nothing, no statute, no  
23 case, no nothing. It's taken as a given that this is just  
24 something the State Engineer does. And I think at a high level  
25 that's true, but it's not fair to use a generalization that

1 describes the nature of the State Engineer's obligations under  
2 the statutory scheme to claim that he's got authority separate  
3 and apart from the existing statutory scheme. He's saying that  
4 rule sits above everything else and it doesn't. It sits in the  
5 context of everything else and that's how you have to  
6 understand it.

7           The last kind of technical point I want to talk about  
8 is -- well, maybe I should just tie that off. Again, just to  
9 close that point, it's our view, obviously, that the State  
10 Engineer does not have the authority to make this decision.  
11 It's certainly not based on his kind of like policy-driven  
12 articulation of his obligations and it's not rooted in any  
13 specific statute we've talked about here.

14           The timeliness issue that Mr. Dotson raised a couple  
15 times about whether we could even be here, I don't mean this  
16 disrespectfully, but honestly when I read that the first time I  
17 just completely threw it away. I thought, well, that's  
18 ridiculous. Like, of course we're legitimately in this court.  
19 And maybe it's because I do administrative law all the time. I  
20 don't know. But what this order says, that order in  
21 paragraph 1 says,

22                           The Lower White River Flow System  
23                           consisting of Kane Springs Valley, Coyote  
24                           Springs Valley, et cetera -- it names all the  
25                           other valleys -- is hereby delineated as a

1           single hydrographic basin. The Kane Springs  
2           Valley, Coyote Springs Valley, dot, dot, dot,  
3           are hereby established as sub-basins within the  
4           Lower White River Flow System hydrographic  
5           basin.

6           I mean, the State Engineer exercised authority. It's  
7           in an order. The order is live. It's appealable. It doesn't  
8           matter that even if, which it didn't, but let's say there's a  
9           prior order on the topic, it doesn't matter. I mean, state  
10          agencies visit and revisit issues like this over and over and  
11          over again, and if they exercise authority in the form of an  
12          order, it's appealable. There's no res judicata. There's  
13          nothing like that. We're clearly legitimately here. And I  
14          agree with everything people have said about interim orders.

15          I think just to close, I think I would say that the  
16          thing that's kind of noteworthy about this proceeding is that  
17          the decision to subject the basins to conjunctive management  
18          and joint administration didn't do anything to actually solve  
19          the problem. And that's not for this Court to decide, but it  
20          has really just created chaos and confusion and it's been  
21          counterproductive.

22          And whether or not the State Engineer intended to  
23          immediately scramble priorities, as people seem to concede now,  
24          it would be the inevitable result of the joint administration  
25          of the basins and has left everybody trying to figure out what

1 comes next and how to deal with it. And that alone  
2 demonstrates, I think, the nature of the harm that has occurred  
3 in the case. The State Engineer kind of suggests that, well,  
4 that wasn't the intent of what we were doing and the idea is  
5 that we will deal with management later. But if that's true,  
6 then there was no reason to consolidate the basins, subject  
7 them to conjunctive management and joint administration in the  
8 first place. It was done to set the table for the future  
9 actions.

10 That doesn't mean nothing has happened, but it was  
11 the first step in a series of actions to manage the basins.  
12 But it had to be taken because of how they want to manage the  
13 basins. If they want to subject everyone to a pump limit, if  
14 they want to, you know, curtail rights, they had to take this  
15 step first because obviously they felt like it was the best way  
16 to manage everybody by putting them in the bathtub together.  
17 That's a real thing, and it has had no really perceptible  
18 impact on the outcome of the substantive issues, I'll say, to  
19 date.

20 The one other point I want to make is that there's a  
21 question about whether this whole thing is sort of form over  
22 substance and it goes to kind of the authority question. Like,  
23 did the State Engineer actually do something different or could  
24 he do indirectly what he did directly in the order? And I  
25 think that's kind of a difficult question to answer. The first

1 part of the answer is no. If what you're saying is could he  
2 scramble rights within a basin on his own --

3 THE COURT: No.

4 MR. FOLETTA: And I know you're not asking that.

5 THE COURT: No. That's not what I'm --

6 MR. FOLETTA: But I'm saying that, no, he couldn't do  
7 that; right? And so my point is that that's why 1309 is not --  
8 is not something that did nothing or something that could be  
9 achieved another way. It did a very specific thing that could  
10 never happen any other way.

11 The other part of the question is can the State  
12 Engineer, I suppose, manage things the same on a basin by basin  
13 basis, or at least consider some of the same considerations?  
14 And I agree with what other people have said, is that I think  
15 he could to some degree do all of that. It's a little hard to  
16 say because we don't know what the tools are he's going to use  
17 next.

18 With all that, Your Honor, we would ask that you  
19 vacate the order for the reasons we've described. Thank you.

20 THE COURT: Thank you.

21 All right. So why don't we take a ten-minute break.  
22 Does that -- why don't I say this. Why don't we do a  
23 fifteen-minute break. So we'll come back at 2:05. And then I  
24 think we close up with Lincoln and Vidler. Thank you.

25 (Proceedings recessed at 1:52 p.m., until 2:09 p.m.)



1 THE COURT: All right. Are we back on the record?

2 COURT RECORDER: Yes.

3 THE COURT: Okay. Are we good on time?

4 Great. So, Mr. Klomp, you're going first?

5 MR. KLOMP: Yes. Thank you, Your Honor.

6 THE COURT: Okay.

7 MR. KLOMP: I'll go first and then Ms. Peterson will  
8 wrap up, the co-petitioner.

9 THE COURT: Sounds good.

10 MR. KLOMP: Wayne Klomp on behalf of Lincoln County  
11 Water District. And again, I just want to echo the sentiments  
12 of all counsel of gratitude for you and the courtroom staff for  
13 your patience with all of us.

14 THE COURT: Well, let me just say to everyone, it has  
15 been a pleasure to have the finest water law attorneys in our  
16 state in my courtroom. It's been a real treat for me. So I  
17 really appreciate all the hard work that you've all put into  
18 this. I know that pouring through 50,000 pages of record on  
19 appeal and getting the briefs prepared for me has been a  
20 monumentous task, so I do want to say that I appreciate all of  
21 your hard work.

22 MR. KLOMP: Thank you, Your Honor. So in the famous  
23 last words of every attorney ever, I will be brief.

24 ARGUMENT FOR LINCOLN COUNTY WATER DISTRICT

25 MR. KLOMP: First, I just want to correct a couple of

1 issues that were made during answering statements and then  
2 conclude with one point about the bundle of rights that  
3 Mr. Foletta spoke about.

4           There was a statement that the case *Mineral County*  
5 does not apply because it was dealing with a decree and here  
6 we're dealing generally with water rights, groundwater rights,  
7 not a decree. *Mineral County v. Lyon County* is 473 P.3d 418.  
8 That case was a certified question to the Nevada Supreme Court  
9 from a federal court asking about the reallocation of or  
10 reprioritization of rights and the application of the public  
11 trust doctrine to Nevada's -- all of Nevada's water,  
12 groundwater, navigable waters and non-navigable waters.

13           The conclusion of the *Mineral County* case was that  
14 although -- and this is from page 425:

15                           Although we recognize that the public trust  
16 doctrine applies to prior appropriated rights  
17 and that the doctrine has always inhered in  
18 Nevada's water law, we hold that Nevada's  
19 comprehensive water statutes are already  
20 consistent with the public trust doctrine.

21           So that tells us two things. One, yes, the public  
22 trust doctrine applies. But also, that the comprehensive  
23 statutory scheme already accounts for the public trust  
24 doctrine. It does not provide an independent basis for Order  
25 1309.

1           And specifically, the *Mineral County* case goes on to  
2 talk about that principle, that it's already within the  
3 statutory scheme. And now I'm going to turn to page 427 of  
4 that decision:

5                       Finally, the State Engineer is permitted to  
6 declare preferred uses and regulate groundwater  
7 in the interest of public welfare, which  
8 includes -- and then it goes into the statutory  
9 basis for doing those things -- curtailing  
10 groundwater rights during water supply shortages  
11 for example.

12           And then it goes on to say,

13                       The statutory scheme therefore sufficiently  
14 places an affirmative duty on the State Engineer  
15 to maintain public trust resources.

16           And again, that's from the Nevada Supreme Court  
17 stating that that is not an independent source of authority.  
18 The authority is within the comprehensive statutory scheme.  
19 Second, there was a criticism by one of the parties about the  
20 placement of -- I think it's KMW, the well for -- in Kane  
21 Springs Valley.

22           THE COURT: For Kane Springs. Uh-huh.

23           MR. KLUMP: Yeah. And I wanted to talk a little bit  
24 about why that was placed there, and we're going to go to  
25 Slide 2. So this is a memorandum to the State Engineer from a

1 deputy state engineer. It's dated June 21st, 2000. This is in  
2 the record at 36658.

3 And go to Slide 3. And I'm going to have trouble  
4 reading this because the part we want is under that blackout.  
5 But what it says is -- he's talking about placing two more  
6 wells in the carbonate on the north end of CSI's project. And  
7 it says,

8 One should be along the line between MX-5  
9 and Ash Springs and the other one -- the other  
10 somewhere in the mouth of Kane Springs Wash as  
11 it enters Coyote Springs Valley.

12 So that provides really the basis for why that well  
13 was placed there. It was where the State Engineer wanted it.

14 And I want to follow up now with another one of  
15 Mr. Foletta's statements. He talked about the bundle of sticks  
16 and how the -- we have vested property rights. A water right,  
17 an appropriation of water is a vested property right.

18 And go back to Slide 1. So when Lincoln and Vidler  
19 received their appropriation under Ruling 5712, the State  
20 Engineer was required under the statutory scheme to make  
21 certain findings and by law he was prohibited from  
22 appropriating water. And this is kind of a case study. This  
23 is what happened in Ruling 5712, but you can imagine that it  
24 will apply to any water right that's been -- a groundwater  
25 right that's been appropriated.

1           And we talked about these in our opening, and I'm not  
2 going to go through them again, but when Ruling 5712 came out,  
3 that was 2007. None of the parties that are in this room  
4 appealed that decision except for we did, and it was resolved.  
5 That appeal was resolved. But those parties had 30 days to  
6 appeal, and none of them did.

7           One of the bundles of those rights, when you are  
8 granted an appropriation, is that you have to use that  
9 appropriation where you say you're going to use it; right? So  
10 in our application we said we're going to use this in Coyote  
11 Springs Valley and we were awarded an inter-basin transfer of  
12 that water.

13           One of the other rights you have is you have the  
14 right to use it to draw the water out of the ground from the  
15 place that you say you're going to draw the water out of the  
16 ground. If you want to move that place, you have to apply for  
17 a permit from the State Engineer, a permit to change the point  
18 of diversion; right? You can't move the point of diversion to  
19 a place outside of your hydrographic basin because that would  
20 be a new appropriation of water.

21           THE COURT: In a different basin?

22           MR. KLOMP: What's that?

23           THE COURT: In a different basin?

24           MR. KLOMP: Correct. And so our -- Ruling 5712 ties  
25 that to Kane Springs Valley basin. In 2013, so this would have

1 been after the pump test, there was an application to change  
2 the point of diversion for the water rights appropriated with  
3 Ruling 5712. And this is in the record at ROA 994.  
4 Application numbers 82727 and 82728 were filed with the State  
5 Engineer's Office to change the point of diversion within --  
6 again, within Kane Springs. And those were granted and also in  
7 2013.

8 None of the parties here protested those change  
9 applications, but they had 30 days to do so following the  
10 granting of those applications. And the statutory reference  
11 for changing a point of diversion is 533.345.

12 The reason that I bring this minutia up is because it  
13 illustrates the bundle of rights. The parties that have water  
14 rights outside of Kane Springs can apply for -- prior to 1309  
15 they could have applied for a change of point of diversion  
16 within the hydrographic basin that they were in. Following  
17 1309, they can now apply for a change of point of diversion  
18 within the entire Lower White River Flow System and maintain  
19 their priority date, whereas before they could not do that. So  
20 that is just another example of one of the ways that 1309  
21 fundamentally changes the nature of the water rights that  
22 Lincoln and Vidler appropriated in Kane Springs, but also the  
23 nature of water rights within the Lower White River Flow  
24 System.

25 So when the State Engineer says that he doesn't have

1 to follow *stare decisis*, that may be true in a court or in an  
2 opinion from the court, but it is not true when it comes to  
3 depriving people of their vested property rights and it's not  
4 true when it changes, fundamentally changes the nature of those  
5 property rights. And with that, Your Honor, I think that was  
6 fairly brief, but I'm going to turn the time over to  
7 Ms. Peterson.

8 THE COURT: That was brief. Okay.

9 **ARGUMENT FOR VIDLER WATER COMPANY, INC.**

10 MS. PETERSON: Thank you, Your Honor. Karen  
11 Peterson. And I'm just going to start with the question that  
12 you've asked some of the other parties about connectivity  
13 because I figured we would probably get it, so let's just start  
14 right there. And what we have noticed in this proceeding and  
15 throughout all these proceedings is that the parties -- well,  
16 the State Engineer and SNWA, Muddy Valley Irrigation Company,  
17 the intervenors and Center for Biological Diversity all equate  
18 connectivity with impacts and that --

19 THE COURT: With impasse?

20 MS. PETERSON: Impacts.

21 THE COURT: Okay.

22 MS. PETERSON: Impacts to their rights, so that --

23 THE COURT: Oh, impacts.

24 MS. PETERSON: Impacts. I-m-p-a-c-t-s.

25 And that connectivity equates with impacts and that

1 therefore all these water rights, all these individual water  
2 rights and all these individual basins need to be managed --  
3 jointly managed and conjunctively managed. And connectivity  
4 does not equate to impacts to other rights, and that's  
5 displayed outright in Order 1309. And what the State Engineer  
6 found in portions of Order 1309 --

7 And, Mr. Hurth, if you could go to the pumping slide.

8 THE COURT: Which slide is this?

9 MS. PETERSON: Slide Number 5.

10 And again, this is the Lower White River Flow System  
11 and the Kane wells are not on this map because this is the  
12 result of the pumping test from 1169 and Kane wasn't involved  
13 in that. But the Kane wells are where the boundary is there.  
14 Oh, gosh. Yeah, the red dot, but I don't know that the record  
15 is going to be able to see the red dot. So it's on the line  
16 between Coyote Spring Valley Basin 210 and Kane Springs ranch  
17 or Kane Springs Valley.

18 I probably have a better way to say this. It's  
19 south, the south end of the valley, southwest portion of the  
20 valley. And I know it's in the record where those wells are.  
21 But the pumping -- the State Engineer found in Order 1309 and  
22 it's in the Record on Appeal at page 7 and also at page 60 that  
23 the pumping of 5,290 acre feet from Coyote Springs caused sharp  
24 declines in discharge at the springs. And the State Engineer  
25 also found in Record on Appeal at 65 that the Muddy River



1 Spring area -- and those are delineated on your map here --  
2 that the alluvial and carbonate pumping affects the Muddy River  
3 and captures the river flow.

4 So you also see the pumping on that map with regard  
5 to the various parties that have been identified, the pumping  
6 in those basins. And so we already know from the pump test  
7 where the impacts are from pumping and those -- what pumping  
8 affects the Muddy River and what pumping affects the springs  
9 for purposes of the Moapa dace. And so what is happening with  
10 Order 1309 is that they're pulling Kane Springs in.

11 Let's say they're pulling Garnet Valley in. And  
12 there's no evidence in the record that the pumping in  
13 particular for like the wells in Garnet, there's actually no  
14 evidence of pumping from the wells in Kane impacts the springs  
15 or the dace, yet they're pulled into this joint management and  
16 conjunctive-use-management scheme that the State Engineer has  
17 set up, and their rights have been impacted because of the  
18 8,000 acre feet cap that the State Engineer has put on the  
19 pumping. Yet again, there's no evidence that pumping from Kane  
20 Springs at all or pumping from the other wells -- again, Garnet  
21 is probably the furthest away -- that that pumping is the  
22 pumping that impacts the springs or the river.

23 And so that's what the beef is about just relying on  
24 connectivity and throwing everybody in is that our rights, Kane  
25 Springs, and we'll show you later on in the chart. I mean,

1 they're way down at the bottom of that printout that  
2 Mr. Robison had with regard to where everybody stands now based  
3 upon the reordering of the priorities.

4           So, for example, Kane Springs, our rights -- there's  
5 no evidence our rights would affect anybody in Garnet Valley,  
6 anybody's pumping in Garnet Valley. Yet again, we're junior.  
7 We're not able to pump our rights because we're lower in  
8 priority than somebody in Garnet Valley or somebody in Hidden  
9 Valley.

10           I don't think there's anybody in Hidden Valley, but  
11 even in -- I can't even read all these basins that are in  
12 there. But we're being prejudiced in not being allowed to pump  
13 our rights because we've been thrown into this basin, yet  
14 there's no evidence that our pumping impacts anybody else.

15           And so the other thing I hear is everybody kind of on  
16 that side of the room talking about existing rights, existing  
17 rights, existing rights, and that our rights have to yield to  
18 everybody else just because now we're the lowest ones in this  
19 super-basin, with the lowest priority in this super-basin, yet  
20 we're not impacting anybody by our pumping or there's no  
21 evidence that we're impacting anybody by our pumping.

22           And my question is -- our question is, the rights  
23 that are in the Muddy River Springs Area and the rights that  
24 are in the lower Coyote Springs Area, whose rights, even though  
25 they're senior rights -- let's say they're the Church's rights

1 or NV Energy's rights, they're Moapa Valley Water District's  
2 rights, they're also subject to existing rights. They're  
3 junior to the Muddy Valley Irrigation Company. How come their  
4 rights -- how come their rights aren't enforced as subject to  
5 existing rights because they're the rights that are impacting  
6 the springs and the river?

7 They're shifting by the scheme that they've created.  
8 They're shifting their burden of their rights being subject to  
9 existing rights and shifting that to make us give up our water  
10 rights, which are not impacting anybody else's, so that their  
11 priorities are preserved, but ours are not, and we're not even  
12 impacting anybody.

13 THE COURT: So as I understand your argument, you're  
14 talking about the proportional impact of where those -- where  
15 that pumping is done to the Muddy River or the springs as it  
16 relates to how the rights would now be recategorized.

17 MS. PETERSON: Correct.

18 THE COURT: Okay.

19 MS. PETERSON: And so --

20 THE COURT: I mean, so what you're saying is just  
21 because it's connected doesn't mean that proportionately  
22 there's a higher impact or a lesser impact. In fact, I think  
23 what you're arguing is -- and I just want to make sure that I  
24 have your argument, you know, straight, is that there are  
25 certain water rights holders who are closer to the Muddy River

1 and the springs and their connectivity and the pumping has a  
2 much higher, direct correlation to the reduction in the springs  
3 and the Muddy River, but everyone is all kind of put in that  
4 same pot of where they are depending on when they got their  
5 rights.

6 MS. PETERSON: Correct.

7 THE COURT: Okay.

8 MS. PETERSON: And it even gets better. If you look  
9 at the Notice of Alleged Violation that Mr. Taggart put up  
10 yesterday, and we have that slide and it starts with Slide 4,  
11 and this is the Notice of Alleged Violation, the first page, I  
12 think, of it. But in this first paragraph here he indicates --  
13 or, sorry, SNWA indicates that studies performed in the Lower  
14 White River Flow System have demonstrated that groundwater  
15 pumping in the Lower White River Flow System ultimately  
16 depletes Muddy River stream flows on a one-to-one ratio and  
17 pumping in certain areas, such as the Muddy River Springs Area,  
18 cannot occur over the long term without depleting spring and  
19 stream flows.

20 And so the State -- like I said, the State Engineer  
21 has already found in Order 1309 that Coyote Springs -- and he  
22 has it twice in there -- caused sharp declines in discharge at  
23 the springs. And that the Muddy River Springs Area, both the  
24 alluvial and the carbonate pumping, affects the Muddy River and  
25 captures the Muddy River flow. And it also indicates further

1 in that ruling that he's not going to allow -- he's talking  
2 about where you can change your water rights in the Lower White  
3 River Flow System -- he's not going to allow anybody to put  
4 more water rights, more water rights into the Muddy River  
5 Springs Area to pump because obviously that's going to cause a  
6 greater impact.

7           So -- and I think it builds on what Mr. Foletta was  
8 saying because obviously if we -- if I applied for a water  
9 right and I was right next to the spring and I was going to  
10 impact the spring, yeah, the State Engineer should not grant  
11 that water right application. He shouldn't grant that water  
12 right application. And when we applied in 2005 and were  
13 granted our water rights in Kane Springs, the State Engineer --  
14 he did make that determination that he didn't think the  
15 hydraulic connection was enough for the quantity of water that  
16 we applied and received, that it would impact the Muddy River  
17 springs or the dace.

18           And then now he's changed that after Order 1309, but  
19 he still indicates in Order 1309, and we've cited it on a slide  
20 and it's ROA at 55, that the degree of hydraulic connectivity  
21 is not known yet for Kane, but I'm going to put you in because  
22 I want to -- put the basin in because I want to manage that  
23 basin along with everybody else. But we don't know exactly what  
24 the hydraulic connectivity is with Kane Springs, and so I'm  
25 going to put you in so that there can be further study.

1           So he's saying he doesn't know what our hydraulic  
2 connectivity is with regard to the dace and the springs and  
3 what the connectivity is and what the level of connectivity is.  
4 But he acknowledges that there's a 60-foot change in elevation  
5 between the water levels in Kane Springs. And it's the water  
6 levels in the Lower White River Flow System that he's talking  
7 about is the change, you know, that 60 feet, that six stories,  
8 and that's evidence of low permeability under his six criteria  
9 and also weak hydraulic connectivity. So the point I'm trying  
10 to make is that he's thrown us all into this huge area.

11           The pumping test shows that there's been impacts from  
12 certain wells already in certain areas. They caused sharp  
13 declines in the springs, which of course could affect the dace.  
14 And yet, he's thrown everybody in together and treating us all  
15 equally with all -- you know, subject to seniority and allowing  
16 those -- the pumpers that are closest to the river and causing  
17 the most impact, allowing them to continue to pump, but then  
18 not allowing us to pump because he's got this -- I agree with  
19 CSI that he backed into this artificial 8,000 cap and he's  
20 affecting everyone and creating chaos. So, again, basin by  
21 basin is appropriate because he could handle this problem by  
22 looking at the --

23           Could we put that map back up.

24           -- he could handle the problem by looking at the  
25 lower Coyote Springs Valley basin. He could look at the

1 problem in the Muddy River Springs Area. He could manage those  
2 basins.

3           If you look at the pumping -- if you're talking about  
4 a one-to-one ratio, if you look at the pumping -- could you put  
5 up the pumping records from 2017. And this is in the ROA at  
6 510. If you look at 2017 and you look at what the pumping is  
7 from the Muddy River Springs Area, it's 3,553 acre feet. And  
8 then if you look at Coyote Springs Valley, it's 1,961. I  
9 didn't do the math to add those up beforehand. That's like  
10 7,000 acre feet right there.

11           If SNWA is correct that there's a one-to-one ratio,  
12 what they're saying is when you pump 3,553 acre feet out of  
13 Muddy River Springs Area, it's a one-to-one ratio with the  
14 river flows. You're taking one foot out of the river. That's  
15 what they're saying there in their Notice of Alleged Violation.  
16 And I haven't looked at their studies to know if that's true or  
17 not, but that's what they're saying. So if you want to find  
18 your river flows back, I mean, that's where you get it, right  
19 from that pumping right there.

20           But you don't cut off the property rights of Kane,  
21 and you don't cut off the property rights of Garnet. You don't  
22 cut off the property rights of Cogen because of something  
23 that's being caused by what's going on there in that pumping  
24 with Coyote Springs basin and Muddy River Springs Area. And  
25 that's not how it's been done on a basin-by-basin area, a

1 basin-by-basin basis, you know, in history.

2           You look at the basin and you figure out what the  
3 issues are with regard to that basin and you take action based  
4 on that. And that's why we think it's appropriate because,  
5 again, it doesn't create all the chaos, as Mr. Foletta was  
6 talking about here. It doesn't create all the chaos across  
7 seven basins when it doesn't need to.

8           THE COURT: So let me ask you, because I know that,  
9 you know, you've been making a point that first the Nevada  
10 State Engineer showed that there wasn't enough connectivity.  
11 Now he's saying that there is connectivity. Would you agree,  
12 though, that if the science dictates that there is more impact  
13 or more connectivity that he could reverse himself if he  
14 followed the proper statutory framework?

15           MS. PETERSON: With regard to like the Kane rights?

16           THE COURT: Yes.

17           MS. PETERSON: So if we are pumping our Kane rights  
18 and they impact somebody else that has a higher seniority, that  
19 issue has to be addressed. We can't -- by our pumping we  
20 cannot impact somebody else's water rights that's senior.

21           THE COURT: Right. But your beef, I guess, is more  
22 that everyone was lumped into the same mega-basin as opposed to  
23 handling it basin by basin under the statutory framework?

24           MS. PETERSON: Right.

25           THE COURT: Okay.



1 MS. PETERSON: And knowing what he knows from the  
2 pump test where the areas, the problem areas are.

3 THE COURT: Proportional impact.

4 MS. PETERSON: His findings are -- I'm not sure I  
5 understand what you mean by --

6 THE COURT: So what I'm saying is that some areas may  
7 impact, you know, the Moapa dace. Let's just say the Moapa  
8 dace at greater rates than other places.

9 MS. PETERSON: Yes.

10 THE COURT: Okay.

11 MS. PETERSON: Yes. Yes. And then I did want to  
12 address conjunctive management. And I think it was Mr. Dotson  
13 who put up the slide, the Davenport slide yesterday or whatever  
14 day, that conjunctive management is -- oh, gosh, separate -- is  
15 not separate administration for surface and groundwater,  
16 they're treated as one source. And our legislation is not  
17 there yet. That's our position: It's not there yet. And you  
18 know the reasons.

19 The 2019 legislation and one position there, what  
20 happened here in 1309, and then I'm just going to raise it just  
21 for the legal conflict, issue of 1329. So we don't think there  
22 has been a reboot of Nevada water law by the policy declaration  
23 that there can be conjunctive management.

24 And I think the questions that you were asking some  
25 of the other -- like CSI, I know you asked them specifically

1 and they were saying -- what I heard what they were saying was  
2 that if there is a conflict between their right and a surface  
3 water -- a senior surface water right, or if there was a  
4 conflict even with a senior groundwater right, that they would  
5 understand that they would have to address that and that could  
6 affect. But, see, to me that's that impacts analysis or the  
7 conflicts analysis and the subject to existing rights analysis.  
8 It's not conjunctive use management.

9 THE COURT: So tell me then, what, in your opinion,  
10 does conjunctive use management mean.

11 MS. PETERSON: Okay. And I wouldn't even say my  
12 opinion because I don't feel like I'm an expert, but my  
13 understanding of it.

14 THE COURT: Yes.

15 MS. PETERSON: My understanding of conjunctive use  
16 management is that you have a limited resource and you would  
17 try to maximize the use of that surface and groundwater  
18 resource. And if one of the objectives is to protect senior  
19 rights, that could be one of the objectives of the  
20 conjunctive-use management, a conjunctive use management plan  
21 or whatever.

22 So, and I -- the one example I can use because I  
23 think the information is in the record but it's only with  
24 regard to one water right holder, but to try to explain how  
25 this might happen, and I'm not as familiar with the hydrology

1 and everything down here in the Muddy River area. I'm more  
2 familiar with everything up north. But Vidler owns, you know,  
3 groundwater rights in Kane Springs, and Vidler owns surface  
4 water rights in the Muddy Valley Irrigation Company.

5 And so they're one owner that owns groundwater and  
6 surface water, but they could use their water rights more  
7 efficiently to maximize the use of the surface and the  
8 groundwater rights by maybe, for example, if they needed to  
9 pump their groundwater they wouldn't pump -- they wouldn't take  
10 their surface water maybe one year because they wanted to pump  
11 more of their groundwater based on hydraulic conditions or  
12 something. Maybe another year they would want to use more of  
13 their surface water and not pump as much of their groundwater.  
14 And that's how they would conjunctively manage the water  
15 resources.

16 Utilities do it that have, like, surface water rights  
17 and groundwater rights. They conjunctively manage their  
18 resources so that -- up north, this is how it happens up north.  
19 And I'm not trying to get any objections, but, for example --

20 MR. TAGGART: Well, I will if you --

21 MS. PETERSON: Okay. I'll move on. I'll move on.  
22 I'll move on.

23 MR. TAGGART: No, I don't disagree. I didn't mean to  
24 stop you. I'm sorry.

25 MS. PETERSON: Yeah, I'll move on. But I don't

1 equate --

2 THE COURT: So it's really a much more nuanced,  
3 closely connected -- what's the word that I'm looking for --  
4 calculation that you're making when you're conjunctively  
5 managing the surface water and the groundwater together. It's  
6 not just looking at the conflict of the rights between the  
7 surface water and the groundwater, it's really like a  
8 management plan between the two and how to maximize whatever  
9 your objective is?

10 MS. PETERSON: It does use the word management right  
11 in there.

12 THE COURT: Yes.

13 MS. PETERSON: So, yeah. And again, I think the  
14 examples that you were giving, the way I understood them with  
15 the others was that that was more of a conflicts analysis.

16 THE COURT: I see.

17 MS. PETERSON: And I'll tell you, and I've got it in  
18 here because I was going to comment on it, but all the  
19 slides -- there was a slide, and I can't remember the number of  
20 it. I'll get to it in my notes here, that the SNWA attorney  
21 had. And those cases weren't about conjunctive management.  
22 They were about surface water and groundwater rights that  
23 were --

24 THE COURT: At conflict with each other. I see.

25 MS. PETERSON: -- in conflict with each other.

1 THE COURT: Okay.

2 MS. PETERSON: The cases don't mention conjunctive  
3 use management at all.

4 THE COURT: Okay.

5 MS. PETERSON: So I will -- oh, and I guess could you  
6 bring up the slide. I guess just another thing just to point  
7 out some of the evidence in the record.

8 THE COURT: And what number slide is this?

9 MS. PETERSON: It's Slide 8.

10 So this is the slide we put up the other day, and  
11 it's the -- on the left is a narrative from the SNWA report and  
12 it was after the 1169 pump test that says there's a lack of  
13 pumping responses from the 1169 pumping north of the Kane  
14 Springs fault and west of the MX-5 and CSI wells. And this  
15 again is information that could be used for purposes of  
16 management of a basin to maybe allow pumping in a certain  
17 portion of a basin where there wasn't as much connectivity.  
18 And so maybe you can put water --

19 THE COURT: Oh, I see.

20 MS. PETERSON: -- because it's saying there's a lack  
21 of pumping responses. So, again, maybe this is an area where  
22 there could be pumping in the Lower White River Flow System or  
23 in this basin in particular and it's not going to have --

24 THE COURT: So the point is that just because a  
25 basin -- part of the basin has connectivity with other basins

1 doesn't mean that the entire basin is connected.

2 MS. PETERSON: Right. Okay. I'm going to get on to  
3 Mr. Dotson, and he had an example yesterday about wasn't it a  
4 lot of water, 6 inches over 1,100 square miles. And we did the  
5 math on that. And the quantity of water that he's talking  
6 about, 6 inches over 1,100 square miles, there's 640 acres in  
7 1 square mile. And then 640 acres times 1,100 equals  
8 704 acres. And then an acre foot of water -- oh, 704,000.

9 Thank you.

10 An acre foot of water is 1 foot of water in an acre.  
11 We're only talking about 6 inches here. So we're going to cut  
12 the 704,000 acres in half to 352-. And the evidence and the  
13 testimony -- or the evidence or the argument that you heard was  
14 that there was an average over the two years of 14,500 acre  
15 feet pumped per year, so during the two year pump test we're  
16 talking about 29,000 acre feet being pumped.

17 But under Mr. Dotson's scenario, even though there  
18 were only 29,000 acre feet pumped during the pump test, there  
19 was 352,000 acre feet of water in that 6 inches over the  
20 1,100 square miles. And so, you know, that's over 10 times  
21 more water that was pumped, he's contending in his scenario,  
22 was in that 6 inches over the 1,100 square miles.

23 THE COURT: Okay. You totally lost me on the math.

24 MS. PETERSON: Okay. Trying to show --

25 THE COURT: So, you know what, if you give me -- have

1 you figured out what the 6 inches over 1,100 square miles is in  
2 acre feet?

3 MS. PETERSON: Yes.

4 THE COURT: And is that number 352 --

5 MS. PETERSON: 352.

6 MR. TAGGART: I'm just going to object.

7 THE COURT: 352 or 352,000?

8 MS. PETERSON: Thousand.

9 MR. DOTSON: I'm going to object that it's an  
10 improper hypothetical because it assumes a vacuous space during  
11 that entire area because you're not counting the mass of the  
12 earth.

13 THE COURT: Oh, boy. Okay.

14 MR. DOTSON: It calls for math.

15 THE COURT: No, no, no, no, I'm just saying -- I'm  
16 just saying my brain is hurting from the math, and I'm not a  
17 mathematician. So I'm just --

18 MR. DOTSON: In other words, there's not a hole.  
19 It's not a hole of water. And it also misstates my argument.  
20 So those are my two objections.

21 MR. TAGGART: Your Honor, I'm just going to object  
22 that I just think -- getting another math question into the  
23 record. I think the point is getting made. Clearly she  
24 disagrees with what Mr. Dotson said, but putting another value  
25 into the record that the State Engineer didn't calculate is not

1 a good idea.

2 MS. PETERSON: It's argument. This is argument, and  
3 I'm responding to the argument of Mr. Dotson that 6 inches over  
4 1,100 square miles is a lot of water. And, yeah, if you're  
5 saying that after the result of that pump test there were  
6 drawdowns in the Lower White River Flow System, 1,100 square  
7 miles that totaled 6 inches, at least, you're talking about  
8 352,000 acre feet of water when only 29,000 was pumped. That's  
9 the point of that.

10 You also heard during the argument with regard to  
11 Phase 2 of Order 1309, if a Phase 2 occurs that, you know, we  
12 don't -- number one, we don't know when that might be. We  
13 don't know what might happen during that phase. And it's clear  
14 we don't know what to expect in Phase 2.

15 And I think we heard Mr. Bolotin say that we don't  
16 know what the State Engineer is going to -- he may not want to  
17 curtail by priority. He said there's nothing explicit in the  
18 statute how to manage or how to reprioritize. He also  
19 indicated that -- priorities in sub-basins. He's not sure what  
20 to do with those, whether that stays. It's all unknown.

21 Mr. Taggart indicated we don't know how to divide the  
22 8,000. We don't know how it will be done. This is the first  
23 part of a curtailment. A curtailment is the next step.

24 And again, just throwing into the whole -- and  
25 building on, I guess, the whole -- the argument that



1 Mr. Foletta made about all the chaos that has been thrown into  
2 this proceeding, and I will tell you, I know they didn't like  
3 the fact that I talked about the decree and how you have to  
4 give notice to everybody.

5           But if there is a curtailment in seven basins they  
6 will have to give notice to every water right holder in those  
7 basins because there is a Nevada case right on point, *Eureka*  
8 *County v. District Court*, where the Nevada Supreme Court  
9 specifically held that prior to curtailment proceedings you  
10 have to notify every single water right holder, groundwater  
11 right holder in the basin. So they will have to notify  
12 everybody in the seven basins that hold water rights.

13           And then just kind of briefly addressing some of the  
14 other arguments that were made, I heard Mr. Morrison for Moapa  
15 Valley Water District say that the State Engineer found Kane  
16 Springs water ends up in Muddy Springs, and that is nowhere  
17 found in Order 1309, not at all.

18           I also -- with regard to some of Mr. Taggart's  
19 argument, he indicated that NRS 532.120 was the authority to  
20 include Kane, and that statute states that the State Engineer  
21 may make such rules and regulations as may be necessary for the  
22 proper and orderly execution of the powers conferred by law,  
23 and obviously that has nothing to do with designating a basin  
24 and Order 1309 was certainly not rules and regulations.

25           In the afternoon Mr. Taggart presented -- it was

1 page 41 of the slides and he cited to ROA 41982. He had five  
2 hydrographs that he said were all very familiar. Recovery did  
3 not occur with those hydrographs. And again, that's -- a  
4 hydrograph is just one -- it's the well location. It doesn't  
5 necessarily mean that that's what's happening, you know, in the  
6 ground all around the well. We don't know. We just know  
7 what's happening in that well and that the water levels had not  
8 come back to pretest levels.

9           And it's not the same hydrographs that you saw that  
10 the State Engineer put up. These hydrographs that he was  
11 describing, the five hydrographs, they only had to do -- they  
12 didn't have anything to do with Kane, the Kane wells or the  
13 CSVM-4 well, which is in northern Coyote Springs. Those  
14 hydrographs were in lower Coyote Spring Valley, the Muddy River  
15 Springs Area, California Wash, Garnet Valley and Black  
16 Mountains. They didn't have anything to do with, again,  
17 northern Coyote Springs or Kane.

18           There was also argument that the application  
19 procedures in NRS 533 and 534 indicated -- were indicative of  
20 conjunctive management because they both used the NRS 533  
21 statute. And the Legislature said that you can use that same  
22 procedure to apply, whether it was surface water or  
23 groundwater; therefore, that was indicative of conjunctive  
24 management. And I guess my response to that would be why would  
25 you need the -- if that was true, why would you need the

1 conjunctive management legislative policy enacted in 2017 if  
2 the application statute was indicative of conjunctive  
3 management?

4           And then Slide 58 was the slide that had all the  
5 cases with the authority for conjunctive management. And  
6 again, none of those cases described or discussed conjunctive  
7 management. Those words were not used in those cases. But  
8 those cases had to do with impacts between surface water right  
9 holders and groundwater right holders.

10           And the *Cappaert* decision in particular involved the  
11 State Engineer not recognizing a reserved right of the Federal  
12 Government claim that the national monument that had the  
13 pupfish, and the State Engineer allowed a nearby groundwater  
14 right holder that was junior to the federal reserved right to  
15 pump and lowered the Devil's Hole, which was the habitat for  
16 the pupfish. And the U.S. Supreme Court said that the federal  
17 reserve right had to be recognized. So that was -- again, it  
18 was an impacts case.

19           THE COURT: Impact on conflict of rights.

20           MS. PETERSON: Yes.

21           THE COURT: Okay.

22           MS. PETERSON: And then the Center for Bio Diversity  
23 indicated that proving liability or argued that proving  
24 liability for a take, that that was in federal court and that  
25 was a standard there for federal cases. But it was different

1 from proving potential for a take. And I just did want to  
2 indicate that the State Engineer indicated that he was  
3 worried -- in his ROA at 47 that he definitely indicted that he  
4 was worried about the liability for the State and that's what  
5 he was talking about, not that there is some kind of different  
6 standard for proving potential for a take.

7           The attorney then for Center for Bio Diversity also  
8 indicated that the 60-foot higher water level elevations -- he  
9 was kind of attacking those and that the water levels really  
10 weren't 60 that the State Engineer was describing. And I guess  
11 I would just indicate that the State Engineer made that  
12 determination. He made that determination in Ruling 5712 and  
13 he made it also in Order 1309.

14           And, you know, it is improper to ask the Court to  
15 reweigh the factual determination that was made by the State  
16 Engineer on that issue. And I don't even believe the Center  
17 even appealed that issue, so I'm not asking you to substitute  
18 or reweigh the evidence on that issue.

19           I would also, Your Honor, when you're -- if you're  
20 using the demonstrative evidence or the slides here when you're  
21 reviewing everything and making your decision, I would ask that  
22 you look at some of them very carefully because in some  
23 instances there were words that were, you know, taken out and  
24 put the dot, dot, dot that are pretty important for the  
25 statutes.

1           And I know you noticed them before when you were  
2 reading the statute, but there was one on the slides yesterday  
3 and it was a Southern Nevada Water Authority slide, NRS  
4 534.120, subsection 1. The words that were taken out were "as  
5 provided for in this chapter." So what you saw on the slide or  
6 what somebody saw on the slide was, "Within an area that has  
7 been designated by the State Engineer." The words "as provided  
8 for in this chapter" were taken out and then it goes on as if  
9 to read, "where, in the judgment of the State Engineer the  
10 groundwater basin is being depleted." So we would ask you to  
11 just look at those carefully.

12           And then moving on to Mr. Dotson today, the argument  
13 that he made today --

14           MR. DOTSON: Your Honor, objection. She can't  
15 respond to something I said today unless it's just framing a  
16 question. This was the point that counsel made, which is why  
17 we did it in the order that we did.

18           THE COURT: Right. No, no, I understand your point.

19           I guess it just really depends on what it is that you  
20 are addressing.

21           MS. PETERSON: There was a dialogue today with the  
22 Court regarding the scope of judicial review versus the decree  
23 court. And I understood the Court to ask Mr. Dotson the  
24 question that his petition for judicial review was with the  
25 issue of procedural due process in Order 1309, as opposed to a

1 determination from the decree court on anything in the decree  
2 under -- in this proceeding.

3 THE COURT: So, no, I think what I was -- so what I  
4 was asking is when he was talking about, you know, invoking the  
5 powers of the decree that he was asking the Court to do, that  
6 was as it related specifically to the conflicts analysis that  
7 was done in 1309 regarding the Muddy River Decree.

8 MS. PETERSON: Okay.

9 THE COURT: So I guess -- I know that there was --  
10 let me think about this -- that in your intervening brief that  
11 you had addressed issues regarding how they had calculated the  
12 Muddy River Degree water. Is that what you were going to or  
13 was that something different?

14 MS. PETERSON: I definitely was going to address  
15 that, but I was going to go to the remand instruction that you  
16 saw on the slide today.

17 THE COURT: As it relates to Vidler?

18 MS. PETERSON: As it relates to the relief that  
19 Mr. Dotson asked for.

20 THE COURT: Regarding enforcing the decree?

21 MS. PETERSON: Yes. Well, and also the one about  
22 even though they're appealing the part of the order that deals  
23 with the State Engineer's statement about what the  
24 predevelopment flows of the Muddy River were, the 33,900 --

25 THE COURT: Uh-huh.

1 MS. PETERSON: -- he wants you to affirm that.

2 THE COURT: So I think you covered that pretty well  
3 in your intervening answering brief.

4 MS. PETERSON: Okay.

5 THE COURT: So I think -- I don't think I need  
6 further argument on that --

7 MS. PETERSON: Okay.

8 THE COURT: -- if that gives you some assurance.

9 MS. PETERSON: Okay.

10 THE COURT: I think that's what caused me to ask  
11 those questions about the calculations as it relates to, you  
12 know, translating historical volume and then, you know, because  
13 it looks like there are different opinions, I guess I should  
14 say, from the different entities as to how much that volume  
15 actually is.

16 MS. PETERSON: And I guess my last argument with  
17 regard to the Muddy River would be that there was no notice to  
18 the parties. And I guess I'm kind of following up on  
19 Mr. Foletta's argument about the Endangered Species Act. There  
20 was no notice to the parties in this case that we were to  
21 address what the predevelopment flows of the Muddy River were  
22 and provide evidence on that, so I'll leave it at that.

23 THE COURT: Okay.

24 MS. PETERSON: And then with regard to the six  
25 criteria, I know there were questions from the Court a few days

1 ago about whether -- if we had known the six criteria if our  
2 presentations would have been any different, and of course we  
3 did raise the due process argument in our petition for judicial  
4 review.

5           And I can assure you, absolutely, that if we had  
6 known what the six criteria were before we went into the  
7 hearing, that we would have performed work that would have  
8 provided information with regard to geologic structures and/or  
9 mapping. I mean, we would have drilled bore holes near our  
10 wells to show what the geology was there so that we could have  
11 complied with Criteria 5 and/or Criteria 6. And it would have  
12 made a difference in the case that we would have presented and  
13 what we would have presented and how we would have presented  
14 it, so our due process rights were violated.

15           And I also wanted to touch upon the best -- you know,  
16 the best available science and all that's been raised. And I'm  
17 not asking you to reweigh any evidence here, but I am going to  
18 let you know, Your Honor, that in response to Order 1303,  
19 Lincoln and Vidler did provide what they considered, their  
20 experts considered to be the best available science to the  
21 State Engineer. They provided some geophysics. I'm not asking  
22 you to reweigh it. I'm just telling you it's in the record.  
23 They provided geophysics. They provided geochemistry data that  
24 they believe showed that the Kane Springs water, what didn't  
25 end up in the Muddy River springs --



1 THE COURT: Oh, this is like the duadanem (sic) or  
2 whatever it's called.

3 MS. PETERSON: Yeah, the deuterium --

4 THE COURT: Yeah, the deuterium.

5 MS. PETERSON: -- and the chemical signature. And  
6 they also provided --

7 MR. BOLOTIN: Your Honor.

8 THE COURT: Yes?

9 MR. BOLOTIN: I just got a message from my colleague  
10 that's on BlueJeans. He said he wasn't able to get back into  
11 the BlueJeans just now and I just wanted to make sure that --

12 THE COURT: Oh, okay. Hang on. Stop the clock.  
13 Let's check on that.

14 MR. BOLOTIN: It might be a personal issue, but I  
15 just wanted -- I didn't want all those people to miss  
16 anything --

17 THE COURT: Oh, sure.

18 MR. BOLOTIN: -- if it was that, but I'll tell him it  
19 might be his problem.

20 THE COURT: Yeah. See if he can try it again. Okay.  
21 All right, start the clock.

22 MS. PETERSON: So we did try to present what we  
23 thought was the best available science. And with due respect,  
24 I want to state on the record our frustration with trying to  
25 provide that, not having any guidance in advance as to what the

1 State Engineer wanted to see. Obviously if we would have known  
2 what he wanted to see, we would have tried to provide that to  
3 him.

4 But there's been this suggestion, for example, that  
5 maybe there should be -- the State Engineer would welcome a  
6 pump test from the Kane Springs well at this point. And  
7 obviously, you know, we don't even know if we have any water  
8 rights. So why would we go out and spend all the money, which  
9 would be a lot, because there's no power at that site? There's  
10 no -- again, that's one of the things we complained about in  
11 our petition.

12 The State Engineer is telling us that there can be  
13 additional hydrologic study or there has to be additional  
14 hydrologic study in Kane Springs to know what the hydrologic  
15 connection is. And why we would do a pump test when we don't  
16 even know what the State Engineer would want to see? What we  
17 would have to try to show by that pump test again just reveals  
18 that we're in this mega mess where we don't even know if we can  
19 get out or how we can out.

20 And it's very frustrating because we have to litigate  
21 the issue instead of trying to be involved in finding the  
22 solution or working with other parties. It's very frustrating.  
23 And our clients, you know, they're frustrated that they're  
24 losing their property rights, and it just has created a lot of  
25 problems. I'll just leave it at that.

1           There were some other slides that I just wanted to  
2 highlight.

3           Slide 7. So, Your Honor, there was a question the  
4 other day that you had about what the headwaters were.

5           THE COURT: As related to the tributaries?

6           MS. PETERSON: Headwaters related to the springs.

7           THE COURT: Oh, the springs.

8           MS. PETERSON: And so on Record on Appeal 7, the  
9 State Engineer indicates Pederson Springs. It's in the middle  
10 there. And actually the sharp declines with the pumping from  
11 Coyote Springs. This is one of the sites. The other site on  
12 page 60 just references the pumping from Coyote Spring Valley  
13 of 5,290 acre feet that caused -- he used the same language --  
14 sharp decline, I think, was -- yeah, in groundwater levels and  
15 flows. But the Pederson Springs there are noted as headwater  
16 springs and then also the Baldwin and the Jones Springs.

17           And so we also provided a map, and there's a cite to  
18 the record on that, 41959, that shows the springs in that area.  
19 So you had asked just about the headwaters. And so those are  
20 the headwater springs --

21           THE COURT: Okay.

22           MS. PETERSON: -- referenced in the decree.

23           THE COURT: Okay.

24           MS. PETERSON: And then the next slide.

25           Okay. Slide 9, there were some comments about this

1 slide. And the access on the left is the KMW monitor well and  
2 water levels and then the access on the right is the CSVN-4  
3 scale with regard to water levels. And you'll see on the slide  
4 that the KMW data is in blue and the CSVN-4 data is in red.  
5 And so the scales are different.

6           The reason that they're different is that the monitor  
7 well, the KMW monitor well showed 26 feet of drawdown. And  
8 because we wanted to show the responses for both wells on this  
9 one graph, we plotted again the CSVN-4 data on the right-hand  
10 side. And the scale needs to be larger because the CSVN-4 data  
11 shows that there was approximately a 1 and a half foot change.  
12 And so on the one hand we have a 26-foot change and a one and a  
13 half foot change, and so that's why the data is plotted like  
14 that. Because if we had plotted the CSVN-4 data on the same  
15 scale as the KMW-1, basically the red would be a flat line and  
16 you wouldn't be able to see the data points. And so the red  
17 blocks are the data points.

18           And I know there was some criticism of that and the  
19 data points there, but it is data from -- it's a Southern  
20 Nevada Water Authority well. And if you don't like the lines,  
21 you can just look at the red squares. You can just ignore the  
22 lines and you can look at the red squares and you can see what  
23 the data points were.

24           And then the other thing I wanted to mention about  
25 this is that this well recovered on April 26, 2007, the water

1 level. And this is in the record. It's in the record at page  
2 1585. The water levels in the KMW monitor well had recovered  
3 to 1,879.9 feet, which is where they were -- actually a little  
4 bit above where they started.

5           And I guess I'm just bringing this to your attention  
6 because in those hydrographs that were talked about they were  
7 indicating how other wells in the Lower White River Flow  
8 System, in the lower part of the Lower White River Flow System  
9 had not recovered yet to date. And our well recovered, you  
10 know, one year after the well had been pumped, the production  
11 well had been pumped.

12           And then moving on to the next slide, which is  
13 Slide 10, and there was some discussion about this slide, that  
14 the data -- and we're talking about the text that's on the  
15 left-hand side and it talks about the problem with the  
16 transducer and the failure. And there was some information  
17 that there had been hand measurements.

18           And I guess what I want to say about that is that we  
19 were not around in this mega-mess when these reports were  
20 prepared because we weren't involved in 1169 at all. And so  
21 we're reading the report and we're taking this at face value  
22 put out by SNWA that you can't rely on this data because of  
23 this failure. So it doesn't say in here that there were hand  
24 measurements and so it's okay to rely on this data. It doesn't  
25 say anything like that. It just says you can't rely on the

1 data. So that's what everybody was put on notice with regard  
2 to their report.

3 And then the next slide would be 11. And this was --  
4 I put in the full redirect examination on this question with  
5 regard to the U.S. Fish and Wildlife witness that answered the  
6 question about take. And he's being asked questions by his  
7 attorney, which is Mr. Miller. And he wants to ask  
8 questions -- my interpretation of it is is to clarify the  
9 record. And he does, he specifically asked the three  
10 witnesses, they had three on their panel, None of you are  
11 proffered to give testimony and discuss ESA compliance issues?  
12 And they say they're not.

13 Mr. Mayer, he's a hydrologist, he said he wasn't.

14 Ms. Braumiller, she was a hydrologist, she said she  
15 wasn't.

16 Then Dr. Schwemm says he's going to answer it, and he  
17 does answer it. His counsel asks him, and he answers it. And  
18 he's trying to clarify this thought or inference that had been  
19 placed in the record by the Center for Biological Diversity.

20 And nobody objected to that. There's no objection to  
21 that testimony by that witness and that opinion by that  
22 witness. So I would give full weight to that testimony from  
23 that witness.

24 Okay. And, Your Honor, these next three slides,  
25 which are Numbers 12, 13 and 14, and the reference on the

1 record is there, but this is the same chart but it's the full  
2 chart that Mr Robison presented to you yesterday. And again,  
3 it starts out at the top on the first page. This is the State  
4 Engineer's exhibit. The first page indicates all the water  
5 rights in priority. And we get to -- if we go to the next  
6 page.

7 THE COURT: You know, I didn't even look. Does it  
8 actually indicate which are surface and which are groundwater  
9 rights?

10 MS. PETERSON: They're all groundwater.

11 THE COURT: Oh, they're all groundwater.

12 MS. PETERSON: Yes.

13 THE COURT: Oh, you know, I saw that. Okay.

14 MS. PETERSON: Okay. And then when we get to the  
15 second page there's the -- I don't know if we put that there or  
16 if that was there in the original one, but there is a  
17 cumulative total running there of the duty.

18 THE COURT: Yes.

19 MS. PETERSON: So you can see where the 8,000 cutoff  
20 line is. And you can also see the priority dates of all the  
21 water rights. So I think Coyote Springs might have been on  
22 this page so they showed these two pages. But then if we go to  
23 the next page, we go to where Lincoln and Vidler's water rights  
24 would be in the basin. And they're not on here. I'm not sure  
25 why they're not on here, but maybe this was before we were

1 thrown into the basin.

2 THE COURT: Oh.

3 MS. PETERSON: But our priority rights are February  
4 14th, 2005, so they would be right above the Muddy River, that  
5 permit. Is it 775161?

6 THE COURT: So right above the Muddy River Springs  
7 Area.

8 MS. PETERSON: Springs Area. Yes, that area --

9 THE COURT: Nevada Power Company?

10 MS. PETERSON: Yes. That area that's highlighted.  
11 So you can see in the cumulative total, you know, we're like at  
12 the 38,000, 39,000 of an 8,000 cap.

13 MR. TAGGART: Your Honor, if I can just object to  
14 clarify the record. This is -- earlier stated, this is where  
15 we stand. This particular document was --

16 THE COURT: Was one that was stricken or rescinded  
17 from 1303. Is that the one?

18 MR. TAGGART: Well, first it was attached to a Draft  
19 1303 --

20 THE COURT: Right.

21 MR. TAGGART: -- and it was not part of 1303. So I  
22 hope counsel agrees so we can clarify the record that this  
23 table that we're looking at was part of a Draft 1303. It was  
24 not part of Order 1303 and it was not part of Order 1309. I  
25 think it's really important that the Court be aware --



1 THE COURT: Sure.

2 MR. TAGGART: -- of that record.

3 MS. PETERSON: But it was an exhibit in the 1309  
4 proceedings. It was a State Engineer exhibit in the 1309  
5 proceedings.

6 MR. TAGGART: No. The State Engineer put Draft 1303  
7 into his exhibits. And because he put his Draft 1303 in his  
8 exhibits, the attachment to Draft 1303 was also in his  
9 exhibits.

10 THE COURT: So it's in the record on appeal?

11 MR. TAGGART: Yes, it is.

12 THE COURT: And you're just clarifying for the record  
13 what it is, which is that it was part of the draft. It didn't  
14 make it to 1303 itself. And then 1309 basically rescinded  
15 anything else that wasn't included in 1309 from 1303.

16 MR. TAGGART: That's right.

17 THE COURT: Okay.

18 MR. TAGGART: I mean, does it depict what the State  
19 Engineer said in the draft of 1303? Absolutely.

20 THE COURT: Sure.

21 MR. TAGGART: I don't disagree. I think it's --

22 THE COURT: Well, and I think it may be -- it's being  
23 used more illustratively to make a point regarding where  
24 everyone's respective rights would be now that they're thrown  
25 into a seven basin mega-basin.

1 MR. TAGGART: Well, if they are thrown in --

2 THE COURT: If that's true.

3 MR. TAGGART: -- and if it were done with one  
4 priority schedule --

5 THE COURT: Sure.

6 MR. TAGGART: -- this is what it would look like.

7 THE COURT: Sure.

8 MS. PETERSON: Any knowledge that the information is  
9 not correct in that exhibit?

10 MR. TAGGART: I didn't say it was. I think -- I'm  
11 just trying to clarify for the Court so the Court is not  
12 confused about what this document is.

13 THE COURT: No, no, no. I understand what the  
14 document means.

15 MR. TAGGART: Okay.

16 MS. PETERSON: And if we could go back to the first  
17 page.

18 MR. HERREMA: Your Honor, Brad Herrema on behalf of  
19 CSI. We showed this. I think we were the first ones to bring  
20 it into the proceeding. I don't think there's any dispute from  
21 Mr. Taggart it was prepared by the State Engineer. It's  
22 accurate as to what it says at the top of the first page,  
23 regardless of what it was associated with previously. It was  
24 prepared by the State Engineer. It's accurate to show  
25 groundwater rights by priority in the Lower White River Flow

1 System at the time it was prepared.

2 THE COURT: Thank you. And I think Mr. Taggart's  
3 point is at this point you don't know exactly how these  
4 priorities are going to be looked at, considered or anything  
5 like that because that's not part of the conflicts portion. Is  
6 that right?

7 MR. TAGGART: Well, yes. And I think -- yes. I  
8 mean, this is part of what we said is Phase 2.

9 THE COURT: I understand your position.

10 MR. TAGGART: Right.

11 THE COURT: So I understand everyone's respective  
12 positions as to that, but you can continue. I think that  
13 you're illustrating your point as far as the uncertainty that  
14 you are put in with the possibility, I guess, that this could  
15 happen.

16 MS. PETERSON: Correct. And on that note, we hope it  
17 doesn't happen. We hope the Court vacates Order 1309, finding  
18 that the State Engineer had no statutory authority to issue  
19 Order 1309 with regard to, you know, putting all these basins  
20 into one mega-basin and I guess in the future somehow requiring  
21 conjunctive management. Again, we don't think the State  
22 Engineer has statutory authority for that. We hope the case  
23 ends there and that's the only determination that the Court has  
24 to make. But obviously we also would want the Court, if for  
25 some reason that doesn't happen, to rule on all our other

1 requests for relief with regard to vacating the ruling because  
2 of a violation of our due process rights with regard to the six  
3 criteria and all the other due process violations that we've  
4 made and the substantial evidence arguments that we've made.

5 THE COURT: Okay.

6 MS. PETERSON: And thank you very much. Appreciate  
7 your time.

8 THE COURT: Thank you. Thank you. So I think that  
9 concludes our hearing. I'm sure we have housekeeping matters.

10 MR. BOLOTIN: Your Honor, this is James Bolotin for  
11 the State Engineer.

12 THE COURT: Yes.

13 MR. BOLOTIN: And since my argument was two days ago  
14 and it's been another --

15 THE MARSHAL: You're not close to a microphone.

16 THE COURT: Oh, yeah, come close to the mic.

17 MR. BOLOTIN: Since our argument was two days ago and  
18 it's been a long two days, I also wanted to say that on behalf  
19 of the State Engineer and the Attorney General's Office we  
20 really appreciate your time and focus and devotion to getting  
21 through all of this and sticking through it with us those four  
22 days. Thank you, Your Honor.

23 THE COURT: All right. Okay, so I feel like I have  
24 enough, but I know that there was a mention of --

25 UNIDENTIFIED SPEAKER: My fault.

1 THE COURT: So whose hearing were you seeing it at?  
2 Which I have never seen. I don't even know it's a thing. But  
3 I'll certainly let the parties let me know their positions on  
4 that.

5 MR. HERREMA: Your Honor, just a housekeeping issue.

6 THE COURT: Sure.

7 MR. HERREMA: Brad Herrema again on behalf of CSI.  
8 All of the demonstratives, those are considered admitted? Do  
9 we do anything further on those? Admitted as demonstratives,  
10 obviously.

11 THE COURT: Yeah. They're the Court's exhibits that  
12 will be made part of the record.

13 MR. HERREMA: Okay, great.

14 THE CLERK: But not the big boards, though.

15 THE COURT: Not the big boards, but I think that we  
16 have the smaller copies of those. Right? Yeah, but we have  
17 the smaller copies of those. Okay. So I see a lot of people  
18 standing up. Why don't I just go from Mr. Bolotin this way and  
19 then we can go through everyone. Okay.

20 MR. BOLOTIN: Your Honor, just based on what you just  
21 said, sometimes in these water cases there's specific issues  
22 that the judge does want post-hearing briefing on, but if there  
23 isn't, the State Engineer has no desire or request for  
24 post-hearing briefing specifically on anything.

25 MR. TAGGART: And I guess I'm next in line.

1 THE COURT: You're next.

2 MR. TAGGART: Okay. I tend to agree. If the Court  
3 has -- I mean, we've gone through things pretty exhaustively  
4 and the briefs are pretty good. I mean, if something new came  
5 up during the hearing or you go back in chambers and you  
6 realize there is an issue that you think you'd like the parties  
7 to brief more, we've seen that happen. But I think because  
8 we -- and we also did the findings of fact and conclusions of  
9 law.

10 THE COURT: Right.

11 MR. TAGGART: So I think nothing is jumping out at me  
12 as a need to do that, but -- because usually we'll then wait  
13 for the transcripts and then we'll summarize the evidence.

14 THE COURT: Oh, yeah.

15 MR. TAGGART: I just -- we've done enough of all of  
16 that.

17 THE COURT: I mean, you all have done so much work  
18 already. I will ask this. Are there any specific case that  
19 speak to conjunctive management as conjunctive management and  
20 not as a conflict of laws issue?

21 MR. TAGGART: Well, I think that presumes --

22 THE COURT: Or one that's closest to that.

23 MR. TAGGART: Yeah. I think that presumes what  
24 conjunctive management means. And I think there's valid,  
25 multiple --

1 THE COURT: Interpretations of what that actually  
2 means?

3 MR. TAGGART: Yeah, obviously from here today.

4 THE COURT: Okay.

5 MR. TAGGART: So, I mean, I gave you the list I have.  
6 I think Ms. Peterson made her points about that. They're fair  
7 points, so I'm not sure I could add to that much.

8 THE COURT: Okay. All right. I also still -- okay.  
9 Yes?

10 MR. BOLOTIN: The only thing I'd add on that, Your  
11 Honor, not to get into a conflicts of law -- and this is James  
12 Bolotin, for the record. There are persuasive authorities from  
13 other states that probably use the term conjunctive management,  
14 but --

15 THE COURT: Yeah.

16 MR. BOLOTIN: Yeah.

17 THE COURT: I'll just stick to Nevada. It's probably  
18 a lot safer that way. Okay. Mr. Dotson, was there something  
19 you wanted?

20 MR. DOTSON: No, I was just going to put -- I thought  
21 you were going to ask everybody to put on the record. I have  
22 no need for any post-trial briefing, unless you -- but I would  
23 say if in the Court's exercise of your review of the record it  
24 comes to light that you would care to see any issue, please do  
25 not hesitate to ask. And I'm sure I speak with everyone in the

1 room when it comes to that. But I am not asking for any  
2 post-trial opportunity.

3 THE COURT: Yeah. Okay, Mr. Lake.

4 MR. LAKE: I take the same position on briefing as  
5 Mr. Dotson. I don't see a need for it from our perspective.  
6 I'd also like to ask, I know we've all been here for a long  
7 time and I understand that, I would like to ask for one more  
8 brief recess before we adjourn today. I need to confer with my  
9 client one more time.

10 THE COURT: Okay. So I guess we'll just rest at  
11 ease. How brief do you need?

12 MR. LAKE: Five minutes or less would be fine.

13 THE COURT: Okay. I mean, why don't everyone just  
14 stick around here until 3:30. Let me just ask Mr. Flaherty, is  
15 there anything else that you wanted to add?

16 MR. FLAHERTY: Regarding briefing, Your Honor?

17 THE COURT: Yeah.

18 MR. FLAHERTY: On behalf of Nevada Cogen I was going  
19 to say no mas, por favor.

20 THE COURT: Yeah. Okay.

21 MR. FLAHERTY: Thank you.

22 THE COURT: All right. Mr. Balducci, I assume that  
23 same thing.

24 MR. BALDUCCI: Please, no more.

25 THE COURT: Okay. Well, you know, I will tell you



1 there is a lot for me to think about, re-review, make sure.  
2 And I have to thank everyone for their excellent arguments. It  
3 has been extremely helpful to me as someone who has never  
4 practiced water law or done anything even remotely close to  
5 water law to be really able to understand how everything fits  
6 together and what something I think it means isn't really  
7 actually what it means until, you know, when you really kind of  
8 solidified it for me in your arguments. That really helped me  
9 follow the briefings a little bit better.

10 So I think that's why now that I have all this  
11 information I'm going to reread the briefings again just to  
12 make sure in preparing the order. You know what, let me just  
13 make sure I have everyone's proposed findings of fact and  
14 conclusions of law. So hang on. I'm just going to go get my  
15 binder, and I'm going to read off the ones that I have.

16 (Pause in the proceedings.)

17 THE COURT: So let me just read off the ones that I  
18 have and make sure I'm not missing anyone. I've got Las Vegas  
19 Valley Water District, Center for Biological Diversity, Lincoln  
20 County, Vidler, Coyote Springs, NVEnergy, Apex Holding, Nevada  
21 Cogen, Church of Jesus Christ of Latter-Day Saints, Nevada  
22 State Engineer, Muddy Valley Irrigation Company. And I think  
23 there was Georgia-Pacific that I received just like recently.  
24 Is that right, Mr Foletta?

25 MR. FOLETTA: Yeah, you should have it.

1 THE COURT: Okay.

2 MR. FOLETTA: At the -- I think it was the first day  
3 of the hearing.

4 THE COURT: Yeah. Is there anyone who thought they  
5 had put forward proposed findings of fact and didn't hear their  
6 entity called? No. Okay.

7 MR. BOLOTIN: Your Honor, just to double -- just to  
8 triple check, you said State. You said you got the State  
9 Engineer's?

10 THE COURT: Yep, I did get the State Engineer. Yep.  
11 And then, Mr. Lake, was there anything else? Were you able to  
12 confer with your client?

13 MR. LAKE: One second, Your Honor.

14 THE COURT: Okay, sure.

15 MR. LAKE: Your Honor.

16 THE COURT: Yes?

17 MR. LAKE: I'll wait for everybody to get settled. I  
18 have one more thing just to add. So the Center for Biological  
19 Diversity and the State Engineer have reached -- I'm going to  
20 stop short of calling it an agreement in principle, but an  
21 agreement in concept in which we would dismiss our PJR, subject  
22 to certain terms. The specifics of the terms are still under  
23 negotiation.

24 THE COURT: You're still in the negotiating stage?

25 MR. LAKE: Uh-huh. But just to make the Court aware.

1 And we would be maintaining our intervenor status in the  
2 remaining appeals as well.

3 MR. BOLOTIN: And, Your Honor, I would just echo that  
4 it would be subject to the same motion -- by the time we get  
5 across the finish line it would be subject to the same motion  
6 practice, objection, everybody would -- the same thing that  
7 people would get to say to the proposed settlement with SNWA  
8 and MVIC as well.

9 THE COURT: Okay. Thank you. Thank you for letting  
10 us know.

11 So with that said, this -- although I hate taking  
12 matters under advisement, this absolutely necessitates that I  
13 take this under advisement. You know, I will try to get it out  
14 as expediently as I can.

15 They give us like the drop-dead date of 60 days. I'm  
16 hoping to do it well before then. No promises, but, you know,  
17 it will certainly not take months and months and years and  
18 years because I know that that really puts a stop on  
19 everything, and I know that you want to get this case moving  
20 along.

21 / / /

22 / / /

23 / / /

24 / / /

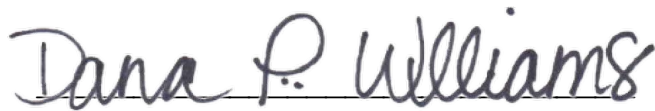
25 / / /

1 THE COURT: So thank you all. I hope you -- for  
2 those of you who are traveling back, that you do so safely.  
3 And have a great weekend.

4 (Proceedings concluded at 3:29 p.m.)

5 -oOo-

6 ATTEST: I do hereby certify that I have truly and correctly  
7 transcribed the audio/video proceedings in the above-entitled  
8 case to the best of my ability.

9  
10 

11 Dana L. Williams  
12 Transcriber

13 ADDITIONAL TRANSCRIBER: LIZ GARCIA  
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**COURT RECORDER:**

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 21/15 22/4 22/13 22/17  
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**MR. BOLOTIN:** [54]  
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 9/20 10/8 10/12 10/17  
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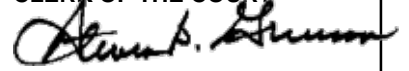
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27 **DISTRICT COURT**  
28 **CLARK COUNTY, NEVADA**

29 LAS VEGAS VALLEY WATER DISTRICT,  
30 and SOUTHERN NEVADA WATER  
31 AUTHORITY, et al.,

Case No. A-20-816761-C

Dept. No. 1

32 Petitioners,

Consolidated with Cases:

33 vs.

- A-20-817765-P
- A-20-818015-P
- A-20-817977-P
- A-20-818069-P
- A-20-817840-P
- A-20-817876-P
- A-21-833572-J

34 ADAM SULLIVAN, P.E., Acting  
35 Nevada State Engineer, et al.,

36 Respondent.

37 \_\_\_\_\_/

38 **NOTICE OF ENTRY OF FINDINGS OF FACT, CONCLUSIONS OF LAW,  
AND ORDER GRANTING PETITIONS FOR JUDICIAL REVIEW**

///

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1 **CERTIFICATE OF SERVICE**

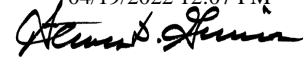
2 Pursuant to NRCP 5(b), I hereby certify that I am an employee of ALLISON MacKENZIE,  
3 LTD., Attorneys at Law, and that on this date, I caused a true and correct copy of the foregoing  
4 document to be served on all parties to this action by electronic service to the participates in this case  
5 who are registered with the Eighth Judicial District Court’s Odyssey eFileNV File & Service system  
6 to this matter.

7 DATED this 19<sup>th</sup> day of April, 2022.

8  
9 /s/ Nancy Fontenot  
10 NANCY FONTENOT



# **EXHIBIT “1”**



CLERK OF THE COURT

1 **FFCO**

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3 **DISTRICT COURT**  
**CLARK COUNTY, NEVADA**

4 LAS VEGAS VALLEY WATER DISTRICT,  
5 and SOUTHERN NEVADA WATER  
6 AUTHORITY,

Case No. A-20-816761-C  
Dept. No. I

7 Petitioners,

Consolidated with Cases:

8 vs.

A-20-817765-P

A-20-818015-P

A-20-817977-P

A-20-818069-P

A-20-817840-P

A-20-817876-P

A-21-833572-J

9 TIM WILSON, P.E., Nevada State Engineer,  
10 DIVISION OF WATER RESOURCES,  
11 DEPARTMENT OF CONSERVATION AND  
12 NATURAL RESOURCES,

Respondent.

And All Consolidated Cases.

13  
14 **FINDINGS OF FACT, CONCLUSIONS OF LAW, AND ORDER GRANTING PETITIONS**  
15 **FOR JUDICIAL REVIEW**

16 This matter comes before this Court on consolidated petitions for judicial review of State  
17 Engineer's Order 1309 filed by Petitioners:

- 18 • Southern Nevada Water Authority and Las Vegas Valley Water District
- 19 • Coyote Spring Investment, LLC
- 20 • Apex Holding Co. and Dry Lake Water, LLC
- 21 • The Center for Biological Diversity
- 22 • Muddy Valley Irrigation Company
- 23 • Nevada Cogeneration Associates Nos. 1 and 2
- 24 • Georgia-Pacific Gypsum LLC and Republic Environmental Technologies, Inc.
- 25 • Lincoln County Water District and Vidler Water Company.

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The parties stipulated to permit the following Intervenors into this matter:

- Sierra Pacific Power Company d/b/a NV Energy and Nevada Power Company d/b/a NV Energy
- Moapa Valley Water District
- The Church of Jesus Christ of Latter-Day Saints
- City of North Las Vegas
- Western Elite Environmental, Inc. and Bedroc Limited, LLC.

In addition, some Petitioners intervened to respond to other petitions for judicial review. The Parties appeared by and through their respective counsels of record. The Court held oral argument from February 14, 2022 to February 17, 2022.

The Court having considered the evidence, the pleadings, together with opening and closing arguments presented at the hearing for these matters, and good cause appearing therefor, makes the following Findings of Fact, Conclusions of Law, and Order:

**I.**  
**PROCEDURAL HISTORY**

On June 15, 2020, the Nevada State Engineer issued Order No. 1309 as his latest administrative action regarding the Lower White River Flow System (“LWRFS”)<sup>1</sup>.

On June 17, 2020, the Las Vegas Valley Water District and the Southern Nevada Water Authority (collectively, “SNWA”) filed a petition for judicial review of Order 1309 in the Eighth Judicial District Court in Clark County, Nevada.<sup>2</sup> Subsequently, the following petitioners filed petitions for judicial review in the Eighth Judicial District Court: Coyote Spring Investments, LLC (“CSI”); Apex Holding Company, LLC and Dry Lake Water LLC (collectively, “Apex”); the Center Biological Diversity (“CBD”); Muddy Valley Irrigation Company (“MVIC”); Nevada

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<sup>1</sup> SE ROA 2 – 69. The LWRFS refers to an area in southern Nevada made up of several hydrological basins that share the same aquifer as their source of groundwater. The Nevada State Engineer determined that this encompasses the area that includes Coyote Spring Valley, Muddy River Springs Area, California Wash, Hidden Valley, Garnet Valley, Kane Springs Valley and the northwest portion of the Black Mountains Area.

<sup>2</sup> LVVWD and SNWA Petition for Judicial Review, filed June 17, 2020.

1 Cogeneration Associates Numbers 1 and 2 (“Nevada Cogen”); and Georgia-Pacific Gypsum LLC,  
2 and Republic Technologies, Inc. (collectively, “Georgia-Pacific”). All petitions were consolidated  
3 with SNWA’s petition.<sup>3</sup>

4 Later, Sierra Pacific Power Company d/b/a NV Energy (“Sierra Pacific”) and Nevada  
5 Power Company d/b/a NV Energy (“Nevada Power” and, together with Sierra Pacific, “NV  
6 Energy”), Moapa Valley Water District (“MVWD”), the Church of Jesus Christ and of Latter-Day  
7 Saints (the “Church”), the City of North Las Vegas (“CNLV”), and Western Elite Environmental,  
8 Inc. and Bedroc Limited (collectively, “Bedroc”) <sup>4</sup> were granted intervention status in the  
9 consolidated petitions for judicial review of Order 1309.

10 On July 13, 2020, Lincoln County Water District and Vidler Water Co. (collectively,  
11 “Vidler”) timely filed their Petition for Judicial Review of State Engineer Order 1309 in the  
12 Seventh Judicial District Court in Lincoln County, Nevada, identified as Case No. CV-0702520.  
13 On August 26, 2020, the Seventh Judicial District Court issued an Order Granting Motion to  
14 Change Venue, transferring this matter to the Eighth Judicial District Court in Clark County,  
15 Nevada. Vidler appealed the Order Granting Motion to Change Venue to the Nevada Supreme  
16 Court, and on April 15, 2021, the Nevada Supreme Court entered its Order of Affirmation. On  
17 May 27, 2021, per verbal stipulation by the parties, the Court ordered this matter consolidated into  
18 Case No. A-20-816761-C. When transferred to the Eighth Judicial District Court, Vidler’s action  
19 was assigned Case No. A-21-833572-J. Notwithstanding the consolidation of all of the cases, each  
20 case retained its individual and distinct factual and legal issues.

21 Petitioners in all the consolidated actions filed their Opening Briefs on or about August 27,  
22 2021. Respondents State Engineer, Intervenors, and Petitioners who were Respondent-Intervenors  
23 filed their Answering Briefs on or about November 24, 2021. Petitioners filed their Reply Briefs on  
24 or about January 11, 2022.

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27 <sup>3</sup> Stipulation for Consolidation, A-20-816761-C, May 26, 2021.

28 <sup>4</sup> Bedroc and CNLV did not file briefs and did not participate in oral argument.

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**II.**

**FACTUAL HISTORY**

**A. The Carbonate Groundwater Aquifer and the Basins**

Much of the bedrock and mountain ranges of Eastern Nevada are formed from a sequence of sedimentary rocks laid down during the Paleozoic Era. These formations are limestones or dolomites, commonly referred to as “carbonates,” due to the chemical composition of the minerals composing the rocks. These formations have been extensively deformed through folding and faulting caused by geologic forces. This deformation has caused extensive fracture and fault systems to form in these carbonate rocks, with permeability enhanced by the gradual solution of minerals. The result is an aquifer system that over time has accumulated large volumes of water with some apparent degree of connection throughout the much of area.<sup>5</sup> The valley floors in the basins of Eastern Nevada are generally composed of alluvium comprised largely of relatively young (<5 million years) unconsolidated sands, gravels, and clays. This sequence is loosely referred to as the “Alluvial Aquifer,” the aquifer for most shallow wells in the area. Most of the water in the Carbonate Aquifer is present due to infiltration of water thousands of years ago; recent recharge from present day precipitation may represent only a fraction of the water stored.

Approximately 50,000 square miles of Nevada sits atop of this geologic layer of carbonate rock, which contains significant quantities of groundwater.<sup>6</sup> This carbonate-rock aquifer system contains at least two major “regional flow systems” - continuous, interconnected, and transmissive geologic features through which water flows underground roughly from north to south: the Ash Meadows-Death Valley regional flow system; and the White River-Muddy River Springs system.<sup>7</sup> These flow systems connect the groundwater beneath dozens of topographic valleys across distances exceeding 200 miles.<sup>8</sup> The White River-Muddy River Springs flow system, stretching approximately

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<sup>5</sup> State Engineer Record on Appeal (“SE ROA”) 36062-67, Ex. 14; SE ROA 661, Ex. 8.  
<sup>6</sup> SE ROA 659.  
<sup>7</sup> SE ROA 661.  
<sup>8</sup> SE ROA 661.



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240 miles from southern Elko County in the north to the Muddy River Springs Area in the south, was identified as early as 1966.<sup>9</sup> The area designated by Order 1309 as the LWRFS consists generally of the southern portion of the White River-Muddy River Springs flow system.<sup>10</sup>

The Muddy River runs through a portion of the LWRFS before cutting southeast and discharging into Lake Mead.<sup>11</sup> Many warm-water springs, including the Muddy River Springs at issue in this litigation, discharge from the regional carbonate groundwater aquifer.<sup>12</sup> The series of springs, collectively referred to as the “Muddy River Springs” in the Muddy River Springs Area hydrographic basin form the headwaters of the Muddy River and provide the only known habitat for the endangered Moapa dace.<sup>13</sup>

The Muddy River Springs are directly connected to, and discharge from, the regional carbonate aquifer.<sup>14</sup> Because of this connection, flows from the springs are dependent on the elevation of groundwater within the carbonate aquifer, and can change rapidly in direct response to changes in carbonate groundwater levels.<sup>15</sup> As carbonate groundwater levels decline, spring flows decrease, beginning with the highest-elevation springs.<sup>16</sup>

As early as 1989, there were concerns that sustained groundwater pumping from the carbonate-rock aquifer would result in water table declines, substantially deplete the water stored in the aquifer, and ultimately reduce or eliminate flow from the warm-water springs that discharge from the aquifer.<sup>17</sup>

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<sup>9</sup> SE ROA 11349-59.

<sup>10</sup> *See* SE ROA 11350.

<sup>11</sup> SE ROA 41943.

<sup>12</sup> SE ROA 660-61, 53056, 53062.

<sup>13</sup> SE ROA 663-664, 41959, 48680.

<sup>14</sup> SE ROA 73-75, 34545, 53062.

<sup>15</sup> SE ROA 60-61, 34545.

<sup>16</sup> SE ROA 46, 34545.

<sup>17</sup> *See* SE ROA 661.

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The general rule in Nevada is that one acquires a water right by filing an application to appropriate water with the Nevada Division of Water Resources (“DWR”). If the DWR approves the application, a “Permit to Appropriate” issues. Nevada has adopted the principle of “first in time, first in right,” also known as “priority.” The priority of a water right is determined by the date a permit is applied for. Nevada’s water resources are managed through administrative units called “hydrographic basins,” which are generally defined by topography, more or less reflecting boundaries between watersheds. Nevada is divided into 232 hydrographic basins (256 hydrographic basins and sub-basins, combined) based upon the surface geography and subsurface flow.

The priority of groundwater rights is determined relative to the water rights holder within the individual basins. If there is not enough water to serve all water right holders in a particular basin, “senior” appropriators are satisfied first in order of priority: the rights of “junior” appropriators may be curtailed. Historically, The Nevada State Engineer has managed hydrographic basins in a basin-by-basin manner for decades,<sup>18</sup> and administers and manages each basin as a discrete hydrologic unit.<sup>19</sup> The State Engineer keeps and maintains annual pumping inventories and records on a basin-by-basin basis.<sup>20</sup>

This administrative structure has worked reasonably well for basins where groundwater is pumped from “basin fill” aquifers or alluvium, where the annual recharge of the groundwater historically has been estimated based upon known or estimated precipitation data - establishing the amount of groundwater that is recharged annually and can be extracted sustainably from a basin, known as the “perennial yield.” In reality, many hydrographic basins are severely over-appropriated, due to inaccurate estimates, over pumping, domestic wells, changing climate conditions, etc.

Administration of groundwater rights is made particularly complex when the main source of

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<sup>18</sup>SE ROA 654, 659, 699, 726, 755.  
<sup>19</sup> SE ROA 949-1069.  
<sup>20</sup> SE ROA 1070-1499.

1 groundwater is not “basin fill” or alluvium, but aquifers found in permeable geologic formations  
2 lying beneath the younger basin fill, and which may underlie large regions that are not well defined  
3 by the present-day hydrographic basins. This is the case with Nevada’s “Carbonate Aquifer.”

4 When necessary, the State Engineer may manage a basin that has been designated for  
5 administration. NRS 534.030 outlines the process by which a particular basin can be designated for  
6 administration by the State Engineer. In the instant case, six of the seven basins affected by Order  
7 No. 1309 had already been designated for management under NRS 534.030, including:

- 8 a. Coyote Spring Valley Hydrographic Basin (“Coyote Spring Valley”), Basin No. 210, since  
9 1985;
- 10 b. Black Mountains Area Hydrographic Basin (“Black Mountains Area”), Basin No. 215, since  
11 November 22, 1989;
- 12 c. Garnet Valley Hydrographic Basin (“Garnet Valley”), Basin No. 216, since April 24, 1990;
- 13 d. Hidden Valley Hydrographic Basin (“Hidden Valley”), Basin No. 217, since October 24,  
14 1990;
- 15 e. California Wash Hydrographic Basin (“California Wash”), Basin No. 218, since August 24,  
16 1990; and
- 17 f. Muddy River Springs Area Hydrographic Basin (“Muddy River Springs Area”), Basin No.  
18 219, since July 14, 1971.<sup>21</sup>

19 Kane Springs Valley (“Kane Springs Valley”), Basin 206, which was also affected by  
20 Order No. 1309, had not been designated previously for administration.<sup>22</sup>

21 See SE ROA 2-3, 71-72.

22 The Court takes judicial notice of Kane Springs Valley Basin’s status of not being designated for administration per  
NRS 534.030. <http://water.nv.gov/StateEngineersOrdersList.aspx> (available online at the Division of Water Resources.  
“Mapping& Data” tab, under “Water Rights” tab, “State Engineer’s Orders List and Search”). Facts that are subject to  
judicial notice “are facts in issue or facts from which they may be inferred.” NRS 47.130(1). To be judicially noticed, a  
fact must be “[g]enerally known” or “capable of accurate and ready determination by resort to sources whose accuracy  
cannot reasonably be questioned.” NRS 47.130(2); *Andolino v. State*, 99 Nev. 346, 351, 662 P.2d 631, 633-34 (1983)  
(courts may take judicial notice of official government publications); *Barron v. Reich*, 13 F.3d 1370, 1377 (9th Cir.  
1994) (courts may take judicial notice of documents obtained from administrative agencies); *Greeson v. Imperial Irr.  
Dist.*, 59 F.2d 529, 531 (9th Cir.1932) (courts may take judicial notice of “public documents”).

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**B. The Muddy River Decree**

Over one hundred years ago, this Court issued the Muddy River Decree of 1920 (sometimes referred to herein as the “Decree” or “Muddy River Decree”), which established water rights on the Muddy River.<sup>23</sup> The Muddy River Decree recognized specific water rights,<sup>24</sup> identified each water right holder on the Muddy River, and quantified each water right.<sup>25</sup> MVIC specifically owns certain rights “. . . to divert, convey, and use all of said waters of said River, its head waters, sources of supply and tributaries, save and except the several amounts and rights hereinbefore specified and described . . . and to divert said waters, convey and distribute the same to its present stockholders, and future stockholders, and other persons who may have acquired or who may acquire temporary or permanent rights through said Company. . .”<sup>26</sup>. The Decree appropriates all water of the Muddy River at the time the Decree was entered, which was prior to any other significant development in the area. The predevelopment flow averaged approximately 33,900 acre feet per annum (“afa”).<sup>27</sup> The rights delineated through The Muddy River Decree are the oldest and most senior rights in the LWRFS.

**C. The Moapa Dace**

The Moapa dace (*Moapa coriacea*) is a thermophilic minnow endemic to the upper spring-fed reaches Muddy River, and has been federally listed as endangered since 1967.<sup>28</sup> Between 1933

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<sup>23</sup> See Judgment and Decree, *Muddy Valley Irrigation Co. v. Moapa and Salt Lake Produce Co.* (the “Muddy River Decree” or “Decree”) (March 11, 1920) (SE ROA 33770-33816).

<sup>24</sup> SE ROA 33770-816. Specifically, the Muddy River Decree finds “[t]hat the aggregate volume of the several amounts and quantities of water awarded and allotted to the parties . . . is the total available flow of the said Muddy River and consumes and exhausts all of the available flow of the said Muddy River, its headwaters, sources of supply and tributaries.” SE ROA 33792-33793.

<sup>25</sup> SE ROA 33798-806.

<sup>26</sup> SE ROA 33775.

<sup>27</sup> See SNWA Report (June 2019) (SE ROA 41930 – 42072) at § 3.4.1 (SE ROA 41962) describing the predevelopment flows as measured in 1946 as 33,900 afa and the average flow measured from July 1, 1913 to June 30, 1915 and October 1, 1916 to September 30, 1917 as 34,000 afa. The NSE further recognizes 33,900 afa as the predevelopment flow. See Order 1309 (SE ROA 2-69) at p. 61 (SE ROA 62).

<sup>28</sup> SE ROA 5.

1 and 1950, the Moapa dace was abundant in the Muddy River and was estimated to inhabit as many  
2 as 25 individual springs and up to 10 miles of stream habitat. However, by 1983, the species only  
3 occurred in springs and two miles of spring outflows. Currently, approximately 95 percent of the  
4 total Moapa dace population occurs within 1.78 miles of one major tributary system that flows from  
5 three high-elevation spring complexes within the Muddy River Springs Area.<sup>29</sup>

6 Threats to the Moapa Dace include non-native predatory fishes, habitat loss from water  
7 diversions and impoundments, wildfire risk from non-native vegetation, and reductions to surface  
8 spring-flows resulting from groundwater development.<sup>30</sup> Because the Moapa dace is entirely  
9 dependent on spring flow, protecting the dace necessarily involves protecting the warm spring  
10 sources of the Muddy River.<sup>31</sup>

11 **D. Order 1169**

12 Significant pumping of the Carbonate Aquifer in the LWRFS began in the 1980s and  
13 1990s. Initial assessments of the water available in the Aquifer suggested it would provide a new  
14 abundant source of water for Southern Nevada. Because the prospective water resources of the  
15 LWRFS carbonate appeared to be substantial, nearly 100 water right applications for over 300,000  
16 acre feet were filed in State Engineer's office.<sup>32</sup>

17 By 2001, the State Engineer had granted more than 40,000 acre feet of applications in the  
18 LWRFS. The State Engineer considered additional applications for groundwater in Coyote Spring  
19 Valley and adjacent hydrographic basins. However, concerned over the lack of information  
20 regarding the sustainability of water resources from the Carbonate Aquifer, the State Engineer  
21 began hearings in July and August 2001 on water right applications.<sup>33</sup>

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<sup>29</sup> SE ROA 47169.

25 <sup>30</sup> SE ROA 47160.

26 <sup>31</sup> SE ROA 42087.

27 <sup>32</sup> SE ROA 4, Ex. 1.

28 <sup>33</sup> *Id.*

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On March 8, 2002, the State Engineer issued Order 1169 to delay consideration of new water right applications and require the pumping of existing groundwater to determine what impact increased groundwater pumping would have on senior water rights and the environment at the Muddy River (“Aquifer Test”).<sup>34</sup> Order 1169 held in abeyance all applications for the appropriation of groundwater from the carbonate-rock aquifer system located in the Coyote Spring Valley Basin (Basin 210), Black Mountains Area Basin (Basin 215), Garnet Valley Basin (Basin 216), Hidden Valley Basin (Basin 217), Muddy River Springs aka Upper Moapa Valley Basin (Basin 210), and Lower Moapa Valley Basin (Basin 220).<sup>35</sup> California Wash (Basin 218) was subsequently added to this Order.<sup>36</sup>

Notably, Kane Springs was not included in the Order 1169 study area. In Ruling 5712, the State Engineer specifically determined Kane Springs would not be included in the Order 1169 study area because there was no substantial evidence that the appropriation of a limited quantity of water in Kane Springs would have any measurable impact on the Muddy River Springs that warranted the inclusion of Kane Springs in Order 1169.<sup>37</sup> The State Engineer specifically rejected the argument that the Kane Springs rights could not be appropriated based upon senior appropriated rights in the down gradient basins.<sup>38</sup>

Order 1169A, issued December 21, 2012, set up a test to “stress” the Carbonate Aquifer through two years of aggressive pumping, combined with examination of water levels in monitoring wells located throughout the LWRFS.<sup>39</sup> Participants in the Aquifer test were Southern Nevada Water Authority (“SNWA”), Las Vegas Valley Water District (“LVVWD”), Moapa Valley Water District, Coyote Springs Investments, LLC (“Coyote Springs”), Moapa Band of Paiutes, and Nevada

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<sup>34</sup> SE ROA 654-669.  
<sup>35</sup> See SE ROA 659, 665.  
<sup>36</sup> SE ROA 659-69, Ex. 8; *see also* SE ROA 654, Ex. 7.  
<sup>37</sup> SE ROA 719.  
<sup>38</sup> SE ROA 713.  
<sup>39</sup> SE ROA 654-58, Ex. 7.

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Power Company. Pumping included 5,300 afa in Coyote Spring Valley, 14,535 afa total carbonate pumping, and 3,840 afa alluvial pumping.<sup>40</sup> Pumping tests effects were examined at 79 monitoring wells and 11 springs and streamflow monitoring sites.<sup>41</sup> The Kane Springs basin was not included in the Order 1169 aquifer testing, and Kane Springs basin water right holders were not involved, not provided notice, and did not participate in the aquifer testing, monitoring or measurements, submission of reports, proceedings and actions taken by the State Engineer pursuant to Order 1169.<sup>42</sup>

The State Engineer’s conclusions from the pump test found an “unprecedented decline” in high-altitude springs, an “unprecedented decline” in water levels, and that additional pumping in the central part of Coyote Spring Valley or the Muddy River Spring Area could not occur without conflict with existing senior rights, including decreed surface water rights on the Muddy River, or the habitat of the Moapa Dace. The State Engineer attributed observed decreases in water levels in other areas of the basins to the pumping during the Order 1169 test and concluded that the test demonstrated connectivity within the Carbonate Aquifer of the LWRFS. On this basis, the State Engineer determined that the five basin LWRFS should be jointly managed.

In 2014, and based on the results of the Aquifer Test, the State Engineer issued Rulings 6254–6261 on January 29, 2014 denying all the pending groundwater applications in Coyote Springs Valley, Muddy River Springs Area, California Wash, Hidden Valley, Garnet Valley, and certain portions of the Black Mountains Area.<sup>43</sup> His rationale in each ruling was the same: “because these basins share a unique and close hydrologic connection and share virtually all of the same source and supply of water, unlike other basins in Nevada, these five basins will be jointly managed.”<sup>44</sup>

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<sup>40</sup> The Order uses the term acre-foot per year (afy), but for consistency with common usage, this Court uses the equivalent term acre feet per annum.

<sup>41</sup> SE ROA 6, Ex. 1.

<sup>42</sup> SE ROA 36230 - 36231.

<sup>43</sup> SE ROA 726 – 948.

<sup>44</sup> *See e.g.*, SE ROA 479.

1 **E. Interim Order 1303 and proceedings**

2 On January 11, 2019 -- nearly 17 years after issuing Order 1169, then-State Engineer Jason  
3 King issued Interim Order 1303 to start a two-phased administrative process to resolve the  
4 competing interests for water resources in the LWRFS.<sup>45</sup> He created the LWRFS as a joint  
5 administrative unit and invited stakeholders to participate in an administrative hearing to address  
6 the factual questions of what the boundary of the LWRFS should be, and what amount of  
7 groundwater could be sustainably pumped in the LWRFS.<sup>46</sup> The LWRFS is the first multi-basin  
8 area that the Nevada State Engineer has designated in state history. The ordering provisions in  
9 Interim Order 1303 provide in pertinent part:

- 10
- 11 1. The Lower White River Flow System consisting of the Coyote Spring Valley,  
12 Muddy River Springs Area, California Wash, Hidden Valley, Garnet Valley,  
13 and the portion of the Black Mountains Area as described in this Order, is  
14 herewith designated as a joint administrative unit for purposes of  
15 administration of water rights. All water rights within the Lower White River  
16 Flow System will be administered based upon their respective date of  
17 priorities in relation to other rights within the regional groundwater unit.

18 Any stakeholder with interests that may be affected by water right  
19 development within the Lower White River Flow System may file a report in  
20 the Office of the State Engineer in Carson City, Nevada, no later than the  
21 close of business on Monday, June 3, 2019.

22 Reports filed with the Office of the State Engineer should address the  
23 following matters:

- 24 a. The geographic boundary of the hydrologically connected groundwater  
25 and surface water systems comprising the Lower White River Flow  
26 System;
- 27 b. The information obtained from the Order 1169 aquifer test and  
28 subsequent to the aquifer test and Muddy River headwater spring flow as  
it relates to aquifer recovery since the completion of the aquifer test;
- c. The long-term annual quantity of groundwater that may be pumped  
from the Lower White River Flow System, including the relationships  
between the location of pumping on discharge to the Muddy River  
Springs, and the capture of Muddy River flow;

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27 <sup>45</sup> SE ROA 635-53, Ex. 6.

28 <sup>46</sup> SE ROA 82-83.



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- d. The effects of movement of water rights between alluvial wells and carbonate wells on deliveries of senior decreed rights to the Muddy River; and,
- e. Any other matter believed to be relevant to the State Engineer's analysis.

SE ROA 647-48, Ex. 6.

The State Engineer identified the LWRFS as including the following hydrographic basins: Coyote Spring Valley, a portion of Black Mountains Area, Garnet Valley, Hidden Valley, California Wash, and the Muddy River Springs Area.<sup>47</sup> Kane Springs continued to be excluded as part of the LWRFS multi-basin area in Interim Order 1303.<sup>48</sup>

In July and August 2019, reports and rebuttal reports were submitted discussing the four matters set forth in Interim Order 1303. On July 25, 2019, the State Engineer issued a Notice of Pre-Hearing Conference, and on August 9, 2019, the State Engineer held a prehearing conference. On August 23, 2019, the State Engineer issued a Notice of Hearing (which it amended on August 26, 2019), noting that the hearing would be “the first step” in determining how to address future management decisions, including policy decisions, relating to the LWRFS.<sup>49</sup> He also indicated that the legal question of whether groundwater pumping in the LWRFS conflicts with senior water rights would be addressed in Phase 2 of the LWRFS administrative process.<sup>50</sup>

The Hearing Officer made it clear that “any other matter believed to be relevant” as specified in ordering paragraph 1(e) of Order 1303 would not include discussion of the administrative impacts of consolidating the basins or any policy matters affected by its decision. The State Engineer conducted a hearing on the reports submitted under Order 1303 between September 23, 2019, and October 4, 2019. At the start of the administrative hearing, the State Engineer reminded the parties the public administrative hearing was not a “trial-type” proceeding,

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<sup>47</sup> SE ROA 70-88.

<sup>48</sup> *Id.*

<sup>49</sup> SE ROA 263, Ex. 2 (Notice); SE ROA 285, Ex. 3 (Amended Notice).

<sup>50</sup> SE ROA 522.

1 not a contested adversarial proceeding.<sup>51</sup> Cross-examination was limited to between 4-17 minutes  
2 per participant depending on the length of time given to a participant to present its reports.<sup>52</sup>

3 Following the submission by the participating stakeholders of closing statements at the  
4 beginning of December 2019, the State Engineer engaged in no additional public process and  
5 solicited no additional input regarding “future management decisions, including policy decisions,  
6 relating to the Lower White River Flow System basins.”<sup>53</sup>

7 **F. Order 1309**

8 On June 15, 2020, the State Engineer issued Order 1309.<sup>54</sup> The first three ordering  
9 paragraphs state as follows:

- 10 1. The Lower White River Flow System consisting of the Kane Springs Valley,  
11 Coyote Spring Valley, Muddy River Springs Area, California Wash, Hidden  
12 Valley, Garnet Valley, and the northwest portion of the Black Mountains Area  
13 as described in this Order, is hereby delineated as a single hydrographic basin.  
14 The Kane Springs Valley, Coyote Spring Valley, Muddy River Springs Area,  
15 California Wash, Hidden Valley, Garnet Valley and the northwest portion of  
16 the Black Mountains Area are hereby established as sub-basins within the  
17 Lower White River Flow System Hydrographic Basin.
- 18 2. The maximum quantity of groundwater that may be pumped from the Lower  
19 White River Flow System Hydrographic Basin on an average annual basis  
20 without causing further declines in Warm Springs area spring flow and flow in  
21 the Muddy River cannot exceed 8,000 afa and may be less.
- 22 3. The maximum quantity of water that may be pumped from the Lower White  
23 River Flow System Hydrographic Basin may be reduced if it is determined  
24 that pumping will adversely impact the endangered Moapa dace.

25 SE ROA 66, Ex. 1.

26 The Order does not provide guidance about how the new “single hydrographic basin” will  
27 be administered and provided no clear analysis as to the basis for the 8000 afa number for the  
28 maximum sustainable yield.

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29 <sup>51</sup> SE ROA 52962, Transcript 6:4-6, 24 to 7:1 (Sept. 23, 2019) (Hearing Officer Fairbank).

30 <sup>52</sup> SE ROA 52962, Transcript 7:5-7 (Sept. 23, 2019) (Hearing Officer Fairbank).

31 <sup>53</sup> See SE ROA 285, Ex. 3.

32 <sup>54</sup> SE ROA 2-69.

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In its Order, the State Engineer indicated that it “considered this evidence and testimony [regarding basin inclusion and basin boundary] on the basis of a common set of criteria that are consistent with the original characteristics considered critical in demonstrating a close hydrologic connection requiring joint management in Rulings 6254-6261.”<sup>55</sup> However, the State Engineer did not disclose these criteria to the stakeholders before or during the Order 1303 proceedings. Instead, he disclosed them for the first time in Order 1309, after the stakeholders had engaged in extensive investigations, expert reporting, and factual hearing requested by Order 1303. The criteria are:

1. Water level observations whose spatial distribution indicates a relatively uniform or flat potentiometric surface are consistent with a close hydrologic connection.
2. Water level hydrographs that, in well-to-well comparisons, demonstrate a similar temporal pattern, irrespective of whether the pattern is caused by climate, pumping, or other dynamic is consistent with a close hydrologic connection.
3. Water level hydrographs that demonstrate an observable increase in drawdown that corresponds to an increase in pumping and an observable decrease in drawdown, or a recovery, that corresponds to a decrease in pumping, are consistent with a direct hydraulic connection and close hydrologic connection to the pumping location(s).
4. Water level observations that demonstrate a relatively steep hydraulic gradient are consistent with a poor hydraulic connection and a potential boundary.
5. Geological structures that have caused a juxtaposition of the carbonate-rock aquifer with low permeability bedrock are consistent with a boundary.
6. When hydrogeologic information indicate a close hydraulic connection (based on criteria 1-5), but limited, poor quality, or low resolution water level data obfuscate a determination of the extent of that connection, a boundary should be established such that it extends out to the nearest mapped feature that juxtaposes the carbonate-rock aquifer with low-permeability bedrock, or in the absence of that, to the basin boundary.

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<sup>55</sup> SE ROA 48-49, Ex. 1.

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After consideration of the above criteria, the State Engineer decided to finalize what was preliminarily determined in Interim Order 1303, and consolidated several administrative units into a single hydrographic basin, designated as the “Lower White River Flow System” or “LWRFS.” The State Engineer also added the previously excluded Kane Springs Hydrographic Basin to the LWRFS,<sup>56</sup> and modified the portion of the Black Mountains area that is in the LWRFS. Although Order 1309 did not specifically address priorities or conflict of rights, as a result of the consolidation of the basins, the relative priority of all water rights within the seven affected basins will be reordered and the priorities will be considered in relation to all water rights holders in the consolidated basins, rather than in relation only to the other users within the original separate basins.

**G. Petitioners and Their Respective Water Rights or Interests**

- a. Southern Nevada Water Authority and Las Vegas Valley Water District are government agencies serving Southern Nevada’s water needs, and own water rights in Coyote Springs Valley, Hidden Valley, Garnet Valley, and a significant portion of the Muddy River decreed rights.
- b. Coyote Spring Investments, LLC is a developer who owns water rights in Coyote Spring Valley, Kane Springs Valley, and California Wash;
- c. Apex Holding Company, LLC and Dry Lake Water LLC own real estate and water rights to the area of land commonly referred to as the Apex Industrial Park, in Garnet Valley and Black Mountains Area;
- d. The Center Biological Diversity is a national nonprofit conservation organization which does not hold any water rights, but has educational, scientific, biological, aesthetic and spiritual interests in the survival and recovery of the Moapa Dace;
- e. Muddy Valley Irrigation Company is a private company that owns most of the decreed rights

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<sup>56</sup> The Court notes that the Nevada State Engineer determined that Kane Springs should be included in this joint management area, even though the Kane Springs Basin had not been designated previously for management through the statutory process delineated in under NRS 534.030.

- 1 in the Muddy River;
- 2 f. Nevada Cogeneration Associates Numbers 1 and 2, who operate gas-fired facilities at the
- 3 south end of the LWRFS and have water rights in the Black Mountain Area;
- 4 g. Georgia-Pacific Gypsum LLC, and Republic Technologies, Inc. are industrial companies that
- 5 have water rights in the Garnet Valley Hydrographic Basin;
- 6 h. Lincoln County Water District and Vidler Water Co. are a public water district and a private
- 7 company, respectively, and own water rights in Kane Springs Valley.

8 **III.**

9 **DISCUSSION**

10 **STANDARD OF REVIEW**

11 An aggrieved party may appeal a decision of the State Engineer pursuant to NRS 533.450(1).  
12 The proceedings, which are heard by the court, must be informal and summary, but must afford the  
13 parties a full opportunity to be heard. NRS 533.450(2). The decision of the State Engineer is  
14 considered to be prima facie correct, and the burden of proof is on the party challenging the  
15 decision. NRS 533.450(10).

16 **A. Questions of Law**

17 Questions of statutory construction are questions of law which require de novo review.  
18 The Nevada Supreme Court has repeatedly held courts have the authority to undertake an  
19 independent review of the State Engineer’s statutory construction, without deference to the State  
20 Engineer’s determination. *Andersen Family Assoc. v. Ricci*, 124 Nev. 182, 186, 179 P.3d 1201,  
21 1203 (2008) (citing *Bacher v. State Engineer*, 122 Nev. 1110, 1115, 146 P.3d 793, 798 (2006) and  
22 *Kay v. Nunez*, 122 Nev. 1100, 1103, 146 P.3d 801, 804 (2006)).

23 Any “presumption of correctness” of a decision of the State Engineer as provided by NRS  
24 533.450(10), “does not extend to ‘purely legal questions,’ such as ‘the construction of a statute,’  
25 as to which ‘the reviewing court may undertake independent review.’” *In re State Engineer*  
26 *Ruling No. 5823*, 128 Nev. 232, 238-239, 277 P.3d 449, 453 (2012) (quoting *Town of Eureka v.*  
27 *State Engineer*, 108 Nev. 163, 165, 826 P.2d 948, 949 (1992)). At no time will the State  
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1 Engineer’s interpretation of a statute control if an alternative reading is compelled by the plain  
2 language of the statute. *See Andersen Family Assoc.*, 124 Nev. at 186, 179 P.3d at 1203.

3 Although “[t]he State Engineer’s ruling on questions of law is persuasive... [it is] not  
4 entitled to deference.” *Sierra Pac. Indus. v. Wilson*, 135 Nev. Adv. Op. 13, 440 P.3e 37, 40  
5 (2019). A reviewing court is free to decide legal questions without deference to an agency  
6 determination. *See Jones v. Rosner*, 102 Nev. 215, 216-217, 719 P.2d 805, 806 (1986); *accord*  
7 *Pyramid Lake Paiute Tribe v. Ricci*, 126 Nev. 521, 525, 245 P.3d 1145, 1148 (2010) (“[w]e  
8 review purely legal questions without deference to the State Engineer’s ruling.”).

9 **B. Questions of Fact**

10 The Court’s review of the Order 1309 is “in the nature of an appeal” and limited to the  
11 record before the State Engineer. *Revert v. Ray*, 95 Nev. 782, 786, 603 P.2d 262, 264 (1979). On  
12 appeal, a reviewing court must “determine whether the evidence upon which the engineer based  
13 his decision supports the order.” *State Engineer v. Morris*, 107 Nev. 699, 701, 819 P.2d 203, 205  
14 (1991) (citing *State Engineer v. Curtis Park*, 101 Nev. 30, 32, 692 P.2d 495, 497 (1985)).

15 As to questions of fact, the State Engineer’s decision must be supported by “substantial  
16 evidence in the record [.]” *Eureka Cty. v. State Engineer*, 131 Nev. 846, 850, 359 P.3d 1114, 1117  
17 (2015) (quoting *Town of Eureka*, 108 Nev. at 165, 826 P.2d at 949). Substantial evidence is “that  
18 which a reasonable mind might accept as adequate to support a conclusion.” *Bacher*, 122 Nev. at  
19 1121, 146 P.3d at 800 (finding that a reasonable person would expect quantification of water  
20 rights needed and no evidence of such quantification or calculations by the State Engineer is  
21 included in the record). The Court may not substitute its judgment for that of the State Engineer,  
22 “pass upon the credibility of the witness nor reweigh the evidence.” *Revert*, 95 Nev. at 786, 603  
23 P.2d at 264.

24 Where a decision is arbitrary and capricious it is not supported by substantial evidence.  
25 *See Clark Cty. Educ. Ass’n v. Clark Cty. Sch. Dist.*, 122 Nev. 337, 339-40, 131 P.3d 5, 7 (2006)  
26 (concluding that an arbitrator’s award was “supported by substantial evidence and therefore not  
27 arbitrary, capricious, or unsupported by the arbitration agreement”).

28 In *Revert*, 95 Nev. at 787, 603 P.2d at 264–65, the Nevada Supreme Court noted:

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The applicable standard of review of the decisions of the State Engineer, limited to an inquiry as to substantial evidence, presupposes the fullness and fairness of the administrative proceedings: all interested parties must have had a ‘full opportunity to be heard,’ *See* NRS 533.450(2); the State Engineer must clearly resolve all the crucial issues presented, *See Nolan v. State Dep’t. of Commerce*, 86 Nev. 428, 470 P.2d 124 (1970) (on rehearing); the decisionmaker must prepare findings in sufficient detail to permit judicial review, *Id.*; *Wright v. State Insurance Commissioner*, 449 P.2d 419 (Or.1969); *See also* NRS 233B.125. When these procedures, grounded in basic notions of fairness and due process, are not followed, and the resulting administrative decision is arbitrary, oppressive, or accompanied by a manifest abuse of discretion, this court will not hesitate to intervene. *State ex rel. Johns v. Gragson*, 89 Nev. 478, 515 P.2d 65 (1973).

Thus, in order to survive review, Order 1309 must be statutorily authorized, resolve all crucial issues presented, must include findings in detail to permit judicial review, and must be based on substantial evidence.

**CONCLUSIONS OF LAW**

**A. The State Engineer Did Not Have the Authority to Jointly Administrate Multiple Basins by Creating the LWRFS “Superbasin,” Nor Did He Have the Authority to Conjunctively Manage This Superbasin.**

The powers of the State Engineer are limited to those set forth in the law. *See, e.g., City of Henderson v. Kilgore*, 122 Nev. 331, 334, 131 P.3d 11, 13 (2006); *Clark Cty. School Dist. v. Clark Cty. Classroom Teachers Ass’n*, 115 Nev. 98, 102, 977 P.2d 1008, 1011 (1999) (*en banc*) (An administrative agency’s powers “are limited to those powers specifically set forth by statute.”); *Clark Cty. v. State, Equal Rights Comm’n*, 107 Nev. 489, 492, 813 P.2d 1006, 1007 (1991)); *Wilson v. Pahrump Fair Water, LLC*, 137 Nev. Adv. Op. 2, 481 P.3d 853, 856(2021) (The State Engineer’s powers thereunder are limited to “only those . . . which the legislature expressly or implicitly delegates.”); *Andrews v. Nevada State Bd. of Cosmetology*, 86 Nev. 207, 208, 467 P.2d 96, 97 (1970) (“Official powers of an administrative agency cannot be assumed by the agency, nor can they be created by the courts in the exercise of their judicial function. The grant of authority to an agency must be clear.”) (*internal citation omitted*).

The Nevada Supreme Court has made clear that the State Engineer is a creature of statute and his or her actions must be within a statutory grant of authority. *Pahrump Fair Water LLC*, 481 P.3d

1 at 856 (explaining that “[t]he State Engineer’s powers thereunder are limited to ‘only those . . .  
2 which the legislature expressly or implicitly delegates’” (quoting *Clark Cty.*, 107 Nev. at 492, 813  
3 P.2d at 1007)); *see also Howell v. Ricci*, 124 Nev. 1222, 1230, 197 P.3d 1044, 1050 (2008) (holding  
4 that the State engineer cannot act beyond his or her statutory authority).

5 The State Engineer’s authority is outlined in NRS Chapters 532, 533 and 534. Chapter 533  
6 deals generally with “water rights,” which addresses surface water as well as groundwater, and  
7 chapter 534 is limited to groundwater, dealing specifically with “underground water and wells.”

8 In the instant case, the State Engineer relied on the following specific statutes as authority for  
9 combining prior independently designated basins as a superbasin newly named the LWRFS, and  
10 then conjunctively managing<sup>57</sup> this superbasin:

- 11 • NRS 533.024(1)(c), which is a legislative declaration “encourag[ing] the State Engineer to  
12 consider the best available science in rendering decisions concerning the available surface  
13 and underground sources of water in Nevada.”<sup>58</sup>
- 14 • NRS 534.024(1)(e), another legislative declaration that states the policy of Nevada is “[t]o  
15 manage conjunctively the appropriation, use and administration of all waters of this State,  
16 regardless of the source of the water.”<sup>59</sup>
- 17 • NRS 534.020, which provides that all waters of the State belong to the public and are subject  
18 to all existing rights.<sup>60</sup>
- 19 • NRS 532.120, which allows the State Engineer to “make such reasonable rules and  
20 regulations as may be necessary for the proper and orderly execution of the powers conferred  
21 by law.”<sup>61</sup>

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22 <sup>57</sup> The Nevada Water Words Dictionary, defines “Conjunctive (Water) Use” in part, as “the integrated use and  
23 management of hydrologically connected groundwater and surface water.” *Water Words Dictionary, Nevada Division of  
24 Water Planning* (2022) (available online at <http://water.nv.gov/WaterPlanDictionary.aspx>) The same dictionary  
25 separately defines “Conjunctive Management” as, “the integrated management and use of two or more water resources,  
26 such as a (groundwater) aquifer and a surface body of water.” *Id.*

27 <sup>58</sup> SE ROA 43.

28 <sup>59</sup> *Id.*

<sup>60</sup> *Id.*

<sup>61</sup> SE ROA 44.



- 1 • NRS 534.110(6), which allows the State Engineer to conduct investigations into any basin  
2 where average annual replenishment is not adequate for the needs of all water rights holders,  
3 and then subsequently restrict withdrawals to conform to priority rights.<sup>62</sup>
- 4 • NRS 534 and specifically NRS 534.120, which allows the State Engineer to make such rules,  
5 regulations and orders as are deemed essential for the welfare of an area where the  
6 groundwater basin is being depleted.”<sup>63</sup>

7 However, as further discussed below, the State Engineer’s reliance on these statutes for  
8 authority is misplaced, and his actions upend the bedrock principles of the prior appropriation  
9 doctrine.

10 **1. The Prior Appropriation Doctrine**

11 The doctrine of prior appropriation has been part of Nevada’s common law since the 1800’s,  
12 and is a fundamental principle of water law in Nevada. *See Lobdell v. Simpson*, 2 Nev. 274, 277-78  
13 (1866). “An appropriative right ‘may be described as a state administrative grant that allows the use  
14 of a specific quantity of water for a specific beneficial purpose if water is available in the source free  
15 from the claims of others with earlier appropriations.’” *Desert Irr., Ltd. v. State*, 113 Nev. 1049,  
16 1051 n.1, 944 P.2d 835, 837 (1997) (quoting Frank J. Trelease & George A. Gould, *Water Law*  
17 *Cases and Materials* 33 (4th ed. 1986)).

18 “Water rights are given ‘subject to existing rights,’ NRS 533.430(1), given dates of priority,  
19 NRS 533.265(2)(b), and determined based on relative rights, NRS 533.090(1)-(2).” *Mineral Cty. v.*  
20 *Lyon Cty.*, 136 Nev. 503,513, 473 P.3d 418, 426 (2020). Thus, “[i]n Nevada, the doctrine of prior  
21 appropriation determines the priority of both pre-1905 vested water rights and modern statutory  
22 water law.” *Rand Properties, LLC v. Filippini*, 484 P.3d 275, Docket 78319 at 2 (Nev. 2021)  
23 (unpublished disposition). It is universally understood that the priority of a water right is its most  
24 valuable component. *See Gregory J. Hobbs, Jr., Priority: The Most Misunderstood Stick in the*  
25 *Bundle*, 32 *Envtl. L.* 37, 43 (2002) (“Priority determines the value of a water right”).

26 “A priority in a water right is property in itself”; therefore, “to deprive a person of his

27 <sup>62</sup> *Id.*

28 <sup>63</sup> *Id.*

1 priority is to deprive him of a most valuable property right.” *Colorado Water Conservation*  
2 *Bd. v. City of Cent.*, 125 P.3d 424, 434 (Colo. 2005) (internal quotation marks omitted). “A loss of  
3 priority that renders rights useless ‘certainly affects the rights’ value’ and ‘can amount to a de facto  
4 loss of rights.’” *Wilson v. Happy Creek, Inc.*, 135 Nev. 301, 313, 448 P.3d 1106, 1115 (2019)  
5 (quoting *Andersen Family Assocs.*, 124 Nev. at 190-1, 179 P.3d at 1201).

6 Nevada’s statutory water law reflects the importance of priority. Not only did the  
7 Legislature choose not to bestow the State Engineer with discretion to alter priority rights, but it also  
8 affirmatively requires the State Engineer to preserve priority rights when performing the State  
9 Engineer’s statutory duties. *See, e.g.*, NRS 534.110(6) (providing that any curtailment “be restricted  
10 to conform to priority rights”); NRS 534.110(7) (same); NRS 533.040(2) (“If at any time it is  
11 impracticable to use water beneficially or economically at the place to which it is appurtenant, the  
12 right may be severed from the place of use and be simultaneously transferred and become  
13 appurtenant to another place of use, in the manner provided in this chapter, without losing priority of  
14 right.”).

15 The prior appropriation doctrine in Nevada, “the driest state in the Nation”<sup>64</sup> becomes  
16 particularly critical when, as in the instant case, there is not enough water to satisfy all of the  
17 existing rights of the current water right holders, and the threat of curtailment looms ominously in  
18 the near future. One of the greatest values of a senior priority right is the assurance that the holder  
19 will be able to use water even during a time of water shortage because junior water right holders will  
20 be curtailed first. Thus, senior right holders rely on their senior priority rights when developing  
21 businesses, entitling and permitting land development, negotiating agreements, making investments,  
22 obtaining permits and various approvals from State and local agencies, and generally making  
23 financial and other decisions based on the relative certainty of their right.

24 Priority in time of a right is only as valuable as where the holder stands in relation to others  
25 in the same situation, or more specifically in this case, in the same basin. As the statutes are written,  
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28 <sup>64</sup> *United States v. State Engineer*, 117 Nev. 585, 592, 27 P.3d 51, 55 (2001)( Becker, J., concurring in part and  
dissenting in part).

1 water right holders only compete in time for their “place in line” with other water right holders in  
2 their same basin. Therefore, the year that one acquires a priority right is only as important as the  
3 year that other water right holders in your basin acquired theirs. It is in this setting that State  
4 Engineer has issued Order 1309.

5 **2. Joint Administration**

6 The State Engineer’s position is that the “best available science” demonstrates that the  
7 seven<sup>65</sup> named hydrographic basins are so hydrologically interconnected that science dictates they  
8 must be managed together in one superbasin. However, NRS 533.024(1)(c) is a policy declaration  
9 of the Legislature’s intent that simply “encourages” the State Engineer “to consider the best  
10 available science in rendering decisions” that concern water he has authority to manage. NRS  
11 533.024(1)(c).

12 Statements of policy from the Legislature do not serve as a basis for government action, but  
13 rather inform the interpretation of statutes that authorize specific action. *See, Pawlik v. Deng*, 134  
14 Nev. 83, 85, 412 P.3d 68, 71 (2018). In *Pawlik*, the Nevada Supreme Court expressed the relevance  
15 of statements of policy in terms as follows: “if the statutory language is subject to two or more  
16 reasonable interpretations, the statute is ambiguous, and we then look beyond the statute to the  
17 legislative history and interpret the statute in a reasonable manner ‘in light of the policy and the  
18 spirit of the law.’” *Id.* (quoting *J.E. Dunn Nw., Inc. v. Corus Constr. Venture, LLC*, 127 Nev. 72, 79,  
19 249 P.3d 501, 505 (2011)).

20 While such statements of policy are accorded deference in terms of statutory interpretation,  
21 the Nevada Supreme Court has specifically held that they are not binding. *See McLaughlin v. Hous.*  
22 *Auth. of the City of Las Vegas*, 227 P.2d 206, 93 (1951) (“It has often been said that the declaration  
23 of policy by the legislature, though not necessarily binding or conclusive upon the courts, is entitled  
24 to great weight, and that it is neither the duty nor prerogative of the courts to interfere in such  
25 legislative finding unless it clearly appears to be erroneous and without reasonable foundation.”); *see*  
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<sup>65</sup> More accurately, the LWRFS is comprised of six hydrographic basins and a portion of a seventh.

1 also *Clean Water Coal. v. M Resort, LLC*, 127 Nev. 301, 313, 255 P.3d 247, 255 (2011) (“The State  
2 acknowledges that when legislative findings are expressly included within a statute, those findings  
3 should be accorded great weight in interpreting the statute, but it points out that such findings are not  
4 binding and this court may, nevertheless, properly conclude that section 18 is a general law despite  
5 the Legislature's declaration to the contrary.”).

6 Statements of policy set forth by the Legislature are therefore not operative statutory  
7 enactments, but rather tools to be used in interpreting operative statutes—and only then where such  
8 statutes are ambiguous on their face. *See Pawlik*, 134 Nev. at 85, 412 P.3d at 71; *see also Cromer v.*  
9 *Wilson*, 126 Nev. 106, 109-10, 225 P.3d 788, 790 (2010) (if the plain language of a statute “is  
10 susceptible of another reasonable interpretation, we must not give the statute a meaning that will  
11 nullify its operation, and we look to policy and reason for guidance”).

12 This statement of policy is not, in and of itself, a grant of authority that allows the State  
13 Engineer to change boundaries of established hydrographic basins as science dictates. This Court  
14 certainly acknowledges that since the time the 256 hydrographic basins and sub-basins were  
15 delineated, that science and technology have made great strides. While certain navigable waters and  
16 topography were more easily identifiable at the time the basins were established, the complexity lies  
17 in the less obvious interconnectivity and formations of sub-surface structures that were more  
18 difficult to detect at that time. There is no doubt that scientific advancements allow experts to more  
19 accurately assess sub-surface formations and groundwater than they have in the past, and certainly  
20 technology will continue to improve accuracy in the future. However, this Court notes that the  
21 Legislature specifically used the word “encourages” to describe how the Nevada State Engineer  
22 should utilize the best available science. NRS 533.024(1)(c). The statute does not declare that the  
23 best available science should dictate the decisions.

24 Indeed, if science was the sole governing principle to dictate the Nevada State Engineer’s  
25 decisions, there would be a slippery slope in the changes that could be made in the boundaries of the  
26 basins and how they are managed; each time scientific advancements and discoveries were made  
27 regarding how sub-surface water structures are situated or interconnected, under this theory of  
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1 authority, the Nevada State Engineer could change the boundaries of the existing basins. Each  
2 boundary change would upend the priority of water right holders as they relate to the other water  
3 right holders in the new, scientifically-dictated “basin.” This would lead to an absurd result as it  
4 relates to the prior appropriation doctrine. Every water right holder would be insecure in their  
5 priority, as their relative priority could change at any moment that science advances in determining  
6 further interconnectivity of water below the surface. In the administration of water rights, the  
7 certainty of those rights is particularly important and prior appropriation is “largely a product of the  
8 compelling need for certainty in the holding and use of water rights.” *Mineral Cty. v. Lyon Cty.*, 136  
9 Nev. at 518, 473 P.3d at 429 (quoting *Arizona v. California*, 460 U.S. 605, 620 (1983)). Science in  
10 and of itself cannot alter common law and statutes. Thus, the State Engineer’s reliance on NRS  
11 533.024(1)(c) for giving him authority to create a superbasin out of seven existing basins is  
12 misplaced.

13 While NRS 532.120 allows the State Engineer to make reasonable rules and regulations as  
14 may be necessary for proper and orderly execution, this authority is not without its limits, and is  
15 only authorized for those “powers conferred by law.” Nothing in Chapters 532, 533 or 534 gives the  
16 State Engineer direct authority to eliminate, modify, or redraw the boundaries of existing  
17 hydrographic basins, or to consolidate multiple, already established, hydrographic basins into a  
18 single hydrographic superbasin. For at least 50 years, holders of groundwater rights in Nevada have  
19 understood a “hydrographic basin” to be an immutable administrative unit. This has been the case  
20 regardless of whether the boundaries of the unit accurately reflected the boundaries of a particular  
21 water resource. The Nevada Legislature has adopted a comprehensive scheme that provides the  
22 framework for the State Engineer to administer surface water and groundwater. Moreover, the State  
23 Engineer has, for decades, administered water on the basis of hydrographic basins identified,  
24 described, and released to the public and relied upon by the Legislature, former State Engineers, and  
25 the public. Applications to appropriate water are and have been on the basis of each hydrographic  
26 basin. Protests, agreements, and resolutions of water applications have been on the basis of each  
27 basin. Furthermore, statutes require that the State Engineer consider available water and  
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1 appropriations based on the basins already defined.

2 It is interesting to note that in the statutes that *do* confer authority on the Nevada State  
3 Engineer to manage water, they specifically mention the management as being done on a basin-by-  
4 basin (or a sub-basin within a basin) basis. NRS 534.030 is the original source of authority for the  
5 State Engineer’s designation of an “administrative area” by “basin.” NRS 534.030. Through NRS  
6 534.030 and NRS 534.011, the State Engineer has authority to designate “any groundwater basin, or  
7 portion therein” an “area of active management,” which refers to an area “[i]n which the State  
8 Engineer is conducting particularly close monitoring and regulation of the water supply because of  
9 heavy use of that supply.” Under the statute’s plain meaning, a *basin* is intended to be an  
10 *administrative unit*, defined by boundaries described by “legal subdivision as nearly as possible.”  
11 NRS 534.030(1)(b). In other words, a hydrographic basin so designated was synonymous with an  
12 administrative unit—a *legal* construct, defined thereafter by a *geographic* boundary. Water rights  
13 within these basins are to be administered according to the laws set forth in NRS Chapters 533 and  
14 534, and the principles of prior appropriation are applied to water uses *within* each basin.

15 Moreover, the Legislature consistently refers to a singular basin throughout the statute. *See*,  
16 *e.g.*, 534.030(1) (describing a petition under NRS Chapter 534 as one that requests the State  
17 Engineer “to administer the provisions of this chapter as relating to designated areas, ... in any  
18 particular basin or portion therein”); NRS 534.030(2) (“a groundwater basin”); NRS 534.030(2)  
19 (“the basin”). In fact, in the State Engineer’s prior rulings and orders, including Order 1169, Order  
20 1169A, and Rulings 5712 and 6455, the State Engineer employs a basin-by-basin management  
21 approach.

22 NRS 534.110(6) sets forth the State Engineer’s ability to make basin-specific determinations  
23 and provides the authority to curtail water rights where investigations into specific basins  
24 demonstrate that there is insufficient groundwater to meet the needs of all permittees and all vested-  
25 right claimants. NRS 534.110 plainly applies to investigations concerning administration and  
26 designation of critical management areas within a basin. If the State Engineer conducts an  
27 investigation as set forth in NRS 534.110(6) and determines that the annual replenishment to the  
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1 groundwater supply is not adequate for the permittees and vested-right claimants, he has the  
2 authority to either (1) order that withdrawals from domestic wells be restricted to conform to priority  
3 rights, or (2) designate as a critical management area the basin in which withdrawals of groundwater  
4 consistently exceed the perennial yield. NRS 534.110(6)-(7). It is important to note, however, that  
5 the statute does not provide authority to change the boundaries of established basins, combine  
6 multiple basins into one unit or superbasin, and then modify or curtail groundwater rights based  
7 upon restructured priority dates in this newly created superbasin.

8           The Court acknowledges that the State Engineer can and should take into account how water  
9 use in one basin may affect the water use in an adjoining or closely related basin when determining  
10 how best to “actively manage” a basin. However, this is much different than how the State Engineer  
11 defines “joint management”: erasing the borders of seven already established legal administrative  
12 units and creating one legal superunit in the LWRFS superbasin. If the Legislature intended for the  
13 State Engineer to designate areas across multiple basins for “joint administration,” it would have so  
14 stated. *See Slade v. Caesars Entm’t Corp.*, 132 Nev. 374, 380-81, 373 P.3d 74, 78 (2016) (citing  
15 Antonin Scalia & Bryan A. Garner, *Reading Law: The Interpretation of Legal Texts*, 107 (2012)  
16 (“The expression of one thing implies the exclusion of others.”)). Thus, under NRS 534.030, while  
17 the State Engineer can administer basins individually, the statute does not allow the State Engineer  
18 to combine basins for joint administration, nor do NRS 532.120, NRS 533.024, or NRS 534.110(6)  
19 confer express authority on the State Engineer to do so.

20           **3. Conjunctive Management**

21           The Nevada State Engineer relies on NRS 534.024(1)(e), as the source of authority that  
22 allows him to manage both surface and groundwater together through “conjunctive management.”<sup>66</sup>  
23 Historically, surface water and ground water have been managed separately. In fact, the term  
24 “conjunctive management” was only introduced in the statutes in the 2017 session of the Nevada  
25 Legislature when it added subsection 1(e) to NRS 533.024. However, as discussed previously, this  
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<sup>66</sup> SE ROA 43.

1 statute is a declaration of legislative intent, and as a statement of policy, it does not constitute a grant  
2 of authority to the State Engineer, nor is it a water management tool in and of itself.

3 In fact, there is no authority or guidance whatsoever in the statutes as to how to go about  
4 conjunctively managing water and water rights. While the Court agrees that it makes sense to take  
5 into account how certain groundwater rights may affect other surface water rights when managing  
6 water overall, as this Court noted previously, the powers of the State Engineer are limited to those  
7 set forth in the law. While Nevada law provides certain tools for the management of water rights in,  
8 for example, over appropriated basins, *e.g.*, NRS 534.110(7) (authorizing the State Engineer to  
9 “designate as a critical management area any basin in which withdrawals of groundwater  
10 consistently exceed the perennial yield of the basin”), nothing in Chapters 532, 533 or 534 gives the  
11 State Engineer express authority to conjunctively manage, in this proceeding, both the surface and  
12 groundwater flows he believes are occurring in the LWRFS superbasin.

13 This Court finds that as a result of the consolidation of the basins, the relative priority of all  
14 water rights within the seven affected basins will be reordered and the priorities will be considered  
15 in relation to all water rights holders in the consolidated basins, rather than in relation only to the  
16 other users within the original separate basins.<sup>67</sup> By redefining and combining seven established  
17 basins for “joint administration,” and “conjunctive management,” the State Engineer essentially  
18 strips senior right holders of their priority rights by deciding that all water rights within the LWRFS  
19 superbasin should be administered based upon their respective dates of priority in relation to other  
20 rights “within the regional groundwater unit.”

21 The State Engineer’s position is that the determination of conflicts and priorities has not yet  
22 occurred since that is to occur in the second step of the proceeding. However, by the very nature of  
23 erasing the existing basins and putting all of the water rights holders in one superbasin, he has  
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26 <sup>67</sup> This Court rejects the State Engineer’s argument that Order 1309 did not change priorities merely because it did not  
27 change priority dates. His argument conflates the meaning of *priority* as defined by the date of a water right application,  
28 and the common meaning of *priority*, as defined by one’s “place in line.” While it is true that the Order does not change  
priority dates, this Court finds that it *does* change the relative priorities, as petitioners who previously held the most  
senior rights within their singular basin may now be relegated to more junior status within the “superbasin.”



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already reprioritized certain rights as they relate to one another, even if their priority dates remain the same.<sup>68</sup> As a result of creating this superbasin, water rights holders with some of the most senior priority rights within their basin are now relegated to a much a lower priority position than some water right holders in basins outside of their own. Such a loss of priority would potentially render certain water rights valueless, given the State Engineer’s restrictions on pumping in the entire LWRFS. The Court concludes that the State Engineer does not have authority to redefine Nevada basins so as to reorder the priority rights of water right holders through conjunctive management within those basins. Accordingly, Order 1309 stands at odds with the prior appropriation doctrine.

The Court determines that the question of whether the State Engineer has *authority* to change the boundaries of basins that have been established for decades, or subject that newly created basin to conjunctive management, or not, is a legal question, not a factual one. The State Engineer has failed to identify a statute that authorizes him to alter established basin boundaries or engage in conjunctive management. Based upon the plain language of the applicable statutes, the Court concludes that the State Engineer acted outside the scope of his authority in entering Order 1309.

**B. The State Engineer Violated Petitioners’ Due Process Rights in Failing to Provide Notice to Petitioners or an Opportunity to Comment on the Administrative Policies Inherent in the Basin Consolidation.**

The Nevada Constitution protects against the deprivation of property without due process of law. Nev. Const. art. 1, § 8(5). “Procedural due process requires that parties receive notice and an opportunity to be heard.” *Eureka Cty. V. Seventh Jud. Dist. Ct.*, 134 Nev. 275, 279, 417 P.3d 1121, 1124 (2018)(internal quotation marks omitted). “In Nevada, water rights are ‘regarded and protected as real property.’” *Id.*(quoting *Application of Filippini*, 66 Nev. 17, 21-22, 202 P.2d 535,

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<sup>68</sup> Although this Court refrains from analyzing whether or not 1309 is supported by substantial evidence, the Court notes that part of the State Engineer’s 1309 decision of limiting use to 8,000afa or less is based on the concern of adversely impacting the endangered Moapa Dace, located in the Muddy River Springs. This decision does not appear to take into account more nuanced effects of how pumping in each separate basin affects the Muddy River flows, no matter how far away the basin is from the river. In other words, reprioritization of each water rights holder in relation to the other (by prioritization date in the newly created superbasin) means that their standing (and more importantly, their potential for curtailment) is only by date. Water use in one basin may not have the same effect as another in reducing Muddy River flows; however, these distinguishing factors are all erased by combining all of the basins together for joint administration.

1 537 (1949)). Therefore, holders of water rights in Nevada are entitled to constitutional protections  
2 regarding those property rights, including procedural due process. *See id.*

3 The Nevada Supreme Court has held that “[a]lthough proceedings before administrative  
4 agencies may be subject to more relaxed procedural and evidentiary rules, due process guarantees of  
5 fundamental fairness still apply.” *Dutchess Bus. Serv.’s, Inc. v. Nev. State Bd. of Pharmacy*, 124  
6 Nev. 701, 711, 191 P.3d 1159, 1166 (2008). In *Dutchess*, the Nevada Supreme Court noted further  
7 that “[a]dministrative bodies must follow their established procedural guidelines and give notice to  
8 the defending party of ‘the issues on which decision will turn and . . . the factual material on which  
9 the agency relies for decision so that he may rebut it.’” *Id.*

10 With respect to notice and hearing, the Nevada Supreme Court has held that “[i]nherent in  
11 any notice and hearing requirement are the propositions that the notice will accurately reflect the  
12 subject matter to be addressed and that the hearing will allow full consideration of it.” *Public Serv.*  
13 *Comm’n of Nev. v. Southwest Gas Corp.*, 99 Nev. 268, 271, 772 P.2d 624, 626 (1983). “Notice must  
14 be given at an appropriate stage in the proceedings to give parties meaningful input in the  
15 adjudication of their rights.” *Seventh Jud. Dist. Ct.*, 134 Nev. at 280-81, 417 P.3d at 1125-26 (citing  
16 *Hamdi v. Rumsfeld*, 542 U.S. 507, 533, 124 S.Ct. 2633, 159 L.Ed.2d 578 (2004) (“It is equally  
17 fundamental that the right to notice and an opportunity to be heard must be granted at a meaningful  
18 time and in a meaningful manner.”). A party’s due process rights attach at the point at which a  
19 proceeding holds the *possibility* of curtailing water rights, and due process necessitates notice of that  
20 possibility to the party potentially affected.<sup>69</sup>

21 For the reasons that follow, this Court concludes that (a) the notice and hearing procedure  
22 employed by the State Engineer failed to satisfy the requirements of due process because the notice  
23 failed to put the parties on notice that the State Engineer would decide on a management protocol for  
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25 <sup>69</sup> “[B]ecause the language in the show cause order indicates that the district court may enter an order forcing curtailment  
26 to begin, junior water rights holders must be given an opportunity to make their case for or against the option of  
27 curtailment. Notice must be given at an appropriate stage in the proceedings to give parties meaningful input in the  
28 adjudication of their rights... Thus, junior water rights holders must be notified before the curtailment decision is made,  
even if the specific “how” and “who” of curtailment is decided in a future proceeding.” *Seventh Jud. Dist. Ct.*, 134 Nev.  
275, 280–81, 417 P.3d 1121, 1125 (2018).

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the LWRFS at the conclusion of the proceeding; (b) the hearing itself failed to satisfy due process because the parties were not afforded a full and complete opportunity to address the implications of the State Engineer’s decision to subject the LWRFS to conjunctive management and joint administration, and (c) the State Engineer’s nondisclosure, before or during the Order 1303 proceedings of the six criteria he would use in evaluating the connectivity of the basins and determining the new consolidated basin boundary, failed to satisfy the requirements of due process.

Specifically, the notice of hearing and amended notice of hearing (“Notice”) noticed an opportunity for the parties that submitted Order 1303 reports to explain their positions and conclusions with respect to the questions posed for consideration in Order 1303.<sup>70 71</sup> But the questions posed in Order 1303 did not relate to management of the LWRFS, such as issues of conjunctive or joint administration, but rather related to factual inquiries. Instead, Order 1303 specifically authorized stakeholders to file reports addressing four specific areas, none of which related to the management of the LWRFS.<sup>72</sup>

In noticing the hearing to consider the reports submitted pursuant to Order 1303, there was no mention of consideration of the prospective management of the LWRFS, *i.e.*, whether it would be appropriately managed conjunctively and as a joint administrative unit. Indeed, this was consistent with the Hearing Officer’s opening remarks at the August 8, 2019, prehearing conference in which

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<sup>70</sup> See SE ROA 262-82, Ex. 2; SE ROA 284-301, Ex. 3

<sup>71</sup> The Notice included the following summary:

On August 9, 2019, the State Engineer held a pre-hearing conference regarding the hearing on the submission of reports and evidence as solicited in Order 1303.... The State Engineer established that the purpose of the hearing on the Order 1303 reports was to provide the participants an opportunity to explain the positions and conclusions expressed in the reports and/or rebuttal reports submitted in response to the Order 1303 solicitation. The State Engineer directed the participants to limit the offer of evidence and testimony to the salient conclusions, including directing the State Engineer and his staff to the relevant data, evidence and other information supporting those conclusions. ***The State Engineer further noted that the hearing on the Order 1303 reports was the first step in determining to what extent, if any, and in what manner the State Engineer would address future management decisions, including policy decisions, relating to the Lower White River Flow System basins. On that basis, the State Engineer then addressed other related matters pertaining to the hearing on the Order 1303 reports, including addressing the date and sequence of the hearing, as set forth in this Notice of Hearing.*** SE ROA 285, Ex. 3 (emphasis added).

<sup>72</sup> SE ROA 647-48. Ex. 6.

1 the State Engineer actively discouraged participants from providing input regarding that very  
2 question. The hearing officer stated as follows at the August 8 prehearing conference:

3           And so, and I'm going to talk about this and we've spoken about this before, is  
4 that really this is a threshold reporting aspect, that this is part of a multi-tiered  
5 process in terms of determining the appropriate management strategy to the  
6 Lower River Flow System.

7           This larger substantive policy determination is not part of the particular  
8 proceeding. That's part of later proceedings....

9           SE ROA 522, Ex. 5 (Hr'g Tr. at 10:6-20).

10           The hearing officer gave additional consistent guidance at the outset of the September 23  
11 hearing, further directing the parties not to address policy issues even in relation to the fact that  
12 Order 1303 authorized stakeholders to include in their reports "[a]ny other matter believed to be  
13 relevant to the State Engineer's analysis."<sup>73</sup> Specifically, the Hearing Officer directed as follows:

14           And while that fifth issue is [as set forth in Ordering Paragraph 1(e) of Order  
15 1303] not intended to expand the scope of this hearing into making policy  
16 determinations with respect to management of the Lower White River Flow  
17 System basin's individual water rights, those different types of things, because  
18 those are going to be decisions that would have to be made in subsequent  
19 proceedings should they be necessary.

20           SE ROA 52962, Ex. 26 (Hr'g Tr. 6:4-15).

21           Not only did the notice not adequately notify the parties of the possibility of the  
22 consideration and resolution of policy issues, but the Hearing Officer consistently  
23 directed the parties to avoid the subject, compounding the due process violation.

24           Notwithstanding the Hearing Officer's admonitions and the plain language of the notice, the  
25 State Engineer ultimately issued a dramatic determination regarding management of the LWRFS. In  
26 doing so, the State Engineer precluded the participants from providing input that would have  
27 allowed for the full consideration of the issue. Specifically, participants and experts did not have the  
28 opportunity to, and were actively discouraged from addressing policy issues critical to the

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<sup>73</sup> SE ROA 648, Ex. 6.

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management of the LWRFS.<sup>74</sup> The refusal to consider these issues ensured that the State Engineer’s decision was not based on a fully developed record.

The State Engineer acknowledged as much in Order 1309 itself. There, the State Engineer noted the fact that Georgia-Pacific and Republic raised concerns over the sufficiency of the scope of the proceedings at hearing but inexplicably asserted that a to-be-determined management scheme would be developed to address “management issues” in the LWRFS:

Georgia-Pacific and Republic asserted that boundaries are premature without additional data and without a legally defensible policy and management tools in place. They expressed concern that creating an administrative unit at this time inherently directs policy without providing for due process. The State Engineer has considered these concerns and agrees that additional data and improved understanding of the hydrologic system is critical to the process. He also believes that the data currently available provide enough information to delineate LWRFS boundaries, and that an effective management scheme will provide for the flexibility to adjust boundaries based on additional information, retain the ability to address unique management issues on a sub-basin scale, and maintain partnership with water users who may be affected by management actions throughout the LWRFS.

SE ROA 54, Ex. 1.

This language reflects a serious misunderstanding of the effect of Order 1309. Insofar as Order 1309 subjects the LWRFS to conjunctive management and joint administration, resulting in effectively reordering of priority of water rights in the LWRFS superbasin, the order effectuates a management scheme with far reaching consequences. Thus, agreeing on the one hand that an “effective management scheme” will be necessary to address challenges in the LWRFS, but

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<sup>74</sup> These issues include, but are not limited to: whether Nevada law allows the State Engineer to conjunctively manage multiple hydrographic basins in a manner that modifies the relative priority of water rights due to the administration consolidation of basins; whether the State Engineer would establish a “critical management area” pursuant to NRS 534.110 and, if so, whether he would develop a groundwater management plan or defer to the stakeholders to develop one; whether Nevada law gives the State Engineer authority to designate a management area that encompasses more than one basin; whether “safe-yield” discrete management areas should be established within the proposed administrative unit; whether water rights holders enjoy a “property right” in the relative priority of their water rights such that impairing that right may constitute a “taking”; whether unused (or only sporadically used) senior water rights take precedence over certificated or fully used junior rights, particularly where these junior rights are in continuous use to support economically significant enterprises; whether States compel quantification of federal reserved rights by a date certain; and whether the State Engineer should approach the legislature to seek different or additional management tools or authority. *See* SE ROA 52801-8, Ex. 25 (Georgia Pacific and Republic Closing Argument, outlining policy questions for consideration by the State Engineer at later proceedings, proceedings that never took place).

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contending it will be developed in the future, reveals a lack of appreciation of the implications of the order to the detriment of not only the participants but all water rights holders in the LWRFS basins. Without consideration of the implications of the management decision contained in the order, it cannot be based on a full consideration of the issues presented. In affirmatively limiting the scope of the proceeding to include a full consideration of the issues, the State Engineer violated the stakeholders' due process rights. Both the notice and the hearing procedures employed failed to comport with due process.

Finally, as noted above, the State Engineer did not give notice or disclose before or during the Order 1303 proceedings, the six specific criteria that he would use in evaluating the connectivity of the basins and determining the new consolidated basin boundary. Although the State Engineer asserted that he considered the evidence and testimony presented in the public hearing "on the basis of a common set of criteria that are consistent with the original characteristics conserved critical in demonstrating a close hydrologic connection requiring joint management in Rulings 6254-6261,"<sup>75</sup> a review of these rulings reveals that none of the six criteria or characteristics were previously identified, examined in the hydrological studies and subsequent hearing that followed the completion of the Order 1169 aquifer test, or expressly disclosed in Rulings 6254-6261.<sup>76</sup> These criteria were instead explicitly disclosed for the first time in Order 1309, which means the participants had no opportunity to directly address these criteria in their presentations, or critically, to address the appropriateness of these criteria.

This Court is unpersuaded by the State Engineer's argument that it could develop the criteria only after it heard all the evidence at the hearing. Even if it did, this does not justify a deprivation of the right to due process. In order to provide the parties due process and a meaningful opportunity to present evidence on these issues, the State Engineer should have included these factors in the Notice of Pre-Hearing Conference. *See Eureka Cty.*, 131 Nev. at 855, 359 P.3d at 1120; *Revert*, 95 Nev. at 787, 603 P.2d at 265 (criticizing the state engineer for engaging in post hoc rationalization). This

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<sup>75</sup> See SE ROA 48.

<sup>76</sup> SE ROA 726-948.

1 due process violation is particularly harmful to water rights holders in Kane Springs, the sole basin  
2 that had not been previously designated for management under NRS 534.030, had not been included  
3 in the Order 1169 aquifer test, and had not been identified as a basin to be included in the LWRFS  
4 superbasin in Order 1303.

5 Accordingly, this Court concludes that revealing the criteria only after stakeholders had  
6 engaged in the extensive investigations, expert reporting, and the intense factual hearing requested  
7 by Order 1303 further violates the participants' due process rights.

8 As this Court has determined that the Nevada State Engineer exceeded his statutory authority  
9 and violated the participants' due process rights in issuing Order 1309, it declines to reach further  
10 analysis on whether his factual findings in Order 1309 were supported by substantial evidence.

11 **IV.**  
12 **CONCLUSION**

13 The Court FINDS that the Nevada State Engineer exceeded his statutory authority and had  
14 no authority based in statute to create the LWRFS superbasin out of multiple distinct, already  
15 established hydrographic basins. The Nevada State Engineer also lacked the statutory authority to  
16 conjunctively manage this LWRFS superbasin.

17 The Court ALSO FINDS that the Nevada State Engineer violated the Petitioners'  
18 Constitutional right to due process by failing to provide adequate notice and a meaningful  
19 opportunity to be heard.

20 As a result, Order 1309 is arbitrary, capricious, and therefore void.

21 Good cause appearing, based upon the above Findings of Fact and Conclusions of Law, the  
22 Court ORDERS, ADJUDGES AND DECREES as follows:

23 IT IS HEREBY ORDERED that the petition for review of the Nevada State Engineer's  
24 Order No. 1309 filed by Petitioners Lincoln County Water District and Vidler Water Company, Inc.  
25 is GRANTED.

26 IT IS FURTHER ORDERED that the petition for review of the Nevada State Engineer's  
27 Order No. 1309 filed by Petitioners Coyote Springs Investment, LLC is GRANTED.  
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IT IS FURTHER ORDERED that the petition for review of the Nevada State Engineer’s Order No. 1309 filed by Petitioners Apex Holding Company, LLC and Dry Lake Water, LLC is GRANTED.

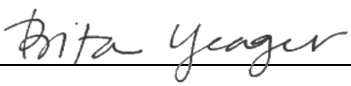
IT IS FURTHER ORDERED that the petition for review of the Nevada State Engineer’s Order No. 1309 filed by Petitioners Nevada Cogeneration Associates Nos. 1 and 2 is GRANTED.

IT IS FURTHER ORDERED that the petition for review of the Nevada State Engineer’s Order No. 1309 filed by Petitioners Georgia-Pacific Gypsum LLC, and Republic Environmental Technologies, Inc. is GRANTED.

IT IS FURTHER ORDERED that the State Engineer’s Order 1309 is VACATED in its entirety.

**IT IS SO ORDERED.**

Dated this 19th day of April, 2022

  
\_\_\_\_\_

**66B 24A E875 2549  
Bitia Yeager  
District Court Judge**



1 CSERV

2 DISTRICT COURT  
3 CLARK COUNTY, NEVADA

4  
5  
6 Southern Nevada Water  
7 Authority, Plaintiff(s)

CASE NO: A-20-816761-C

8 vs.

DEPT. NO. Department 1

9 Nevada State Engineer, Division  
10 of Water Resources,  
11 Defendant(s)

12 **AUTOMATED CERTIFICATE OF SERVICE**

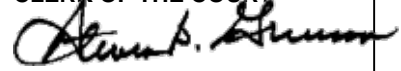
13 This automated certificate of service was generated by the Eighth Judicial District  
14 Court. The foregoing Findings of Fact, Conclusions of Law and Order was served via the  
15 court's electronic eFile system to all recipients registered for e-Service on the above entitled  
16 case as listed below:

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**DISTRICT COURT  
CLARK COUNTY, NEVADA**

18 LAS VEGAS VALLEY WATER DISTRICT,  
19 and SOUTHERN NEVADA WATER  
20 AUTHORITY, et al.

21 Petitioners,

22 vs.

23 ADAM SULLIVAN, P.E., Acting Nevada State  
24 Engineer, DIVISION OF WATER RESOURCES,  
25 DEPARTMENT OF CONSERVATION AND  
26 NATURAL RESOURCES,

27 Respondents,

Case No. A-20-816761-C  
Dept. No. 1

Consolidated with Cases:  
A-20-817765-P  
A-20-818015-P  
A-20-817977-P  
A-20-818069-P  
A-20-817840-P  
A-20-817876-P  
A-21-833572-J

**NOTICE OF ENTRY OF ADDENDUM  
AND CLARIFICATION TO COURT'S  
FINDINGS OF FACT, CONCLUSIONS OF  
LAW, AND ORDER GRANTING  
PETITIONS FOR JUDICIAL REVIEW**

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**CERTIFICATE OF SERVICE**

I certify that I am an employee of Taggart & Taggart, LTD, and that on this 13th day of May 2022, I served a true and correct copy of the foregoing document by electronic service to the participants in this case who are registered with the Eighth Judicial District Court’s Odyssey eFile NV File & Serve system to this matter:

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19  
20 /s/ Thomas Duensing  
Employee of Taggart & Taggart, LTD.



**EXHIBIT INDEX**

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<u>Exhibit</u>	<u>Description</u>	<u>Pages</u>
1.	Addendum and Clarification to Court’s Findings of Fact, Conclusions of Law, and Order Granting Petitions for Judicial Review Filed on April 19, 2022	6

# EXHIBIT 1

# EXHIBIT 1

*Andrew J. Smith*  
CLERK OF THE COURT

1 **FFCO**

2  
3 **DISTRICT COURT**  
**CLARK COUNTY, NEVADA**

4 LAS VEGAS VALLEY WATER DISTRICT,  
5 and SOUTHERN NEVADA WATER  
6 AUTHORITY,

Case No. A-20-816761-C  
Dept. No. I

7 Petitioners,

Consolidated with Cases:

8 vs.

A-20-817765-P

A-20-818015-P

A-20-817977-P

9 TIM WILSON, P.E., Nevada State Engineer,  
10 DIVISION OF WATER RESOURCES,  
DEPARTMENT OF CONSERVATION AND  
NATURAL RESOURCES,

A-20-818069-P

A-20-817840-P

A-20-817876-P

A-21-833572-J

11 Respondent.

12 And All Consolidated Cases.

13  
14 **ADDENDUM AND CLARIFICATION TO COURT'S FINDINGS OF FACT,**  
15 **CONCLUSIONS OF LAW, AND ORDER GRANTING PETITIONS FOR JUDICIAL**  
16 **REVIEW FILED ON APRIL 19, 2022**

17 This matter came before this Court on consolidated petitions for judicial review of State  
18 Engineer's Order 1309 filed by Petitioners:

- 19 • Southern Nevada Water Authority and Las Vegas Valley Water District
- 20 • Coyote Spring Investment, LLC
- 21 • Apex Holding Co. and Dry Lake Water, LLC
- 22 • The Center for Biological Diversity
- 23 • Muddy Valley Irrigation Company
- 24 • Nevada Cogeneration Associates Nos. 1 and 2
- 25 • Georgia-Pacific Gypsum LLC and Republic Environmental Technologies, Inc.
- 26 • Lincoln County Water District and Vidler Water Company.

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In the Order filed April 19, 2022, the Court determined that the Nevada State Engineer exceeded his statutory authority and violated the participants' due process rights in issuing Order 1309, and declined to reach further analysis on whether his factual findings in Order 1309 were supported by substantial evidence.

The Petitions filed by petitioners Southern Nevada Water Authority and Las Vegas Valley Water District, Muddy Valley Irrigation Company, and The Center for Biological Diversity supported the Nevada State Engineer's position that Order 1309 did not exceed the State Engineer's statutory authority nor violated participant's due process rights in issuing Order 1309. However, each of these three petitioners challenged the factual findings as not being supported by substantial evidence.

**IV.**  
**CONCLUSION**

To the extent that the petition for review of the Nevada State Engineer's Order No. 1309 filed by Southern Nevada Water Authority and Las Vegas Valley Water District seeks relief for violating their due process rights, IT IS HEREBY ORDERED that the petition is GRANTED IN PART. The remaining portion of the petition that support the position that the Nevada State Engineer did not exceed his statutory authority in issuing Order 1309 is DISMISSED.

To the extent that the remaining petitions support the position that Nevada State Engineer did not exceed his statutory authority and provided due process in issuing Order 1309;

IT IS FURTHER ORDERED that the petition for review of the Nevada State Engineer's Order No. 1309 filed by Petitioner Muddy Valley Irrigation Company is DISMISSED.

IT IS FURTHER ORDERED that the petition for review of the Nevada State Engineer's Order No. 1309 filed by Petitioner The Center for Biological Diversity is DISMISSED.

**IT IS SO ORDERED.**

Dated this 13th day of May, 2022

*Bita Yeager*

**EE8 27A A594 AF7E**  
**Bita Yeager**  
**District Court Judge**

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**CSERV**

DISTRICT COURT  
CLARK COUNTY, NEVADA

Southern Nevada Water Authority, Plaintiff(s)	CASE NO: A-20-816761-C
vs.	DEPT. NO. Department 1
Nevada State Engineer, Division of Water Resources, Defendant(s)	

**AUTOMATED CERTIFICATE OF SERVICE**

This automated certificate of service was generated by the Eighth Judicial District Court. The foregoing Findings of Fact, Conclusions of Law and Judgment was served via the court's electronic eFile system to all recipients registered for e-Service on the above entitled case as listed below:

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