Case No. 84739

IN THE SUPREME COURT OF THE STATE OF NEVADA

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

Appellants,

vs.

LINCOLN COUNTY WATER DISTRICT, et al.

Respondents.

Electronically Filed
Jun 29 2022 05:54 p.m.
Elizabeth A. Brown
Clerk of Supreme Court

VOLUME ONE OF APPENDIX FOR APPELLANT SOUTHERN NEVADA WATER AUTHORITY'S RESPONSE TO LINCOLN VIDLER'S MOTION TO DISMISS

COMES NOW, Appellant, SOUTHERN NEVADA WATER AUTHORITY ("SNWA") by and through its counsel, PAUL G. TAGGART, ESQ., and THOMAS P. DUENSING, ESQ., of the law firm of TAGGART & TAGGART, LTD., and STEVEN C. ANDERSON ESQ., of SNWA, submit Volume One of appendix for SNWA's Response to Lincoln County Water District and Vidler Water Company's ("Lincoln Vidler") Motion to Dismiss SNWA's appeal of the Eighth Judicial District's Findings of Fact, Conclusions of Law, and Order Granting Petitions for Judicial Review.

AFFIRMATION

The undersigned hereby affirm that the preceding document does not contain the social security number of any person.

Respectfully submitted this 29th day of June 2022.

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DATED this 29th day of June 2022.

/s/ Thomas P. Duensing
Employee of TAGGART & TAGGART, LTD.

APPENDIX INDEX

Document	Description	Bate Stamp
1.	Order Granting Motions to Intervene in consolidated petitions for judicial review of State Engineer Order 1309.	RMTD 1-9
2.	Excerpts from SNWA & LVVWD's Assessment of LWRFS Water Resource Conditions and Aquifer Response	RMTD 10-20
3.	SNWA's Opening Brief in its Petition for Judicial Review of State Engineer Order 1309	RMTD 21-70
4.	SNWA's Answering Brief in its Petition for Judicial Review of State Engineer Order 1309	RMTD 71-140
5.	SNWA's Reply Brief in its Petition for Judicial Review of State Engineer Order 1309	RMTD 141-176
6.	Nevada Supreme Court Order of Affirmance, April 15, 2021.	RMTD 177-185

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07/09/2021 6:03 PM
CLERK OF THE COURT

ORDR

DISTRICT COURT

CLARK COUNTY, NEVADA

LAS VEGAS VALLEY WATER DISTRICT, and SOUTHERN NEVADA WATER AUTHORITY, COYOTE SPRINGS INVESTMENT, LLC, APEX HOLDING COMPANY, LLC, CENTER FOR BIOLOGICAL DIVERSITY, MUDDY VALLEY IRRIGATION COMPANY, NEVADA COGENERATION ASSOCIATES NOS. 1 AND 2, LINCOLN COUNTY WATER DISTRICT, VIDLER WATER COMPANY, GEORGIA-PACIFIC GYPSUM, LLC and REPUBLIC ENVIRONMENTAL TECHNOLOGIES, INC. Petitioners, vs. ADAM SULLIVAN, P.E., Acting Nevada State Engineer, DIVISION OF WATER RESOURCES, DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES, Respondents, CITY OF NORTH LAS VEGAS, THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS, MOAPA VALLEY WATER DISTRICT, NV ENERGY, WESTERN ELITE ENVIRONMENTAL, INC. and BEDROC LIMITED, LLC, Intervenors.	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

ORDER GRANTING MOTIONS TO INTERVENE

On July 27, 2020, the LAS VEGAS VALLEY WATER DISTRICT and SOUTHERN NEVADA WATER AUTHORITY (collectively "SNWA"), by and through their 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, filed a Motion to Intervene in

Case Number: A-20-816761-C

LINCOLN COUNTY WATER DISTRICT and VIDLER WATER COMPANY's (collectively "Lincoln/Vidler") Petition for Judicial Review of the Nevada State Engineer's Order 1309 filed in the Seventh Judicial District of Nevada. On August 24, 2020, the MUDDY VALLEY IRRIGATION COMPANY ("MVIC"), by and through their counsel, ROBERT A. DOTSON, ESQ., of the law firm DOTSON LAW, and STEVEN D. KING, ESQ. filed a Motion to Intervene in Lincoln/Vidler's petition in the Seventh Judicial District of Nevada. SNWA and MVIC's motions to intervene were opposed by Lincoln/Vidler and fully briefed in the Seventh Judicial District.

In April 2021 Lincoln/Vidler's petition was transferred from the Seventh Judicial District to the Eighth Judicial District in Clark County, Nevada. On May 27, 2021, Lincoln/Vidler's petition was consolidated with the previously consolidated petitions for judicial review of Order 1309 that were already pending in the Eighth Judicial District. On July 1, 2021, this Court heard oral arguments on SNWA and MVIC's motions to intervene.

On April 15, 2021, the Nevada Supreme Court issued an order affirming the Seventh Judicial District's order transferring Lincoln/Vidler's petition to the Eighth Judicial District. The Supreme Court recognized that in Order 1309 the State Engineer found that groundwater basins in Lincoln and Clark counties, including Kane Springs, "are inextricably connected" to an extent that they must be managed conjunctively to avoid harm to senior water rights on the Muddy River and the Moapa dace and the State Engineer's Order is presumed correct until the conclusion of the judicial review process.[1] The Court further found "resolution of the appellants' petition presumably impacts the rights of other appropriators in the LWRFS because the scope of each LWRFS stakeholder's rights appears, on this record, interconnected with the others."[2]

Based on the Nevada Supreme Court's findings in its Order of Affirmance as to the State Engineer's findings regarding the interconnected nature of the Lower White River Flow System ("LWRFS") basins and the need for collective management of those basins, both SNWA and MVIC are entitled to intervention under NRCP 24(a) and 24(b). SNWA and MVIC have satisfied all the factors established by the Nevada Supreme Court in *American Home Assurance Company v. Eighth*

[1] Order of Affirmance at 2, 3April 15, 2021, NSC Case No. 87192.
[2] Order of Affirmance at 6-7, April 15, 2021, NSC Case No. 87192.

Judicial District to determine if a party is entitled to intervention under NRCP 26(a).[3] Both SNWA and MVIC have a sufficient interest in the litigation based on their ownership and control of decreed senior surface water rights in the Muddy River that were recognized by this Court in 1920. SNWA and MVIC's decreed water rights could be impacted by a decision regarding the issues and water rights at issue in Lincoln/Vidler's petition. Furthermore, SNWA and MVIC's interest are not adequately represented by a current party in Lincoln/Vidler's petition, and no party has argued that SNWA and MVIC's motions are untimely. Therefore, the intervention is proper.

The Court, hereby ORDERS the following and finds as follows:

SNWA and MVIC motions to intervene in Lincoln/Vidler's petition for judicial review of Order 1309, Case No. A-21-833572-J, are granted.

IT IS SO ORDERED.

Dated this 9th day of July, 2021

Bita Yeager

5B8 2E2 C4A2 1F8F
Bita Yeager
District Court Judge

Respectfully submitted by:

TAGGART & TAGGART, LTD.

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[3] *American Home Assur. Co. v. Eighth Judicial Dist. Court ex rel. County of Clark*, 122 Nev. 1229, 147 P.3d. 1120 (2006).

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Emily Woods

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Cc: Paul Taggart; Tom Duensing
Subject: RE: Proposed Order on Intervention in 1309 Litigation

You have my authority to submit.
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Hi Rob,

Are we authorized to e-sign the attached proposed order on your behalf?

Thank you,

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Paul,
LCWD is agreeable to the order with the edits I proposed. You can e-sign for me and Dylan. Wayne will file a notice of change of address with the court next week.

Thank you.

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Karen: Your edits are fine with me. We will make those changes and send to the Court at around 5 today. Thanks again.

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CSERV

DISTRICT COURT
CLARK COUNTY, NEVADA

Southern Nevada Water Authority, Plaintiff(s) vs. Nevada State Engineer, Division of Water Resources, Defendant(s)	CASE NO: A-20-816761-C DEPT. NO. Department 1

AUTOMATED CERTIFICATE OF SERVICE

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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

PEOPLE LEADING THE WAY

June 2019

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.

Regardless of the streamflow variability, the results of this analysis conclusively demonstrate the prominent impacts MRSA groundwater production has on MR streamflow. Groundwater production from the MRSA alluvial reservoir depletes MR streamflow on a 1:1 basis because the production wells are located within the MR headwaters and capture water that would otherwise flow into the river and past the MR Moapa gage. This is supported by the fact the production volumes fall beneath the MR Flow Deficit line as depicted in Figure 5-4. In similar fashion, MRSA production wells completed in the carbonate aquifer capture water that would otherwise replenish the alluvial reservoir through diffuse subsurface flow or contribute to MR streamflow via discrete springs. Capturing this groundwater ultimately depletes the source of supply to the alluvial reservoir and springs; thereby, depleting the MR streamflow. Based on the accounting depicted in Figure 5-4, the MRSA carbonate production wells have depleted MR streamflow approaching a 1:1 basis.

5.2 Carbonate-Aquifer Responses to Climate Variability and Pumping Stresses

Throughout the LWRFS, there are many groundwater sites that are monitored and provide information on groundwater conditions regarding the carbonate aquifer. These sites include production and monitor wells completed in the carbonate aquifer and various springs in the MRSA. In this section, a comparison of the hydrologic responses at selected wells and springs representative of the carbonate aquifer is presented. The comparison is followed by an analysis of the responses to climate variability and groundwater production.

5.2.1 Comparison of Hydrologic Responses

The comparison of the hydrologic responses at selected wells and springs representative of the carbonate aquifer was performed first by a visual examination of the hydrographs. Second, where correlations appear to exist, they were further analyzed, quantified and interpreted.

Time-series charts of water-level data for representative carbonate wells located in each of the basins composing the LWRFS were constructed and are presented in Figure 5-5 for wells CSVM-1, EH-4, PAIUTES-TH2, GV-1, and BM-DL-2. Based on a review of all of the data, most hydrographs exhibit very similar patterns. The only apparent exception is within Coyote Spring Valley for wells CSVM-3, CSVM-4, and CSVM-5, and within Kane Springs Valley for well KMW-1. Wells CSVM-3 and CSVM-5 are different because of their geologic setting and completion in the upthrown structural blocks of the southern Delamar Mountains and Sheep Range, respectively, as described in Section 3.4.2. Wells CSVM-4 and KMW-1 are completed within the Kane Springs fault zone. Time-series charts for these four wells are presented in Figure 5-6. The hydrograph for well CSVM-1 is included for comparison. As Figure 5-6 illustrates, the responses observed in CSVM-3 and CSVM-5 are distinctly different. The responses of wells CSVM-4 and KMW-1 are similar to those of other wells in the basin, but appear to be slightly attenuated by the Kane Springs fault.

Time-series charts of discharge data for springs located in the MRSA discharge area were constructed and evaluated. Records at the Pederson Spring and the Warm Springs West gage are used as indicators of how changes in aquifer conditions affect discharge from the regional springs in the area. These records are described in detail in Section 4.0 and are presented in Figure 5-7 with the percent of average winter-season precipitation and groundwater production from the carbonate aquifer. The

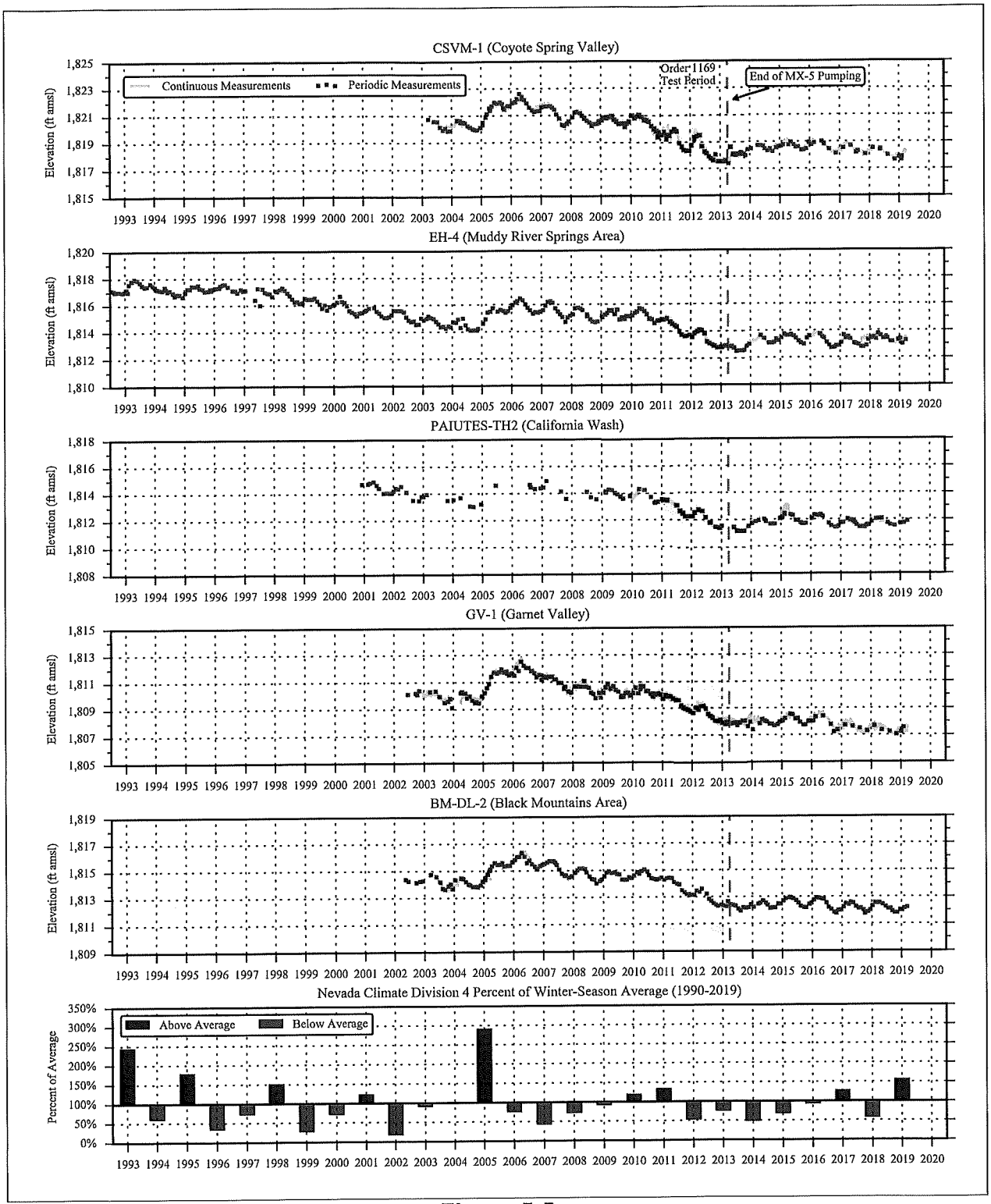

Figure 5-5
Water-Level Responses in Representative Carbonate Wells

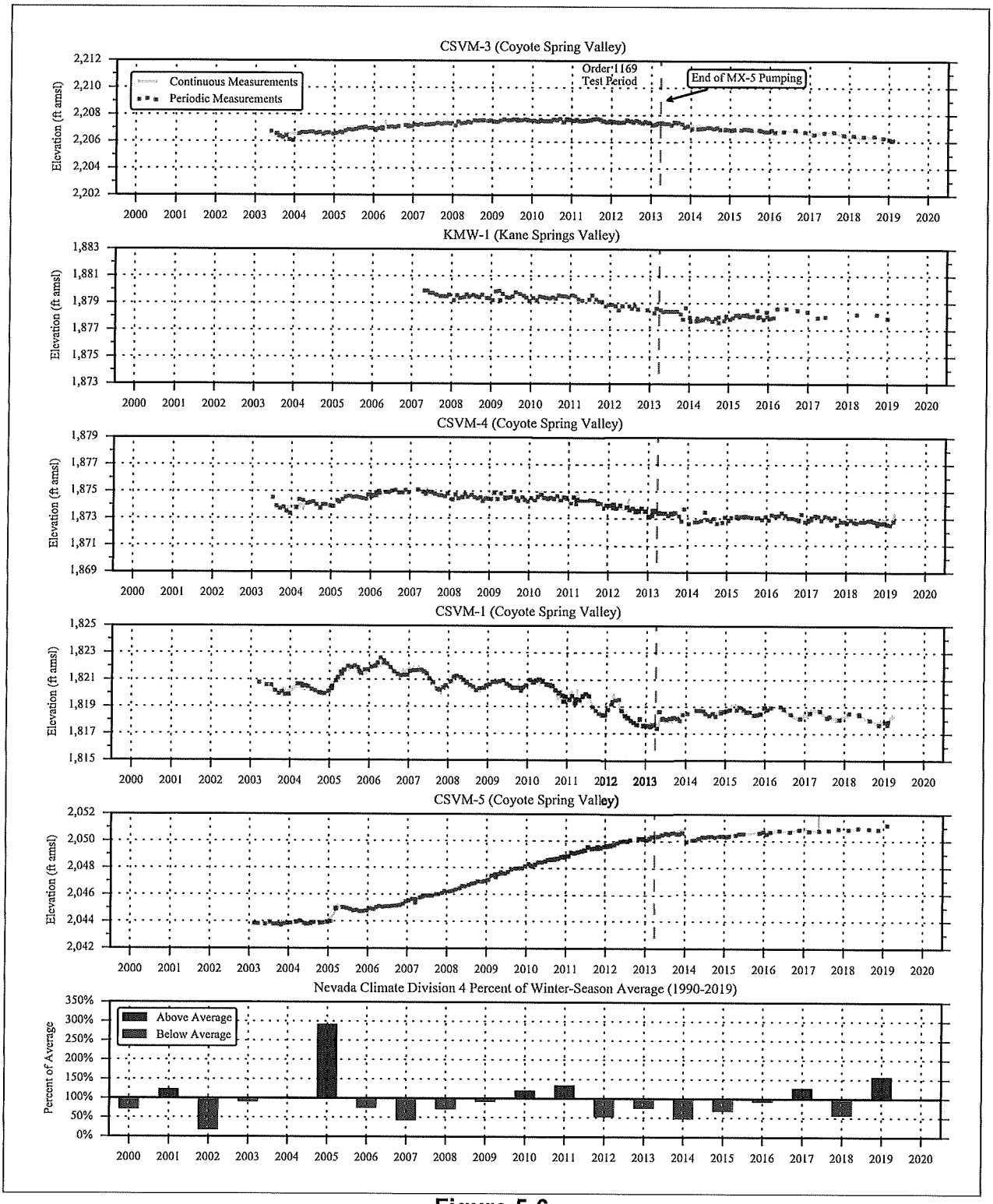

Figure 5-6
Water-Level Responses in Representative Carbonate Wells

7.0 DEPLETION OF MUDDY RIVER STREAMFLOW AND IMPACTS TO SNWA

Groundwater production from the MRSA alluvial reservoir and the LWRFS carbonate aquifer has depleted the flows of the Muddy River. Muddy River water rights were adjudicated in 1920 and the Muddy River Decree allocated the entire flow of the Muddy River. Therefore, groundwater production (whose associated rights are all junior in priority) that causes a depletion in streamflow also conflicts with the decreed rights on the river.

SNWA has significant assets associated with the Muddy River through its ownership and leases of water rights and MVIC shares, and uses these assets to create Tributary Conservation ICS credits in the Colorado River and Lake Mead. SNWA has spent over $80,000,000 on the acquisition of water rights on the Muddy River for the purpose of creating ICS credits. These credits compose a critical component of the SNWA water-resources portfolio that is needed to supply current and future water demands for a growing community with a population of over 2 million people and more than 40 million annual visitors (SNWA, 2018a).

This section describes SNWA's water-resource assets associated with the Muddy River, how they have been used to create ICS credits, and how SNWA has been impacted by Muddy River streamflow depletions caused by groundwater production within the LWRFS. The ensuing discussion describes these assets in relation to the Upper and Lower Muddy River reaches distinguished by the location of the USGS Muddy River near Glendale gaging station (MR Glendale gage) (Figure 7-1).

7.1 Upper Muddy River

Decreed water rights within the Upper Muddy River are individually owned with specific Places of Use to which water associated with the right is applied. Since 2006, SNWA has entered into lease agreements for some of these rights and has purchased others. Leased volumes may vary year to year as documented within the annual Muddy River ICS Certification reports (SNWA, 2009c; 2011a and b; 2012a and b; 2013c; 2015b and c; 2016b; 2017b; 2018c). Within the Upper Muddy River, SNWA leases or owns the following water rights;

- Up to 2,001 afy leased from the Church of Latter Day Saints (expires January 1, 2027)
- 111 afy of former Cox and Mitchell rights (SNWA-owned)
- 1,040 afy of former Hidden Valley rights (SNWA-owned)
- Up to 3,700 afy of rights held in a long-term lease by the Moapa Band of Paiutes and subleased to SNWA (expires December 31, 2026)
- 811 afy of former Knox and Holmes rights (SNWA-owned)
- Up to 3,000 afy of rights leased from MVIC (expires December 31, 2026).

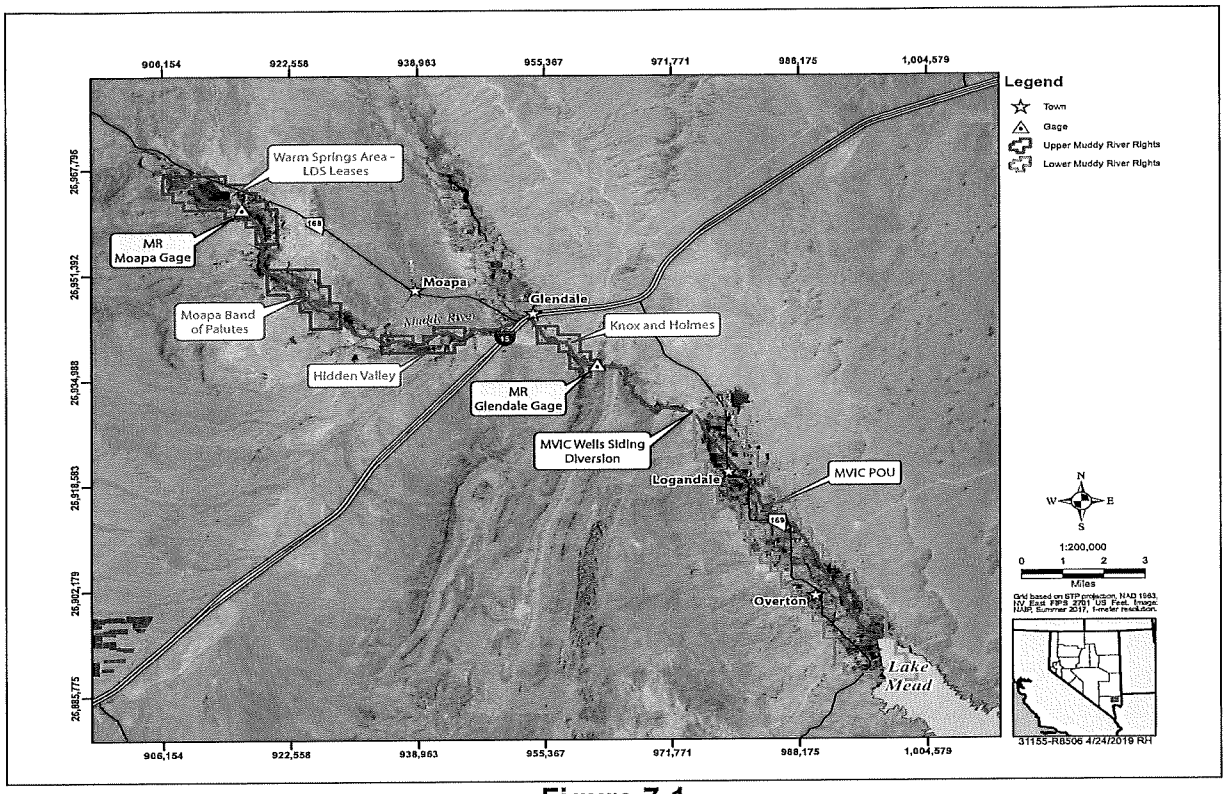

Figure 7-1
Upper and Lower Muddy River Reaches

7.2 *Lower Muddy River*

Decreed water rights within the Lower Muddy River are held by MVIC, which holds the largest quantity of decreed rights on the Muddy River. MVIC decreed Muddy River water rights are owned by MVIC shareholders through ownership of shares of preferred and common MVIC stock. There are 2,432 preferred shares and 5,044 common shares in MVIC. MVIC's operations and covenants define preferred shares as 100 percent of the Muddy River summer flow and 75 percent of the winter flow. Common shares represent the remaining 25 percent of the winter flow. In addition to their decreed and certificated rights, the 1920 Muddy River Decree states that MVIC can divert any additional unused Muddy River flows that reach their diversion structure on the Muddy River. Consequently, the actual water that MVIC splits among its shareholders varies from year to year based on the actual divertible flows that reach their diversion structure. MVIC delivers water to its shareholders through a network of concrete-lined ditches and pipes.

Currently, SNWA controls, through purchases and leases, 1,166 preferred shares and 3,208 common shares. The volume of water represented by these shares changes from year to year based on the flow of the river as measured at the MR Glendale gage. In 2018, SNWA shares represented approximately 10,000 af.

7.3 SNWA Tributary Conservation ICS Credits

SNWA relies upon Muddy River water rights and MVIC shares it owns and leases to create Tributary Conservation ICS credits. SNWA is allowed to store the water associated with these credits in Lake Mead, or divert it at its intakes in Lake Mead for delivery to water purveyors in the Las Vegas Valley.

The criteria for the development and delivery of ICS was established in the Record of Decision for Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations for Lake Powell and Lake Mead, December 13, 2007 (USBR, 2007). Tributary Conservation ICS is one of several types of ICS and allows a Contractor, as defined in the Guidelines, to increase tributary flows into the mainstream of the Colorado River within its state for ICS credits. ICS credits are limited to flows associated with water rights that have been used for a significant period of years and were perfected prior to the effective date of the Boulder Canyon Project Act of June 25, 1929. ICS has been declared a beneficial use under Nevada Revised Statute 533.030.

To generate ICS credits, the Guidelines require a Contractor, SNWA in this case, to submit ICS plans of creation and certification reports. Plans of creation are written to demonstrate how the ICS will be created in the ensuing year, and certification reports are used to document the creation of ICS for the previous year. NSE Order 1194 requires the submittal of an annual report to the NSE that provides a full accounting of adjudicated Muddy River water rights, owned or controlled by the Contractor, that have been conveyed through the Muddy River to the Colorado River for the creation of ICS. The certification reports must comport with this order. SNWA has created 157,824 af of Muddy River Tributary Conservation ICS credits since the Guidelines were instituted in 2008 (SNWA, 2009c; 2011a and b; 2012a and b; 2013c; 2015b and c; 2016b; 2017b; 2018c). Annual ICS credits created by SNWA are presented in Table 7-1. The 2018 ICS data are not included here as the Certification Report has not yet been finalized and approved.

7.3.1 Impacts to SNWA as a Result of Muddy River Streamflow Depletions

As described in Section 5.1.4, Muddy River streamflow has been depleted by groundwater production from both the MRSA alluvial reservoir and LWRFS carbonate aquifer. Figure 5-4 demonstrates that groundwater production within the MRSA accounts for the MR Flow Deficit observed for the period of analysis. Production wells completed in the alluvial reservoir adjacent to the Muddy River capture groundwater that would otherwise discharge to the river. In addition, MRSA production wells completed in the carbonate aquifer capture water that would otherwise replenish the alluvial reservoir though diffuse subsurface flow or discharge from discrete springs. Capturing this groundwater depletes the source of supply to the alluvial reservoir and springs, thereby, depleting the streamflow. Groundwater production from other production wells located within the LWRFS also impact the MRSA discharge, and therefore the Muddy River flow. However, the impacts are not readily discernible in the streamflow record because of their relatively small magnitude compared to the flow of the river and the masking effect caused by recharge variability.

Muddy River streamflow depletions have had, and will continue to have, a direct impact on the volume of water associated with MVIC shares and, consequently, the water resources SWNA is able to secure through the creation of ICS credits. As previously described, the volume of water represented by MVIC shares is determined by the annual flows in the Muddy River. As the flows

Table 7-1
SNWA's Muddy River Tributary Conservation ICS Credits

Year	Tributary Conservation ICS Credits (af)		
	Upper Muddy River	Lower Muddy River	Annual Total
2008	2,112	4,983	7,095
2009	5,812	7,395	13,207
2010	8,622	8,161	16,783
2011	9,420	7,142	16,562
2012	9,929	7,384	17,313
2013	10,390	7,033	17,424[a]
2014	6,471	8,627	15,098
2015	9,963	8,509	18,472
2016	9,963	8,283	18,246
2017	9,963	7,660	17,624[a]
		GRAND TOTAL	157,824

[a]Differences in annual totals are the result of rounding.

have diminished as a result of groundwater production, so too has the volume of water associated with the shares that are owned by the individual MVIC shareholders, including SNWA. The impact to MVIC was estimated for the period 2008 through 2017 by summing the annual differences between the predevelopment baseflow and the natural flow as measured at the MR Moapa gage, which totaled over 46,000 af. The predevelopment baseflow was derived using streamflow records for a period of below-normal hydrology; therefore, using it as a reference point leads to conservatively low estimates of streamflow depletion. Table 7-2 presents the impacts these streamflow depletions have had on SNWA ICS credits. To quantify the impacts, the following steps were taken:

1. The natural flow as a percentage of the predevelopment baseflow was derived for each year of ICS creation using the annual flood-adjusted flow records of MR Moapa gage. The natural flow record was derived by accounting for all surface-water diversions above the gage as described in Section 5.1.3, and represents the water available for uses downstream of the gage, including the creation of ICS from MVIC shares. The computed percentage is less than 100 when the baseflow has been depleted by groundwater production, as was the case during the period of ICS creation. By using the MR Moapa gage, it is assumed that all gains/losses (i.e., diversions, ET) between the MR Moapa and MR Glendale gages remained essentially the same for the period of analysis.

2. The potential ICS credit that would have been created had the streamflow not been depleted was computed by dividing the ICS credit certified for each year by the percentage of natural flow computed in Step 1. The potential ICS is always greater than the certified ICS when the baseflow has been depleted by groundwater production.

3. The impacts were quantified by computing the difference between the potential and certified ICS volumes. The values are listed in Table 7-2 and presented in Figure 7-2. The total

estimated impact from 2008 through 2017 is 12,040 af. The cost to purchase additional water to replace the lost flows is estimated to be $2,288,746 using the annual value of leased shares.

Table 7-2
Impacts of MR Streamflow depletions on SNWA ICS Credits

Year	Certified ICS Credits (af)	Natural Flow at MR Moapa Gage[a] (af)	Natural Flow as Percentage of Predevelopment Baseflow[b] (%)	Potential ICS Credits (af)	Impact to SNWA ICS Credits (af)	Lease Cost per Acre-Foot	Replacement Water Costs
2008	4,983	29,016	86	5,794	(811)	$283.33	$229,781
2009	7,395	29,784	88	8,403	(1,008)	$283.33	$285,597
2010	8,161	29,493	87	9,380	(1,219)	$283.33	$345,379
2011	7,142	28,405	84	8,502	(1,360)	$184.17	$250,471
2012	7,384	28,184	83	8,896	(1,512)	$184.17	$278,465
2013	7,033	28,586	84	8,373	(1,340)	$184.17	$246,788
2014	8,627	28,302	83	10,394	(1,767)	$130.00	$229,710
2015	8,509	30,150	89	9,561	(1,052)	$130.00	$136,760
2016	8,283	30,302	89	9,307	(1,024)	$145.00	$148,480
2017	7,660	30,331	89	8,607	(947)	$145.00	$137,315
			TOTAL		**(12,040)**		**$2,288,746**

[a]MR Moapa Gage values are the Flood-Adjusted Natural Flow as shown in Figure 5-3
[b]Predevelopment baseflow estimate of 33,900 afy was used in calculation.

7.4 *Potential for Increased Damages due to Additional Carbonate Groundwater Production*

The MR Flow Deficit is, at this time, primarily the result of alluvial and carbonate groundwater production within the MRSA. However, as described in Section 6.1, any groundwater production from the carbonate system within the LWRFS will ultimately capture groundwater discharge to the MRSA and, consequently, deplete Muddy River streamflow. These impacts conflict with the senior water rights adjudicated in the 1920 Muddy River Decree and affect the ability of SNWA to create ICS credits for which significant investments have been made.

Changing points of diversion to move groundwater production out of the MRSA to locations sourced by the carbonate aquifer will not mitigate these conflicts, only delay their inevitable occurrence. Such changes would exacerbate issues associated with the already over-appropriated carbonate aquifer by accelerating the timing of impacts to sensitive springs due to the additional groundwater production. The timing of impacts will vary based on the magnitude, duration, and location of groundwater production. The impacts may occur relatively quickly, within weeks or months, if additional groundwater production were to occur in areas directly upgradient from the MRSA. Groundwater production in areas farther away, may take longer, but the properties of the aquifer are such that these impacts will eventually result in reduced spring discharge and depletions of Muddy River streamflow.

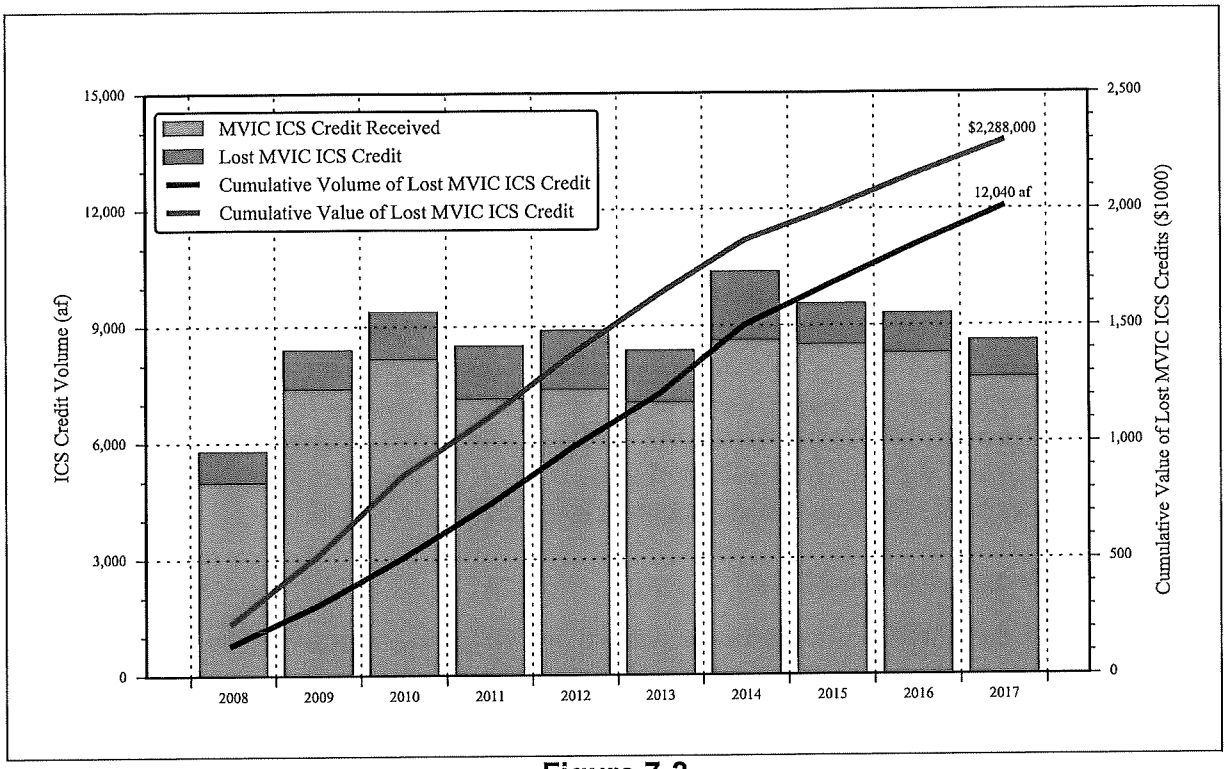

Figure 7-2
SNWA's Tributary ICS Credits and Credits Lost as a Result of Groundwater Production

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DISTRICT COURT

CLARK COUNTY, NEVADA

LAS VEGAS VALLEY WATER DISTRICT, and SOUTHERN NEVADA WATER AUTHORITY, 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 Hearing Requested **OPENING BRIEF FROM PETITIONERS' LAS VEGAS VALLEY WATER DISTRICT AND SOUTHERN NEVADA WATER AUTHORITY**

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

Case Number: A-20-816761-C

NRAP RULE 26.1 DISCLOSURE

The undersigned counsel of record certifies that the LAS VEGAS VALLEY WATER DISTRICT and the SOUTHERN NEVADA WATER AUTHORITY are governmental agencies and political subdivisions of the State of Nevada.

DATED this 27th day of August 2021.

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AFFIRMATION: The undersigned does hereby affirm that the preceding document and/or attachments do not contain the social security number of any person.

Dated this 27th day of August 2021.

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JURISDICTIONAL STATEMENT

This is a petition for judicial review of Nevada State Engineer Order 1309 ("Order 1309") issued June 15, 2020.[1] Under Nevada law "any person feeling aggrieved by any order or decision" of the State Engineer may have the order or decision reviewed "in the proper court of the county in which the matters affected or a portion thereof are situated."[2] SNWA and LVVWD timely filed a petition for judicial review of Order 1309 in the Eighth Judicial District of Nevada in and for Clark County on June 17, 2020.[3] Order 1309 addressed water availability in the Lower White River Flow System ("LWRFS"), which is primarily located in Clark County, Nevada, making the Eighth Judicial District the proper venue for judicial review of Order 1309. Additionally, the Eighth Judicial District Court is the court with jurisdiction over the Muddy River Decree, which is at issue in these related cases. Several other parties filed petitions for judicial review of Order 1309, and their petitions were consolidated with SNWA and LVVWD's petition.[4]

STATEMENT OF ISSUES

1. Whether the State Engineer incorrectly re-quantified decreed water rights in Order 1309 because that re-quantification was legally impressible.

2. Whether the State Engineer's re-quantification of decreed water rights was based on incorrect factual findings that are not supported by substantial evidence.

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[1] SE ROA 67. Filed concurrently with the opening brief is an appendix that includes excerpts of the record of appeal that are cited to in this opening brief.
[2] NRS 533.450(1).
[3] Petition for Judicial Review (Eighth Judicial Dis. Court, Case No. A-20-824381-P).
[4] Order Granting Consolidation, August 17, 2020, Case No. A-20-824381-P.

3. Whether the State Engineer improperly made findings regarding conflicts between junior groundwater pumping in the LWRFS and senior decreed Muddy River water rights because those findings were outside the scope of the administrative proceeding below.

STATEMENT OF THE CASE

The LWRFS is an over-appropriated group of groundwater basins in southern Nevada, north of the Las Vegas valley. To date, the State Engineer's office has granted rights to pump approximately 50,000 acre-feet annually ("afa") of water from the LWRFS basins. However, only about 4,000 to 8,000 afa of groundwater can be sustainably pumped in the LWRFS without adversely impacting senior water rights in the Muddy River. Additionally, the Muddy River is home to the endangered Moapa dace that depend on the flows and quality of water in the Muddy River. Muddy River surface water rights are unquestionably senior in priority to the groundwater rights issued in the LWRFS. Current groundwater pumping has already, and continues to, impact senior decreed Muddy River surface water rights and threatens to reduce the habitat of the endangered Moapa dace.

For at least two decades, regulators have questioned whether groundwater is available for a massive residential development that is proposed by Coyote Springs Investment's ("CSI") because of groundwater pumping impacts on the Muddy River. In 2002, the State Engineer ordered an aquifer test (the "Aquifer Test") to evaluate the impact of groundwater pumping in the LWRFS to better understand the connection between groundwater pumping and flow in the Muddy River. The Aquifer Test demonstrated that large-scale groundwater pumping in the LWRFS is unsustainable. If

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the CSI project is developed using unsustainable LWRFS groundwater as a water source, homeowners would face a substantial likelihood of investing in a home without a sustainable water supply. The same is true for any non-residential development.

Order 1309 is the latest administrative action relating to the problem of over-pumping in the LWRFS. In 2020, the State Engineer issued Order 1309 after the two-year Aquifer Test, years of observing aquifer recovery and evaluating data, and an evidentiary hearing to interpret the data ("Order 1303 Hearing"). In Order 1309, the State Engineer correctly recognized that the LWRFS basins are hydrologically connected, and need to be managed as one administrative unit to avoid conflicts to senior water rights and adverse impacts to the environment. The State Engineer also recognized that far less water is available for appropriation in the LWRFS than once contemplated, and existing groundwater rights need to be curtailed. The State Engineer determined that 8,000 afa is the "maximum amount" of groundwater that can be pumped from the LWRFS.[5] He also ruled that even the 8,000 afa pumping limit "may need to be reduced in the future" if spring flows continue to decline due to groundwater pumping.[6]

Most of Order 1309 was correct. The State Engineer properly provided protection against further development of non-existent groundwater in the LWRFS. However, in Order 1309, the State Engineer failed to recognize the ongoing impact of junior groundwater pumping on senior surface water rights in the Muddy River. He unlawfully reduced the total duty of senior decreed Muddy River water rights to support the erroneous finding that current junior groundwater pumping is not conflicting with senior

[5] SE ROA 63.
[6] SE ROA 64.

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rights. Even if the State Engineer could re-quantify decreed surface water rights (which he cannot), the calculations the State Engineer relied upon when re-quantifying the total duty of the senior decreed rights were erroneous. What is more troubling is that the State Engineer, on multiple occasions, indicated he *would not* be ruling on conflicts in the Order 1303 proceedings, and that conflicts would be specifically addressed in a future proceeding.

This Court should uphold the bulk of Order 1309 because the State Engineer's conclusions regarding LWRFS hydrologic connections and water availability were all based upon much more than substantial evidence. However, the State Engineer's wholly inconsistent conclusion that existing junior LWRFS groundwater pumping does not conflict with senior Muddy River surface water rights must be reversed because it was arbitrary, capricious, contrary to law, and made without substantial evidence.

STATEMENT OF FACTS

I. Muddy River Decree

In 1920, the entire flow of the Muddy River was adjudicated by the district court in Clark County, Nevada, through the Muddy River Decree.[7] The Muddy River Decree identifies each water right holder on the Muddy River and quantified each water right.[8] The decree court also directed how water is to be distributed in times of surplus and shortage. A unique feature of the Muddy River Decree is that the Muddy Valley Irrigation Company ("MVIC") is entitled to "divert and use upon its lands *all the waters*

[7] SE ROA 33770-816.
[8] SE ROA 33798-806.

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of the [Muddy River] except the amounts specifically awarded and allotted to other parties" above an area known as Wells Siding.[9]

Put simply, instead of a specific duty of water, MVIC is entitled to all water in the Muddy River that is not owned by others with decreed rights. The decree fully appropriated all flows in the Muddy River to senior vested water right holders. Any reduction in flow – caused by groundwater pumping, upstream surface water diversions not included in the decree, or otherwise – necessarily conflicts with existing rights by reducing the amount of water delivered to the vested water right owner. Such conflicts are a violation of Nevada's prior appropriation system.

II. History Of LWRFS Administration

A. Order 1169

Beginning in 1989, and through the early 2000s, various parties (including CSI and LVVWD) filed applications to appropriate additional groundwater in various LWRFS basins - Coyote Spring Valley, Black Mountains Area, Garnet Valley, Hidden Valley, California Wash, and Muddy River Springs Area Hydrographic Basins.[10] In 2001, the State Engineer held hearings on pending water right applications in Coyote Spring Valley.[11] Following the 2001 hearings, on March 8, 2002, the State Engineer issued Order 1169, which required a large-scale Aquifer Test under which fifty percent of existing groundwater rights in the subject basins would be pumped for at least two (2) consecutive years to determine the effects of groundwater pumping on senior water

[9] SE ROA 33812-33813 (emphasis added).
[10] SE ROA 4.
[11] SE ROA 4.

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rights and the environment.[12] During the Aquifer Test, the State Engineer held all pending groundwater applications in the LWRFS (excluding the Kane Springs basin) in abeyance.[13]

In Order 1169, the State Engineer expressed concern about how groundwater pumping was impacting the area. He found that he needed additional information to determine if existing groundwater rights "will have any detrimental impacts on existing water rights or the environment,"[14] because existing rights include Muddy River water rights that are senior to all groundwater rights. The State Engineer's environmental concern was related to the Moapa dace. Moapa dace are small, thermophilic fish that only exist in the warm spring headwaters of the Muddy River, known as the Muddy River Spring Area.[15] The Moapa dace is listed as "endangered" by the United States Fish and Wildlife Service ("USFWS") and is protected under the Endangered Species Act.[16] Since the 1990's, SNWA, LVVWD and other stakeholders have been actively involved in efforts to protect and benefit the Moapa dace.[17] Protecting the Moapa dace necessarily involves protecting the warm spring sources of the Muddy River.[18]

Following the issuance of Order 1169, SNWA, USFWS, CSI, the Moapa Band of Paiute Indians ("Tribe"), and the Moapa Valley Water District ("MVWD") entered into a Memorandum of Agreement ("MOA"). The purpose of the MOA was to minimize the impact of groundwater pumping on the endangered Moapa dace.[19] The MOA

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[12] SE ROA 4.
[13] SE ROA 665-66.
[14] SE ROA 665.
[15] SE ROA 42087.
[16] SE ROA 42087.
[17] SE ROA 42087.
[18] SE ROA 42087.
[19] SE ROA 5.

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established minimum in-stream flow levels and identified trigger flow levels at specific springs to mandate the parties to reduce groundwater pumping. Actions to protect in-stream flows (in and to the Muddy River) were also required if flows at a specific gauge (the Warm Springs West gauge) falls below 3.2 cfs.[20] Greater pumping reductions are required if spring flows fall below 2.7 cfs.[21]

B. Common Concerns with CSI's Groundwater Rights

Groundwater issues in the LWRFS were brought to a head by CSI's residential development proposal. CSI planned to use existing groundwater rights, in addition to pending groundwater applications, to develop a large scale residential and commercial development fifty miles north of the Las Vegas valley.[22] CSI recognized it was taking a significant risk.[23] CSI recognized that the water source for its development would be independent of water used in the balance of Clark County, and consequently assumed the risk regarding the sustainability of Coyote Spring Valley groundwater as its water source.[24] CSI's groundwater source was all the more risky because CSI's groundwater permits had been protested by the Nevada Department of Wildlife due to the negative

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[20] SE ROA 5.
[21] SE ROA 5.
[22] SE ROA 47860-61.
[23] SE ROA 47861 (one of the original developers stated "[i]t's the developers who are assuming all of the risk . . . [w]hether it's for acquisition of water rights, subsidy of operating costs . . . [and] the cost of the infrastructure.").
[24] SE ROA 47861-62 ("I also feel like it's important to point out that the water source that we are expecting to use out here is one that is outside of existing allocations within Clark County. We are living on our own water resources that don't have to take away from any of the water rights that would otherwise be used for the rest of Clark County residents.").

impact of increased groundwater pumping on senior water rights and the Moapa dace – forecasting the exact issues outlined in the cases at hand.[25]

III. State Engineer Rulings 6254-6261

The Aquifer Test commenced on November 15, 2010 and concluded on December 21, 2012.[26] The Aquifer Test participants were LVVWD, SNWA, CSI, Nevada Power Company, MVWD, Dry Lake Water Company, LLC, Republic Environmental Technologies, Inc., Chemical Lime Company, Nevada Cogeneration Associates, and the Tribe. Each participant was given the opportunity to submit reports to the State Engineer to present evidence about the results of the Aquifer Test and how those results related to the amount of water available for appropriation in the subject basins.[27]

Based on the findings of the Aquifer Test, the State Engineer issued Rulings 6254-6261 on January 29, 2014. In these rulings, the State Engineer found, in part, that Aquifer Test pumping in the LWRFS caused widespread impacts throughout the LWRFS area, even though only a portion of the existing rights in the region were pumped during the Aquifer Test. The State Engineer also found that Aquifer Test pumping reduced flows in the warm springs which feed the Muddy River and provide habitat to the Moapa dace.[28] Based on these findings, the State Engineer denied all pending applications in the subject basins.[29]

[25] SE ROA 48114-30.
[26] SE ROA 6.
[27] SE ROA 5-6.
[28] SE ROA 10.
[29] SE ROA 752-53.

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The State Engineer also found in Rulings 6254-6261 that "[t]he 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."[30] With regards to existing water rights in the subject basins, the State Engineer 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."[31]

The issuance of Rulings 6254-6261 caused several parties to recognize that the system could not even support *existing* groundwater rights, including the existing rights needed to support CSI's project. Rather than leave future residents with an uncertain supply of water, on November 16, 2017, LVVWD, as manager of the Coyote Springs Water Resources General Improvement District, sent a letter to the State Engineer inquiring whether the State Engineer would be signing CSI subdivision maps given the Aquifer Test results showing widespread pumping impacts.[32]

On May 16, 2018, the State Engineer replied to LVVWD, stating that pumping in the region adjacent to the Muddy River will be "limited to the amount that will not conflict with the Muddy River Springs and the Muddy River . . . [and] carbonate pumping will have to be limited to a fraction of the 40,300 acre-feet already appropriated in the five-basin area."[33] To answer the question of how much water can sustainably be

[30] SE ROA 749.
[31] SE ROA 749.
[32] SE ROA 48040.
[33] SE ROA 48041-42 (The State Engineer later withdrew this letter as part of a settlement agreement with CSI in which the CSI agreed to participate in the ongoing conjunctive management of the LWRFS basins.).

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pumped in the LWRFS region, the State Engineer promptly initiated administrative proceedings to gather the necessary scientific data and engage stakeholders.[34]

IV. Interim Order 1303

On January 11, 2019, the State Engineer issued Interim Order 1303, which designated Coyote Spring Valley, Muddy River Springs Area, California Wash, Hidden Valley, Garnet Valley, and a portion of the Black Mountains Area Hydrographic Basins as a joint administrative unit called the LWRFS.[35] The State Engineer further found in Order 1303 that all water rights in the LWRFS would "be administered based upon their respective dates of priorities in relation to other rights within the regional groundwater unit."[36] In Order 1303, the State Engineer invited all stakeholders to submit reports to address four factual matters: (1) the geographic boundary of the LWRFS, (2) aquifer recovery since the Aquifer Test, (3) long-term annual quantity of groundwater that may be pumped from the LWRFS, and (4) the effects of moving water rights between the carbonate and alluvial system to senior water rights on the Muddy River.[37]

Critical to LVVWD and SNWA's petition here, the State Engineer did not ask for information regarding legal conflicts between junior groundwater pumping and senior water rights in the Muddy River. Rather, the exercise focused on how much water can be pumped, not who can pump it. The State Engineer also ruled that, during the pendency of the Order 1303, all permanent applications to change existing groundwater rights in the LWRFS would be held in abeyance. He also placed a temporary

[34] SE ROA 11-12.
[35] SE ROA 82.
[36] SE ROA 82.
[37] SE ROA 82-83.

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moratorium on the State Engineer's review of proposed subdivisions and developments in the LWRFS pending the Order 1303 proceedings.[38]

V. Scope Of Order 1303 Hearing

During a pre-hearing conference on August 8, 2019, the State Engineer's hearing officer and the parties discussed the scope of the Order 1303 Hearing, and specifically whether the hearing would address the issue of conflicts between water rights.[39] The hearing officer stated that:

> [T]he purpose of the hearing is *not to resolve or address allegations of conflict between groundwater pumping within the LWRFS and Muddy River decreed rights*. This is not the purpose of this hearing and that's not what we are going to be deciding at this point in time. The purpose of this hearing is to determine what the sustainability is, what the impact is on decreed rights, and then addressing and *resolving allegations of conflict should that be a determination that will be addressed in, at a future point in time*.[40]

The hearing officer also stated at the pre-hearing conference that the hearing is part of a "multi-tiered process in terms of determining the appropriate management strategy"[41] in the LWRFS, and legal conflicts are part of "larger substantive policy determinations [that are] not part of this proceeding."[42]

On August 26, 2019, the hearing officer issued a Notice of Hearing.[43] In the Notice of Hearing, the hearing officer pointed out that "[t]he State Engineer further noted that the hearing on the Order 1303 reports was the first step in determining to what

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[38] SE ROA 83.
[39] SE ROA 522.
[40] SE ROA 522 at 12:6-15 (Fairbank) (emphasis added).
[41] SE ROA 522 at 10: 8-10 (Fairbank).
[42] SE ROA 522 at 10:18-22 (Fairbank).
[43] SE ROA 285.

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extent, if any, and in what manner the State Engineer would address future management decisions, including policy decisions, relating to the [LWRFS] basins."[44]

Numerous parties participated in the Order 1303 Hearing.[45] This participation included submitting expert reports, testimony, and written closing arguments regarding the four issues presented by the State Engineer in Order 1303.

VI. Order 1309

On June 15, 2020, the State Engineer issued Order 1309 based on the evidence presented at the Order 1303 Hearing.[46] The State Engineer found that (1) Kane Springs Valley hydrographic basin should be included in the LWRFS administrative boundary, (2) the maximum amount of groundwater that can be pumped in the LWRFS without causing further flow declines in the Muddy River Springs Area and the Muddy River is 8,000 afa, and may be less, (3) the maximum amount of groundwater that may be pumped from the LWRFS may be reduced if it is determined that pumping will adversely impact the Moapa dace, and (4) movement of existing groundwater rights in the LWRFS will be processed in accordance with NRS 533.370.[47] The State Engineer rightfully determined that much less water is available for CSI's development than is

[44] SE ROA 285.

[45] The following parties submitted expert reports and participated in the Order 1303 Hearing; Center for Biological Diversity, The Church of Jesus Christ of Latter-day Saints, City of North Las Vegas, CSI, Georgia Pacific and Republic, Lincoln County Water District and Vidler Water Company, the Tribe, MVWD, MVIC, United States National Park Service, USFWS, Nevada Cogeneration Associates, NV Energy, SNWA and LVVWD, and West Elite Environmental and Bedroc. The Church of Jesus Christ of Latter-day Saints did not directly participate in the hearing but joined in the City of North Las Vegas's evidentiary submissions.

[46] SE ROA 2-69.

[47] SE ROA 66.

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currently permitted, and any increase in existing groundwater pumping will impact senior water rights and the Moapa dace. These are important findings that speak directly to the viability of Coyote Spring Valley groundwater as a source for CSI's proposed development.

Despite the hearing officer and State Engineer making clear that the Order 1303 hearing would not address conflicts between water users, in Order 1309 the State Engineer expressly and inexplicably did just that. He stated:

> [C]apture or potential capture of the waters of a decreed system *does not constitute a conflict with decreed right holders* [. . .]. 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 headwater basins is not conflicting with Decreed rights.[48]

The State Engineer based this finding on the flawed rationale that "[i]f all decreed acres were planted with a high-water use crop like alfalfa, the net irrigation water requirement ("NIWR") would be 28,300 afa, based on a consumptive use rate of 4.7 afa."[49]

Instead of accepting the quantity of water rights based on the Muddy River Decree, as he is required to do, the State Engineer reduced the total duty necessary to fulfill decreed surface water rights from approximately 34,000 afa to approximately 28,300 afa. Without reference to any statute or regulation which permits him to do so (because none exists), the State Engineer ignored the actual quantification of water rights in the Muddy River decree and recalculated the amount of water needed to fulfill those

[48] SE ROA 61-62 (emphasis added).

[49] SE ROA 62. The NIWR is the total amount of water that is needed to grow a crop after subtracting the amount of water used to grow the crop that is recharged back into the aquifer.

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rights based on a hypothetical alfalfa crop, and a hypothetical water consumption rate. The State Engineer also ignored other relevant factors about the quantity of water necessary to fulfill the Muddy River's senior decreed surface water rights, including the fact not all decreed rights are used for irrigation.

Put simply, the State Engineer altered the Muddy River Decree, even though he is expressly prohibited from doing so under Nevada law. The State Engineer used this reduction in total water duty to find that junior groundwater pumping does not conflict with senior decreed water rights, even though he recognized junior pumping reduces the flow of the Muddy River.[50]

VII. SNWA's and LVVWD's Interests In The LWRFS

SNWA is a non-profit political subdivision of the State of Nevada consisting of seven members (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.[51] This portfolio includes control of water rights with points of diversion in five of the seven hydrographic basins that make up the LWRFS.[52] SNWA was a participant in the Order 1169 Aquifer Test and is one of the primary participants in the 2006 MOA concerning protection for the Moapa dace.

LVVWD is a member agency of SNWA. Additionally, LVVWD is the general manager of the Coyote Springs Water Resources General Improvement District, which

[50] SE ROA 62.
[51] SE ROA 40603-04.
[52] SE ROA 40604.

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is the entity responsible for providing water and wastewater services for CSI's development in Coyote Spring Valley if a sustainable water resource exists.[53]

SNWA's decreed surface water rights include both decreed Muddy River water rights and shares in MVIC, which controls additional decreed surface water rights.[54] SNWA relies on these surface water rights to create Tributary Conservation Intentionally Created Surplus ("ICS") credits, which can then be stored in Lake Mead or delivered from Lake Mead to water purveyors in Las Vegas Valley.[55] The creation of ICS credits was established by the United States Bureau of Reclamation ("USBOR") in 2007.[56] To create ICS credits, the USBOR requires SNWA to submit ICS plans of creation, and certification reports.[57] The ICS program provides a significant benefit to southern Nevada, because it allows water purveyors to use water from the Muddy River without having to construct an expensive pipeline to deliver water directly to Las Vegas.[58]

In Nevada, the legislature declared ICS to be a beneficial use of water under NRS 533.030. The State Engineer requires annual reports to be submitted that provide a full accounting of the water rights used to create ICS credits.[59] The State Engineer then reviews these reports and provides the party creating ICS credits (such as SNWA) with a letter confirming that the party controls the water rights used to create ICS credits.

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[53] SE ROA 48007-034.
[54] SE ROA 42007.
[55] SE ROA 42007.
[56] SE ROA 42007.
[57] SE ROA 42007.
[58] SE ROA 53387 at 998:8-12 (Pellegrino).
[59] SE ROA 42007.

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The State Engineer has provided SNWA with a letter verifying the use of its decreed surface water rights for creation of its Muddy River ICS credits annually since 2009.[60] Importantly, when the State Engineer verifies SNWA's decreed Muddy River water rights, he recognizes the full duty of the water rights awarded under the decree and does not limit the water rights based on NIWR, as he did in Order 1309.[61] SNWA has created 157,824 afa of Muddy River Tributary Conservation ICS credits since 2009.[62] However, over that same period, LWRFS groundwater pumping has caused SNWA's ICS creation to be approximately 12,040 acre-feet less than it should have been.[63]

SUMMARY OF THE ARGUMENT

While the State Engineer correctly decided most of Order 1309, he failed to recognize the full impact of ongoing groundwater pumping on senior decreed water rights. The State Engineer is prohibited by law from reducing the amount of decreed water rights,[64] or taking any action that impairs vested rights.[65] The State Engineer is also prohibited by law from using a consumptive use analysis to reduce decreed Muddy River surface water rights.[66] Yet in Order 1309, the State Engineer violated each of these legal mandates and reduced the amount of Muddy River rights he would recognize and protect.

[60] SE ROA 42007.
[61] SE ROA 46349-50.
[62] SE ROA 42007.
[63] SE ROA 42007-08.
[64] *See* NRS 533.0245.
[65] NRS 533.085.
[66] *See* NRS 533.3703(2)(b).

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In addition, the State Engineer made a series of factual errors in his ruling regarding Muddy River water rights. These errors include: (1) incorrectly calculating the originally irrigated acreage in the Muddy River Decree, (2) incorrectly finding the decree overestimated the availability of supply, (3) failing to account for conveyance and evaporation loss of the river and ditches, (4) assuming all decreed rights continue to be used for irrigation, and (5) applying a duty inconsistent with the decree.

Finally, the State Engineer erred in conducting a conflicts analysis because it was outside the scope of the Order 1303 Hearing. The State Engineer and hearing officer stated on multiple occasions that conflicts between water rights holders would not be addressed at the Order 1303 Hearing. SNWA and LVVWD rightfully relied on the State Engineer's limitation of the scope of the Order 1303 proceedings and did not present significant evidence on conflicts. Instead of following his own guidance on conflicts, the State Engineer performed an unlawful conflicts analysis based on his unlawful reduction of the total duty of Muddy River water rights. The State Engineer's conflicts analysis was therefore erroneous, arbitrary, capricious, an abuse of discretion, and a violation of LVVWD and SNWA's right to due process.

ARGUMENT

I. Standard Of Review

Judicial review is "in the nature of an appeal."[67] When reviewing a State Engineer's decision, the role of the reviewing court is to determine if the State Engineer's decision was arbitrary, capricious, or an abuse of discretion, or it was otherwise affected

[67] NRS 533.450(1); *Revert v. Ray*, 95 Nev. 782, 786, 603 P.2d 262, 264 (1979).

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by prejudicial legal error.[68] A decision is arbitrary if it was made "without consideration of or regard for facts, circumstances, fixed rules, or procedures."[69] A decision is capricious if it is "contrary to the evidence or established rules on law."[70] The reviewing court's focus must be "on whether the record includes substantial evidence to support the State Engineer's decision."[71] The Nevada Supreme Court has defined 'substantial evidence' as "that which a reasonable mind might accept as adequate to support a conclusion."[72]

In *Revert v. Ray*, the Nevada Supreme Court articulated the procedural safeguards the State Engineer must employ prior to issuing an order.[73] First, the State Engineer must provide affected parties with a "full opportunity to be heard" and "must clearly resolve all the crucial issues presented."[74] Next, the State Engineer's order or decision must include "findings in sufficient detail to permit judicial review."[75] Finally, if such procedures are not followed and "the resulting administrative decision is arbitrary, oppressive, or accompanied by a manifest abuse of discretion," a court should "not hesitate to intervene and block the enforcement of the order or decision."[76]

The Nevada Supreme Court has recently recognized that Nevada law prohibits the reallocation of decreed water rights, "[t]he statutory water scheme in Nevada therefore

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[68] *Pyramid Lake Paiute Tribe of Indians v. Washoe Cty.*, 112 Nev. 743, 751, 918 P.2d 697, 702 (1996), citing *Shetakis Dist. v. State, Dep't of Taxation*, 108 Nev. 901, 903, 839 P.2d 1315, 1317 (1992).
[69] BLACK'S LAW DICTIONARY 125 (10th ed. 2014).
[70] BLACK'S LAW DICTIONARY 254 (10th ed. 2014).
[71] *Bacher v. Office of the State Engineer of State of Nevada*, 122 Nev. 1120, 1121 (2006)
[72] *Id.* (internal quotations omitted).
[73] *Revert*, 95 Nev. at 786, 603 P.2d at 264.
[74] *Revert*, 95 Nev. at 787, 603 P.2d at 264-65.
[75] *Revert*, 95 Nev. at 787, 603 P.2d at 265.
[76] *Id.*

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expressly prohibits reallocating adjudicated water rights that have not been abandoned, forfeited, or otherwise lost pursuant to an express statutory provision."[77] The 9th Circuit has also recognized the finality of water right decrees, "[p]articipants in water adjudications are entitled to rely on the finality of decrees as much as, if not more than, parties to other types of civil judgments."[78]

II. The State Engineer's Decision To Re-Quantify Decreed Water Rights Was Arbitrary, Capricious, And An Abuse Of Discretion Because The Re-Quantification Was Unlawful.

A. Re-quantifying decreed water rights based on the NIWR of alfalfa is unlawful because it reduces the amount of water rights recognized under the decree.

The State Engineer's use of a hypothetical alfalfa-irrigation formula to measure the duty of decreed Muddy River's already-adjudicated water rights violates Nevada law. The 1920 Muddy River Decree already fully and finally adjudicated water rights on the Muddy River. Under Nevada law and the doctrine of res judicata, water rights recognized under that decree cannot be relitigated over a century later.[79] The State Engineer himself recognized in Order 1194 that the Muddy River was fully appropriated: "The Muddy River Decree adjudicated the entire flow of the Muddy River and its tributaries, and there is insufficient flow in the Muddy River to grant any new

[77] *Mineral County v. Lyon County*, 136 Nev. Adv. Op. 58, ___, 473 P.3d 418, 429 (2020) (expressly provides that decreed water rights 'shall' be final and conclusive.").
[78] *United States v. Alpine Land & Reservoir, Co.*, 984 F.2d 1047, 1050 (9th Cir. 1993).
[79] *See Nevada v. U.S.*, 463 U.S. 110 (1983) (The Supreme Court ruled that water rights recognized under the *Orr Ditch* decree could not be reallocated by the federal government because of the doctrine of res judicata), *Mineral County v. Lyon County*, 136 Nev. Adv. Op. at ___, 473 P.3d at 429 (2020).

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appropriations."[80] The total amount of water recognized under the decree is approximately 34,000 afa.[81]

The State Engineer is also prevented by statute from reducing the amount of decreed water rights, as decreed water rights are under the jurisdiction of the judicial, not executive, branch because the decreed water rights were put to beneficial use prior to the existence of the State Engineer's office. Under NRS 533.0245, the State Engineer is prohibited from carrying out his duties in any way that conflicts with a decree issued by a state of federal court.[82]

In Order 1309, instead of using approximately 34,000 afa as the measure of water rights awarded in the decree, the State Engineer re-quantified the decreed rights by first assuming a hypothetical situation where all decreed water right users would be growing alfalfa, and then using the NIWR of the hypothetical alfalfa crop to calculate the amount of water needed to fulfill the decreed rights. The State Engineer's NIWR for alfalfa in Order 1309 was 4.7 af/acre, while the Muddy River decree uses 8.54 af/acre.[83] The obvious flaw in the State Engineer's process is that not all decreed water rights are used

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[80] SE ROA 46471.

[81] SE ROA 33798 (original table, later supplemented to add winter use), 33813 (amendment to add winter use to original table), 33787-33789 (final decree), 33799-33806 (acreage per claimant). The total summer acreage is approximately 3,261 acres and the total winter acreage is approximately 4,700 acres. When the respective winter and summer duties are applied, and a weighted average taken, the result is approximately 34,000 afa of year-round flow necessary to satisfy the decreed rights. This amount does not account for non-irrigation use recognized in the decree, which total less than 100 afa.

[82] 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, an interstate compact or an agreement to which this State is a party for the interstate allocation of water pursuant to an act of Congress.").

[83] SE ROA 33788. Under the Muddy River decree the diversion rates equate to 10.34 af/acre in summer (153 irrigation days) and 7.24 af/acre in winter (212 irrigation days). These diversion rates have a weighted average of 8.54 af/acre.

to grow alfalfa, and some uses (such as ICS credits) utilize more water than the State Engineer's hypothetical alfalfa crop would utilize requiring the full duty of 8.54 af/acre. By using the NIWR of alfalfa, instead of the amounts of water recognized in the Muddy River Decree, the State Engineer, in effect, reduced the total amount of water allocated to the senior decreed water right holders from approximately 34,000 afa to 28,300 afa. This reduced the amount of water allocated to decreed senior water rights by almost 6,000 afa.[84]

The State Engineer's re-quantification runs afoul of the court's decreed duty of the water rights, as well as the State Engineer's own statutory limitations which prevent him from carrying out his duties in any way that conflicts with a decree issued by a state of federal court.[85] No law or regulation exists that gives the State Engineer authority to re-quantify decreed water rights, let alone employ a hypothetical crop calculation like the NIWR to determine the water requirements of decreed water rights.[86] Notably, NRS

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[84] *See* SE ROA 62 (The calculated volume is notable for its convenience and coincidence – essentially giving the senior decreed vested rights holders a haircut of roughly the same amount currently being pumped by junior groundwater rights holders.).

[85] 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, an interstate compact or an agreement to which this State is a party for the interstate allocation of water pursuant to an act of Congress.").

[86] NRS 533.210(1); NRS 533.220 ("the distribution of water by the State Engineer or by any of the State Engineer's assistants or by the water commissioners or their assistants shall, at all times, be under the supervision and control of the district court. Such officers and each of them shall, at all times, be deemed to be officers of the court in distributing water under and pursuant to the order of determination or under and pursuant to the decree of the court").

533.3703 impliedly forbids such a calculation on the Muddy River.[87] As such, his re-quantification was arbitrary and capricious, and an abuse of discretion.

The State Engineer's attempt to re-quantify the decreed Muddy River water rights also violates MVIC's right to all leftover water flows under the Muddy River Decree.[88] By re-quantifying the total water necessary to fulfill decreed water rights at about 28,300 afa, the State Engineer ignored the plain language of the Muddy River Decree which gives MVIC the senior priority right to all remaining water in the system. The State Engineer effectively re-quantified MVIC's water rights from *all water left in the river* to *all water left in the river under 28,300 afa* which is harmful to MVIC shareholders like SNWA. This action was therefore arbitrary, capricious, and an abuse of discretion by the State Engineer.

B. The State Engineer's re-quantification of decreed Muddy River water rights is arbitrary and capricious because it ignores the State Engineer's past practices without adequate justification.

The State Engineer's has previously administered Muddy River water rights with full recognition of the duty of the water rights in the decree rather than reducing the duty of decreed rights as he did in Order 1309. For example, the State Engineer approved Applications 23600 and 22603,[89] which changed the manner of use of decreed Muddy

[87] Under NRS 533.3703 the State Engineer is allowed to consider consumptive use when evaluating change applications except for decreed Muddy River and Virgin River water rights.

[88] SE ROA 33790 (MVIC is decreed "all the waters of said Muddy River, its headwaters, sources of supply and tributaries, save and except the several amounts and rights hereinbefore specified and described as awarded and decreed to the other [decreed owners]").

[89] SNWA and LVVWD request this Court take judicial notice, pursuant to NRS 47.130(2)(b), of Applications 23600 and 22603. Application 23600 available at

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River water rights from irrigation to industrial use without reducing the duty of the water right recognized under the decree. Also, the State Engineer approved Application 22739, which changed the manner of use of decreed Muddy River water rights from irrigation to municipal use without reducing the duty of the decreed water right.[90] In Order 1309, the State Engineer ignored his prior practice of honoring the full duty of decreed Muddy River water rights when he re-quantified the duty of decreed Muddy River water rights to a lower duty.

The State Engineer's finding in Order 1309 is also inconsistent with his ICS determinations. The State Engineer has continuously recognized that SNWA can use the total duty of the decreed Muddy River water rights it controls to create ICS credits. Since 2009, SNWA has utilized its decreed Muddy River water rights to create ICS credits which require a 100% consumptive use because these water rights must be left in the river and reach Lake Mead. In SNWA's annual ICS certification reports, SNWA explains that it uses the entire duty of the decreed Muddy River water rights it controls for the creation of ICS credits.[91] In other words, when calculating its ICS Credits, SNWA uses its fully-decreed annual duty of 8.54 afa/acre for its Muddy River water rights, which is the weighted average annual duty recognized in the Muddy River

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http://images.water.nv.gov/images/Book_Records/23000/23600.pdf (last visited May 27, 2021). Application 22603 available at http://images.water.nv.gov/images/Book_Records/22000/22603.pdf (last visited May 27, 2021).

[90] SNWA and LVVWD request this Court take judicial notice, pursuant to NRS 47.130(2)(b), of Application 22739. Application 22739 available at http://images.water.nv.gov/images/Book_Records/22000/22739.pdf (last visited May 27, 2021).

[91] SE ROA 46349, 8971.

Decree.[92] On an annual basis, the State Engineer certificated the correctness of this quantification when he stated:

> [t]hese Certification Reports demonstrate that the amount of Tributary Conservation ICS created by the Authority and conveyed to Lake Mead are consistent with Nevada Water Law and State Engineer's Order 1193 and 1194.[93]

In ICS credit accounting, the State Engineer recognizes that decreed Muddy River water right holders are entitled to the full duty of their water rights. In Order 1309, without any legal authority to do so, the State Engineer failed to adhere to past practices and did not recognize the full duty of decreed Muddy River water rights. Instead, he chose to cut the duty nearly in half, from 8.54 af/acre to 4.7 af/acre. Furthermore, the State Engineer did not provide any justification for this change in practice.

The State Engineer's past practices regarding the consumptive use of decreed Muddy River water rights are also reflected in statutory limitations on the State Engineer's ability to consider the consumptive use of a water right. NRS 533.3703 permits the State Engineer to consider the consumptive use of a water right when evaluating a change application, but decreed Muddy River water rights are specifically excluded from NRS 533.3703.[94] The legislature enacted a statute that expressly allowed the State Engineer to consider consumptive use, but importantly excluded Muddy River

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[92] SE ROA 8971.

[93] SE ROA 46349.

[94] NRS 533.3703(2)(a) ("the provisions of this section do not apply to any decreed, certified or permitted right to appropriate water which originates in the Virgin River or the Muddy River"); *Andersen Fam. Assocs. v. Hugh Ricci, P.E.,* 124 Nev. 182, 192, 179 P.3d 1201, 1207 (2008) ("[a]lthough Carson City changed the use of its vested rights, those rights remained of the same character – i.e., they remained vested and did not become solely permitted rights just because the holder obtained a permit changing the use of the rights.").

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decreed water rights. Therefore, the State Engineer's re-quantification of the Muddy River decreed water rights was arbitrary and capricious.

C. The State Engineer violated the non-impairment doctrine by reducing the amount of water recognized and protected under the decree.

The State Engineer is prohibited from taking any action that would impair a pre-statutory water right, such as any Muddy River decreed water right.[95] This doctrine on non-impairment has been upheld by Nevada courts since the water law was first litigated in 1914.[96] By failing to properly recognize the full extent of existing decreed rights, including the current-day uses under valid change applications and ICS creation, the State Engineer impaired the use of those rights. But for Order 1309, SNWA and LVVWD's Muddy River water rights would be recognized under their full duty as set forth in the Muddy River decree. Such an action is barred by statute, making the State Engineer's Order 1309 arbitrary, capricious, and an abuse of discretion.

D. The State Engineer violated the prior appropriation doctrine by using the NIWR of alfalfa to re-quantify decreed Muddy River water rights.

By not recognizing the full duty of decreed Muddy River water rights, the State Engineer was, in effect, preferencing junior groundwater users in violation of Nevada law. Prior appropriation has been the basis of Nevada's water law since statehood. This doctrine applies a "first in time, first in right" principle to all appropriations of water.[97]

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[95] NRS 533.085(1) ("Nothing contained in this chapter shall impair the vested right of any person to the use of water, nor shall the right of any person to take and use water be impaired or affected by any of the provisions of this chapter where appropriations have been initiated in accordance with law prior to March 22, 1913.").

[96] *Ormsby County v. Kearney*, 37 Nev. 314, 142 P. 803 (Nev. 1914).

[97] *Lobdell v. Simpson*, 2 Nev. 274, 277 (1866) ("he has the best right who is first in time.").

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Priority is one element in the bundle that makes up a water right.[98] Every water right, whether vested or permitted, is assigned a relative priority date. This priority date is an essential component of the water right that cannot be stripped away without diminishing the right itself.[99]

Under NRS 533.430(1), all permitted water rights are subject to existing rights. Therefore, junior water right holders are prohibited from conflicting with senior water right holders. In Order 1309, the State Engineer held that junior groundwater pumping that captures Muddy River flow did not conflict with decreed Muddy River rights because he reduced the total duty of senior decreed water rights by using the NIWR of alfalfa to calculate the water demand of these rights.[100] By reducing the total duty of decreed Muddy River water rights in order to find that some amount of junior groundwater can be pumped without impacting the senior decreed rights, the State Engineer is allowing junior groundwater pumpers to continue to capture senior Muddy River water rights. For example, between 2008 and 2017, junior groundwater pumping captured 12,040 acre-feet of Muddy River flow.[101] Instead of recognizing that fact, the State Engineer reduced the total duty of the decreed water rights to support his finding that junior groundwater pumping does not illegally interfere with Muddy River flow. By failing to recognize the impact of junior groundwater pumping on senior decreed water rights, the State Engineer violated Nevada law. Therefore, the State Engineer's finding

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[98] *Wilson v. Happy Creek, Inc.*, 135 Nev. 301, 313, 448 P.3d 1106, 1115 (2019).
[99] *Happy Creek*, 135 Nev. at 312, 448 P.3d at 1115.
[100] SE ROA 62.
[101] SE ROA 42009 (SNWA compared the pre-development baseflow of the of the Muddy River to the annual flood adjusted natural flow of the river to determine the amount of river capture caused by junior groundwater pumping).

regarding the capture of decreed Muddy River water rights by junior groundwater pumpers is arbitrary, capricious, and an abuse of discretion.

III. The State Engineer's Re-Quantification Of Decreed Muddy River Water Rights Was Based On Erroneous Calculations.

Even if the State Engineer had the authority to re-quantify decreed rights, the State Engineer cites to no substantial evidence in the record to support his calculated duty of Muddy River decreed water rights. And, while the State Engineer cites to the Muddy River Decree to support his assertion that the decree sets forth specific quantities of water per user,[102] the decree, by its plain terms, does not support any of the facts used in his analysis.

A. Irrigated acres

The State Engineer erroneously states that the total amount of irrigated land in the decree is 5,614 acres.[103] However, the acreages adjudicated in the Muddy River decree simply do not add up to this total. The acreage listed in the decree is divided by season with a "winter" season and a "summer" season.[104] The total winter acres in the decree is approximately 4,700 acres.[105] The total summer acres in the decree is approximately

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[102] SE ROA 61.

[103] SE ROA 61.

[104] The winter season includes the months of October through April. The summer season includes the months of May through September.

[105] *See* SE ROA 33798 (original table, later supplemented to add winter use), 33813 (amendment to add winter use to original table), 33787-33789 (final decree), 33799-33806 (acreage per claim). The winter acreages are calculated as follows: George and Aletha Baldwin 16 ac, Moapa and Salt Lake Produce Company 155 ac, Livingston and Smith 160 ac, Joseph and Kathryn Perkins 30 ac, G.S. Holms & Julia Knox 95 ac, Isaih & Anna Cox 10 ac, Cox/J.H. Mitchel 3 ac, W. J. and Mary Powers 29 ac, Sadie George 2.1 ac, Jacob Bloedel 2 ac, John Perkins 2 ac, MVIC (Certificate 58) 398.11 ac, MVIC (Certificate 59W) 846.6 ac, MVIC (Certificate 60) 80 ac, MVIC (Permit 1611) 2,784.75 ac, and Tribe 87 ac.

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3,261 acres.[106] The State Engineer provided no explanation for how he calculated this number. Thus, the State Engineer's calculation is completely unsupported in the record and therefore cannot withstand judicial scrutiny.

B. Muddy River flow

The State Engineer also claimed that the total diversion rates in the decree far exceed the full the flow of the river.[107] This claim is unsupported by the record. In 1920, the Muddy River flowed more than current day because groundwater development since 1920 has reduced the river flows. In 1920, the court reviewed evidence submitted and determined that the listed acreages were irrigated, leading to the duties described in the Muddy River Decree. The total diversion rates under the Muddy River Decree equate to approximately 34,000 afa,[108] which is roughly the same quantity as the estimated pre-development flow of the Muddy River and 10% more than the current flow.[109] However, current river flow is logically lower than the decreed amount due to junior groundwater pumping interfering with senior rights. Thus, the evidence supports that the amounts in the decree accurately reflect a full appropriation of the base flow of the river. No evidence supports the State Engineer's contrary position.

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[106] ROA 33798, 33799-33806. The summer acres are calculated as follows: George and Aletha Baldwin 16 ac, Moapa and Salt Lake Produce Company 155 ac, Livingston and Smith 160 ac, Joseph and Kathryn Perkins 30 ac, G.S. Holms & Julia Knox 95 ac, Isaih & Anna Cox 10 ac, Cox/J.H. Mitchel 3 ac, W. J. and Mary Powers 29 ac, Sadie George 2.1 ac, Jacob Bloedel 2 ac, John Perkins 2 ac, MVIC 2,244.8 acres, MVIC (certificate 59S) 425.2 ac, and Tribe 87 ac.

[107] *See* SE ROA 61.

[108] This amount is derived by applying the summer duty to the summer acres, the winter duty to the winter acres, and taking a weighted average based on days per season to establish the annual average diversion of all rights.

[109] SE ROA 42009.

C. Conveyance losses

The State Engineer's decreed water right duty calculation is also flawed because it does not account for water conveyance losses to the hypothetical alfalfa fields. Instead, he concludes that there is no conveyance loss because "the alluvial corridor is narrow and well defined so water stays within the shallow groundwater or discharges back to the river."[110]

When water is moved to a field through a ditch network or similar conveyance, losses of water occur such as seepage into the ground and evaporation. Those losses are included as part of the total duty of the water right, because those losses are often necessary to ensure water reaches its end place of use. The State Engineer assumed that the pre-1905 irrigation of the Muddy River was 100% efficient, with no evaporation or conveyance loss. The State Engineer cites no evidence to support this optimistic, but nearly impossible contention. Never has the State Engineer considered a water right based on a 100% efficiency factor because it is nearly impossible, if not impossible, to achieve 100% efficiency.[111] To the contrary, the State Engineer has consistently and historically used an irrigation efficiency multiplier to estimate the additional water needed to deliver the water to the plants.[112] The State Engineer cites to no evidence or

[110] SE ROA 62.

[111] The State Engineer's own NIWR evidence (which provided the 4.7 acre-feet per acre value) undermines his determination. Ditches and reservoirs are used to convey water to irrigate fields. These conveyance structures are shallow open water features. The NIWR for shallow open water is approximately 5.1 acre-feet per acre. So there is unquestionably some conveyance loss of water. Thus, not only are the State Engineer's findings not supported by substantial evidence, his findings are contrary to his own limited evidence cited in his Order, being the NIWR calculations and the decree.

[112] SNWA and LVVWD request this Court take judicial notice, pursuant to NRS 47.130(2)(b), of the State Engineer's 2017 Statewide Groundwater Pumpage Inventory.

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reasoning why he abandoned his long-standing and tested efficiency calculation in this instance.

The State Engineer cites to no evidence that supports his flawed calculations, and in fact the limited evidence he cites in the ruling undermines his findings. Therefore, the dearth of evidence in the record on the diminishment of senior decreed rights means that the State Engineer's decision regarding the impact of junior groundwater pumping on senior decreed water rights is not sound.[113]

D. Manner of use

The State Engineer arbitrarily and capriciously assumed all decreed water rights are used for growing alfalfa instead of relying on his own records showing the current and lawful beneficial use of the decreed Muddy River water rights. These uses include municipal, industrial, and ICS credit creation. In the same way that it would be improper for the State Engineer to reduce an irrigation right based on some other hypothetical use, such as municipal, it was improper for the State Engineer to review all decreed rights through an irrigation lens when decreed rights are not all used for irrigation.

The State Engineer relied solely on one hypothetical manner of use when conducting his conflicts analysis. However, the State Engineer's own records show that the decreed water rights are not being used to solely irrigate alfalfa crops. In fact, much of the decreed water has lawfully been changed to other uses, such as power or municipal use. For example, Permits 23600 and 22603 changed the manner of use of decreed Muddy River water rights from irrigation to industrial use using the full duty awarded

Located at http://water.nv.gov/documents/Nevada_Groundwater_Pumpage_2015.pdf at 4 (last visited August 27, 2021).

[113] *Revert*, 95 Nev. at 786, 603 P.2d at 264.

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under the decree.[114] Similarly, Permit 22739 changed the manner of use of decreed Muddy River water rights from irrigation to municipal use.[115] Additionally, SNWA has created 157,824 afa of Muddy River Tributary Conservation ICS credits since 2009 using decreed Muddy River rights.[116] The priority date and nature of these new uses relate back to the decreed amount.[117] The NIWR does not apply to these non-irrigation uses, so it was arbitrary for the State Engineer to use NIWR to estimate the duty of decreed Muddy River water rights. Nor did the State Engineer account for these water rights in his hypothetical calculation, although he was aware of the existence of these rights and the quantity of water committed to their beneficial use. By ignoring these relevant facts, the State Engineer acted arbitrarily and capriciously, and abused his discretion.

E. Duty of decreed water rights

In Order 1309, the State Engineer re-quantified decreed Muddy River water rights using the NIWR of alfalfa when he performed his conflicts analysis.[118] In effect, this reduced the duty of decreed Muddy River water rights to 4.7 af/acre which is

[114] Application 23600 available at http://images.water.nv.gov/images/Book_Records/23000/23600.pdf (last visited May 27, 2021). Application 22603 available at http://images.water.nv.gov/images/Book_Records/22000/22603.pdf (last visited May 27, 2021).

[115] Application 22739 available at http://images.water.nv.gov/images/Book_Records/22000/22739.pdf (last visited May 27, 2021).

[116] SE ROA 42007.

[117] *Andersen Fam. Assocs. v. Hugh Ricci, P.E.*, 124 Nev. at 192, 179 P.3d at 1207 ("[a]lthough Carson City changed the use of its vested rights, those rights remained of the same character – i.e., they remained vested and did not become solely permitted rights just because the holder obtained a permit changing the use of the rights.").

[118] SE ROA 62.

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significantly less than the duty recognized in the decree. The use of the NIWR also neglects to account for the winter use expressly recognized in the decree, as it is based on the water needs of alfalfa, which is typically grown only in the summer. All water rights adjudicated in the Muddy River Decree have a duty of 1 cubic feet per second ("cfs") for 70 acres in the summer irrigation season and 1 cfs for 100 acres for the winter irrigation season.[119] These diversion rates equate to 10.34 af/acre in summer (153 irrigation days) and 7.24 af/acre in winter (212 irrigation days).[120] The weighted average duty is thus 8.54 af/acre.[121] This duty is the vested amount of water to which each claimant is entitled to receive on an annual basis. In Order 1309 the State Engineer disregarded the duty recognized in the Muddy River Decree and instead reduced the duty of decreed Muddy River water rights to 4.7 af/acre. Therefore, the State Engineer's conflict analysis was arbitrary, capricious, and an abuse of discretion.

IV. The State Engineer's Conflicts Analysis Was Arbitrary, Capricious, And An Abuse Of Discretion Because A Conflicts Analysis Was Beyond The Scope Of The Order 1303 Hearing.

A. The purpose of the Order 1303 Hearing was for parties to submit evidence pertaining to an impacts analysis, not a conflicts analysis.

The State Engineer's conflicts determination in Order 1309 was arbitrary and capricious because it went beyond the scope of the administrative hearing. The 1303

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[119] SE ROA 33808.
[120] SE ROA 33796.
[121] The duty reduction from 8.54 af/ac to 4.7af/ac represents a 45% reduction to the duty established and protected under the Muddy River Decree. The calculations of reduction above based on acre feet are of a lesser degree due to the jumble of contradictory and unsupported numbers provided by the State Engineer in the Order. The State Engineer found an acreage of 5,614 acres, a duty of 4.7 af/ac, but a total of 28,300 afa. These numbers simply do not add up. The estimated degree of error varies based on which of these three incorrect numbers are used for the comparison against the decreed amounts.

Hearing was supposed to be the initial step in a "multi-tiered process" to develop a management strategy in the LWRFS.[122] The State Engineer and the hearing officer made clear on several occasions that the purpose of the Order 1303 Hearing was not to address conflicts and that conflicts would be addressed at a later stage of the administrative process.[123] The 1303 Hearing was expressly "not to resolve or address allegations of conflicts between groundwater pumping within the LWRFS and Muddy River decreed rights."[124] Parties were told that the issue of conflicts would be addressed in a later phase of the proceeding.[125] Accordingly, the issue of conflicts was not fully litigated in the Order 1303 Hearing, and the State Engineer should not have included findings related to conflicts in the resulting Order.

Instead, the purpose of the Order 1303 Hearing was to conduct, in part, a sustainability analysis in order to determine how much water could be pumped, if any, before impermissible impacts occurred to the natural resources.[126] The distinction between an impacts analysis and a conflicts analysis is an important concept in water law. A conflict occurs when the impact prevents the full beneficial use of a senior right or is otherwise unreasonable. A conflicts analysis necessarily determines a review into whether the impact rises to the level of a conflict as well as a legal review of whether the water right being impacted has priority over the water right causing the impact. On the other hand, an impacts analysis looks at the general impact of a project while a conflicts analysis focuses on whether an impact rises to the level of a conflict. The

[122] SE ROA 522 at 10: 8-10 (Fairbank).
[123] SE ROA 522 at 12:6-9 (Fairbank), SE ROA 285.
[124] SE ROA 522 at 12:6-15 (Fairbank).
[125] SE ROA 522 at 12:6-15 (Fairbank).
[126] SE ROA 522 at 10:18-22 (Fairbank) "The purpose of the hearing is to determine what the sustainability is, *what the impact is on decreed rights*." (emphasis added).

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distinction between impacts and conflicts is reflected in Nevada law, which recognizes that some impacts are reasonable, where other impacts would cause a conflict with a water right.[127] The State Engineer's determination that the impacts to senior water rights were not conflicts went beyond a mere impacts analysis and made a legal determination about whether those impacts constituted a conflict. SNWA and LVVWD were never afforded an opportunity to put on conflicts evidence, such as a legal review of whether impacts rose to the level of conflicts, because the State Engineer limited the hearing from conflicts evidence.

As part of the impacts analysis, the State Engineer found that pumping over 8,000 afa caused declines in springs.[128] The State Engineer found that pumping decreased since 2014, and that at the pumping range of around 7,000 to 8,000 afa may be allowing the system to approach steady state.[129] Based on the State Engineer's statements about scope, the analysis should have ended there. Instead, the paragraphs on page 60 and the first paragraph on page 61 of Order 1309 expanded the impacts analysis to one of conflicts, which the State Engineer said he would not be conducting in this proceeding. These paragraphs should be stricken as being outside the scope of this proceeding. Their exclusion has no impact on the remainder of the Order or any of the final conclusions of the State Engineer.

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[127] NRS 534.110(5) (allows for a reasonable lowering of the static water level at a water applicant's place of diversion. Therefore, the Nevada legislature recognized that one can impact a senior water right without necessarily conflicting with the water right); NRS 533.014(1)(b) (protects domestic wells from "unreasonable adverse effects." You can impact domestic wells without reaching the level of unreasonable adverse effects).

[128] *See* SE ROA 64.

[129] SE ROA 58, 60 ("distributed pumping since the completion of the Aquifer Test in excess of 8,000 afa has correlated with a stabilization of spring discharge.").

The State Engineer's conflicts analysis in Order 1309 contradicted his own guidance regarding the scope of the Order 1303 Hearing. These actions make his decision to perform a conflicts analysis in Order 1309 arbitrary, capricious, and an abuse of discretion.

B. The State Engineer's conflicts analysis violated Nevada law because it was beyond the scope of the Order 1303 Hearing.

The State Engineer violated Nevada law by performing a conflicts analysis that was outside the scope of the Order 1303 Hearing. The State Engineer must allow parties a "full opportunity to be heard" and "must clearly resolve all the crucial issues presented … [w]hen these procedures, grounded in the 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, [the courts] will not hesitate to intervene."[130] However, when setting the scope of the Order 1303 Hearing, the State Engineer's office explained "the purpose of the hearing is not to resolve or address allegations of conflict between groundwater pumping within the LWRFS and Muddy River decreed rights."[131]

SNWA and LVVWD did not get the opportunity to provide meaningful input at the hearing regarding conflicts because the scope of the Order 1303 Hearing was not supposed to include a conflicts analysis.[132] SNWA and LVVWD did not have a full and fair opportunity to present evidence of how Muddy River water rights should be calculated and how increased groundwater pumping would impact those rights. Instead,

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[130] NRS 533.450(2) (requiring a full opportunity to be heard); *Revert*, 95 Nev. at 787, 603 P.2d at 264-65.

[131] SE ROA 522 at 12:6-15 (Fairbank) (emphasis added).

[132] SE ROA 522 at 12:6-15 (Fairbank) (emphasis added).

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they presented evidence on the general impact of groundwater pumping on Muddy River flows, but stopped short of addressing whether conflicts existed because parties were specifically told not to do so.[133]

If SNWA and LVVWD knew the State Engineer was going to recalculate the volume of decreed Muddy River water rights and make conflict determinations, the agencies would have presented legal and scientific evidence concerning (1) the proper method of calculating rights under the Muddy River decree, (2) how groundwater pumping in the LWRFS has conflicted with senior decreed rights, and (3) which rights are causing conflicts, and which are not. Instead, SNWA and LVVWD presented limited evidence and purposely avoided a more thorough presentation of conflicts to comply with the State Engineer's orders on the limited scope of the proceeding in anticipation of a later hearing to address conflicts. Therefore, by performing a conflicts analysis that was outside the scope of the Order 1303 Hearing, the State Engineer did not afford SNWA and LVVWD a full opportunity to be heard, in violation of Nevada law.

C. The State Engineer's conflicts analysis violated SNWA's and LVVWD's due process rights because it was outside the scope of the hearing.

The State Engineer's conflicts analysis violated SNWA and LVVWD's due process rights because it was beyond the scope of the Order 1303 Hearing and parties had no notice of the expanded scope or opportunity to be heard on the issue. The Nevada Supreme Court has recently affirmed that "[p]rocedural due process requires that parties

[133] *See* SE ROA 53400 at 1048:24-1049:14 (Burns).

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receive notice and an opportunity to be heard."[134] The Nevada Supreme Court has explained that "a hearing is not meaningful without awareness of the matters to be considered."[135] The Court has also recognized that "[i]nherent in any notice and hearing requirement are the propositions that notice will actually reflect the subject matter to be addressed and that the hearing will allow full consideration of it."[136]

Here, Order 1303, the Notice of Pre-Hearing Conference, and the hearing officer's subsequent statements, made clear that the Order 1303 Hearing was limited to the questions presented in the order and was not intended to address conflicts between water users in the LWRFS.[137] The State Engineer disregarded his own limitation and performed a *sua sponte* post-hearing conflicts analysis in Order 1309 that relied on the NIWR of alfalfa to support his finding that junior groundwater pumping did not conflict with senior decreed Muddy River water rights.[138] Furthermore, the NIWR method and data used by the State Engineer to make this finding were not part of the record or presented at the hearing. Indeed, no party had the opportunity to present evidence rebutting the State Engineer's use of the NIWR of alfalfa to calculate the water requirement of decreed Muddy River water rights.

By performing a conflicts analysis beyond the scope of the Order 1303 Hearing, the State Engineer failed to provide SNWA and LVVWD with a meaningful hearing in which the agencies understood the subject matter in play. In fact, the State Engineer

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[134] *Eureka Cnty. v. Seventh Judicial Dist. Ct.*, 133 Nev. 275, 279, 417 P.3d. 1121, 1124 (2018) (internal quotations omitted).

[135] *Nevada Power Co. v. Public Service Commission*, 91 Nev. 816, 824, 544 P.2d 428, 434 (1975).

[136] *Public Service Commission of NV v. Southwest Gas*, 99 Nev. 268, 662 P.2d 624, 626 (1983).

[137] *See* SE ROA 82-83, SE ROA 513, SE ROA 522 at 11:4-12:15 (Fairbank).

[138] SE ROA 62.

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affirmatively represented on numerous occasions that this subject *would not be addressed through the hearing*. The failure to provide SNWA and LVVWD with a meaningful hearing manifestly violated the agencies' due process rights and requires that the State Engineer's conflicts analysis be reversed by this Court.

CONCLUSION

For the reasons stated herein, the State Engineer's finding in Order 1309 that junior groundwater pumping in the LWRFS does not conflict with senior decreed Muddy River water rights should be reversed.

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ATTORNEY CERTIFICATE

Pursuant to NRAP 28.2, undersigned counsel certifies that:

1. I have read this entire opening brief.

2. To the best of my knowledge, information, and belief, it is not frivolous or interposed for any improper purpose.

3. This answering brief complies with all applicable Nevada Rules of Appellate Procedure, in particular NRAP 28(e)(1), which requires every assertion in the brief regarding matters in the record to be supported by a reference to the page and volume number, if any, of the transcript or appendix where the matter relied on is to be found.

4. This opening brief complies with the formatting requirements of NRAP 32(a)(4), the typeface requirements of NRAP 32(a)(5), and the type style requirements of NRAP 32(a)(6) because this answering brief has been prepared in a proportionally spaced font using Microsoft Word in 14-point Times New Roman font.

5. I further certify that this answering brief complies with the page-volume limitations of NRAP 32(a)(7) because, excluding the parts exempted by NRAP 32(a)(7)(C), it is proportionately spaced, has a typeface of 14 points, and contains less than 14,000 words.

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I understand that I may be subject to sanctions in the event that the accompanying answering brief is not in conformity with the requirements of the Nevada Rules of Appellate Procedure.

DATED this 27th day of August 2021.

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CERTIFICATE OF SERVICE

I certify that I am an employee of Taggart & Taggart, LTD, and that on this 27th day of August 2021, 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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DISTRICT COURT

CLARK COUNTY, NEVADA

LAS VEGAS VALLEY WATER DISTRICT, and SOUTHERN NEVADA WATER AUTHORITY, 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 Hearing Requested **ANSWERING BRIEF OF PETITIONERS' LAS VEGAS VALLEY WATER DISTRICT AND SOUTHERN NEVADA WATER AUTHORITY**

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

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ISSUES PRESENTED

1. Whether the State Engineer has the authority to designate the LWRFS as an independent hydrological unit for management purposes.

2. Whether the State Engineer's decision to designate the LWRFS is supported by substantial evidence.

3. Whether the State Engineer's factual finding that 8,000 acre-feet annually ("afa" or "acre-feet") is the maximum amount of groundwater that can be sustainably pumped on an annual basis in the LWRFS is supported by substantial evidence.

STATEMENT OF THE CASE[1]

The LWRFS is an over-appropriated groundwater system in southern Nevada, north of the Las Vegas Valley. The *basins* that make up the LWRFS were formally considered separate *basins* largely on the assumption that the groundwater aquifers reflected the topographic boundaries. For decades, however, the State Engineer expressed uncertainly about that assumption, and investigated whether groundwater throughout the LWRFS is, in fact, connected as a single unit. Only large-scale pumping could yield the data needed to analyze what basins in the LWRFS are connected. The State Engineer ordered a large pumping test, rigorously reviewed the drawdown data throughout the LWRFS, and found that groundwater levels responded uniformly. Thus, the State Engineer confirmed that the LWRFS basins are not separate hydrographic units, but instead, operate as a single aquifer that underlies various topographic mountains and valleys.

[1] SNWA and LVVWD incorporate by reference their Statement of the Case from their Opening Brief.

Since the 1980s, the State Engineer's office was concerned that groundwater pumping in the LWRFS would impact senior surface water rights and the endangered Moapa dace. His office therefore evaluated the maximum volume of groundwater that can be sustainability pumped in the LWRFS. Initial estimates of water availability varied widely, and protests were filed against water development in the region. While some groundwater rights were granted, the State Engineer conditioned the approval of those groundwater permits on protecting senior rights and the Moapa dace.

In 2002, the State Engineer refused to grant new groundwater rights until he understood the impact from pumping *existing* rights, but most of the groundwater rights he already granted were not yet pumped.[2] Instead of granting new permits, the State Engineer ordered a comprehensive pumping test to obtain aquifer data necessary to understand groundwater connectivity and availability ("Aquifer Test"). The Aquifer Test, conducted in 2010-2012, revealed that pumping even less than half of the existing rights caused immediate and significant impacts to the Muddy River within two years. Based on the Aquifer Test, the State Engineer denied all pending applications for *new* groundwater rights in the LWRFS.[3]

In 2019, prompted largely by Coyote Springs Investment's ("CSI") intention to use existing groundwater rights to support large residential and commercial project in Coyote Spring Valley, the State Engineer issued Interim Order 1303.[4] Prior to issuing Order 1303, the State Engineer held several public workshops that invited stakeholders to provide input on water issues in the area. Order 1303 initiated a two-phased process

[2] ROA 665-66.

[3] ROA 75-76 (Several parties including NV Energy, CSI, LVVWD, and SNWA had applications for new groundwater rights in the LWRFS denied).

[4] ROA 70-88.

designed to ensure the State Engineer could create rules for administering water rights in the LWRFS using the best available data and science.

The first phase involved fact-finding on discrete hydrologic issues through a two-week hearing, which resulted in Order 1309. The findings of Order 1309 are the subject of this Petition. The second phase will involve development of administrative rules for managing groundwater use in the LWRFS.

In Order 1309, the State Engineer made hydrologic findings to define (1) the area where the regional aquifer is connected (the LWRFS) and (2) how much groundwater can be developed in that aquifer. The appeals currently before the Court arise from the factual findings in Order 1309, not groundwater management decisions the State Engineer will not make until Phase 2 of the administrative process. The two key factual findings addressed in this Answering Brief are the geographic extent of the hydrologically connected LWRFS, and the 8,000 afa limit on groundwater production in the LWRFS.[5]

STATEMENT OF FACTS[6]

I. History of groundwater administration in LWRFS region

Order 1309 is the culmination of decades of LWRFS investigation. In the 1980s, the State Engineer began an in-depth study of the area now known as the LWRFS with the United States Department of Interior, Geological Survey ("USGS").[7] The initial

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[5] Another determination in Order 1309 related to the impact of existing groundwater pumping on senior surface water rights in the Muddy River. SNWA and LVVWD challenged that determination in their petition for judicial review and presented their argument against that determination in their Opening Brief.

[6] SNWA and LVVWD incorporate by reference their Statement of Facts from their Opening Brief.

[7] *See* SE ROA 654-658 for a history of the studies conducted prior to 2002.

USGS studies did not have pumping data because significant groundwater development had not yet occurred in the area. Therefore, the USGS relied on groundwater budgets and other theoretical methods to estimate the amount of available supply. The estimates varied widely from a few thousand acre-feet based on local recharge, to over 50,000 acre-feet based on underground flow from upgradient basins.

A. Application 46777

In 1983, Application 46777 was filed by Nevada Power to appropriate groundwater in Coyote Spring Valley.[8] Today, CSI desires to use water rights originating from Application 46777 for CSI's proposed development. But even in 1983, the sustainability of that groundwater use was in serious question. Protests were filed against Application 46777 by the United States and Nevada's Department of Wildlife based on potential impacts to the Moapa dace. Protests were also filed by Muddy River water right owners who claimed groundwater pumping would capture river flows and impact their water rights.[9]

In 1997, Application 46777 was conditionally granted. After an evidentiary hearing, the State Engineer granted Permit 46777 with specific permit terms that preclude impacts to the Muddy River. Specifically, the State Engineer issued Ruling 4542 and stated that protests were withdrawn "on the understanding that *groundwater pumping would be stopped* should the project adversely affect the water table in the Muddy River Springs Area."[10] To protect the Muddy River and Moapa dace from pumping that Permit 46777 authorized, the State Engineer established an early warning

[8] SE ROA 47837.
[9] SE ROA 48114-48130, 47837-47840 (Ruling 4542, Permit 46777).
[10] SE ROA 48115 (emphasis added).

system. The State Engineer found that "if, at some future time, it is determined that pumping the [Permit 46777 wells] has adverse effects on the springs [and river . . .] *those effects would be detected early."*[11] Accordingly, the State Engineer issued Permit 46777 "subject to existing rights" and expressly stated the "State Engineer retains the right to regulate the use of the water herein granted *at any and all times*."[12] Similar language was included in all other groundwater permits that were issued in the LWRFS area.[13]

B. Order 1169

Joint management of the LWRFS region began with Order 1169 and continued with Rulings 6254-6261 because the region shares a close hydrologic connection, and a *joint* groundwater supply. In the early 2000s, the State Engineer had to consider additional applications for groundwater in Coyote Spring Valley and the LWRFS region. Instead of acting on those applications, he issued Order 1169 to require the Aquifer Test.[14] The State Engineer ordered that half the existing rights issued in the LWRFS be pumped and the effects of pumping be monitored.[15] Order 1169 included all the LWRFS basins, except Kane Springs Valley.[16] The Aquifer Test yielded data that proved groundwater in Coyote Spring Valley has a close hydrologic connection to groundwater

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[11] SE ROA 48123 (emphasis added).
[12] SE ROA 47838.
[13] *See e.g.*, SE ROA 33952, 35507-35508, 41852.
[14] SE ROA 654-669.
[15] The State Engineer had previously issued approximately 50,465 afa in six of the LWRFS Basins, usually with strict permit terms noting that the permits are subject to reductions in pumping if harm occurs to others or the environment, and had pending applications before him requesting over 100,000 afa of additional appropriations.
[16] *See* SE ROA 992-994. The State Engineer added Kane Springs Valley to the LWRFS in Order 1309.

in adjacent valleys. The test also proved that pumping in Coyote Spring Valley directly impacts the Muddy River and Moapa dace habitat.

After the Aquifer Test, the State Engineer had data the USGS did not have in the 1980s. Rather than simple theoretical estimates, empirical data showed common groundwater level responses throughout the LWRFS region due to Aquifer Test stress imposed by pumping.[17] More importantly, monitoring wells near the Muddy River and critical Moapa dace habitat showed a direct and nearly immediate groundwater decline in response to Aquifer Test pumping.

Based on the Aquifer Test evidence, the State Engineer issued Rulings 6254-6261 in 2014. His office treated the LWRFS (except Kane Springs Valley) as one aquifer.[18] Each ruling addressed a different basin in the LWRFS and denied each pending water right application that existed in that basin. The rationale for all the rulings 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."[19] The State Engineer then set one perennial yield for all the Order 1169 basins and the Muddy River.[20]

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[17] SE ROA 41986.
[18] SE ROA 726-948.
[19] *See e.g.*, SE ROA 479.
[20] *Id*. ("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.").

II. Interim Ruling 1303

In 2019, the State Engineer issued Interim Order 1303 to initiate a two-phase process to develop management rules for the use of existing groundwater rights in the LWRFS.[21] The State Engineer was explicit – he had to address hydrologic factual questions with the help of stakeholders and their experts before management decisions could be made.[22] For Phase 1, the State Engineer asked all stakeholders to submit expert reports to address four specific factual matters: (1) the geographic boundary of the LWRFS, (2) aquifer recovery since the Aquifer Test, (3) the long-term annual quantity of groundwater that may be pumped from the LWRFS, and (4) the effects of moving water rights between the carbonate and alluvial systems to senior water rights on the Muddy River.[23]

Many of the stakeholders that presented evidence understood the work that had been completed since the 1980s. Many parties agreed that the State Engineer already rejected theoretical estimates (water budgets) in favor of empirical pumping and recovery data from the Aquifer Test. They acknowledged that an exceptionally flat groundwater gradient exists with a high degree of transmissivity throughout the LWRFS indicating a high degree of hydraulic connection. Importantly, most parties agreed that prior State Engineer findings were correct. They also agreed that the data shows that the aquifer has not fully recovered since the Aquifer Test. Many parties agreed that no new long-term pumping should occur, and a reduction of existing pumping is probably

[21] SE ROA 84.
[22] SE ROA 81.
[23] SE ROA 82-83. The State Engineer also include a fifth general request for "[a]ny other matter believed to be relevant to the State Engineer's analysis."

required. Thus, without mitigation, even the existing pumping of about 8,300 afa poses an imminent threat to senior water rights in the Muddy River.[24]

A decided majority of stakeholders further agreed: (1) the precise LWRFS boundary is debatable, but ultimately, a hydrologic connection exists with Kane Springs Valley; (2) the aquifer is highly transmissive and pumping from virtually all reaches of the LWRFS impacts the Muddy River and its springs; (3) pumping, not climate, is the primary factor for the declines; (4) maximum recovery has been reached and groundwater 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 were outliers and ignored the prior findings of the State Engineer. For instance, CSI sought to turn the clock back to a time before the availability of Aquifer Test data. CSI's experts relied on water budgets, and not on the much more instructive aquifer stress and recovery data even though the State Engineer, and virtually all other experts, acknowledged water budgets are of limited value when there is actual Aquifer Test data available.[25] And despite widely accepted expert conclusions regarding the hydrologic connectivity in the LWRFS, CSI also proffered geologic evidence to *hypothesize* new barriers to flow. Based upon this evidence, CSI argued that its water rights exist in a discrete LWRFS compartment accessible for conflict-free pumping. This was vigorously disputed by many experts.[26]

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[24] SE ROA 56.
[25] SE ROA 49-50.
[26] SE ROA 22 at fn. 104.

III. Evidence presented by SNWA and LVVWD

SNWA and LVVWD are main stakeholders in the LWRFS and have a long-term responsibility for maintaining sustainable water supplies in southern Nevada. Accordingly, SNWA and LVVWD urged the State Engineer to limit LWRFS groundwater pumping to that which does not threaten the existence of the Moapa dace, does not impact senior rights, and is sustainable in the long term.

A. Boundary of LWRFS

At the administrative hearing, SNWA and LVVWD did not recommend that the State Engineer extend the boundary of the LWRFS beyond what was defined in Order 1169.[27] Rather, SNWA and LVVWD recommended adjacent basins be included in Phase 2 when groundwater management decisions could be made regarding those basins because, "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.[28] 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 [of the LWRFS]."[29] The State Engineer considered this testimony, but determined based upon his previous criteria for an area's inclusion in the LWRFS management area (described in Rulings 6254-6261) that Kane Springs Valley, and a modified section of Black Mountain Area, should be added to the LWRFS Hydrographic Basin.[30]

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[27] SE ROA 34-35.
[28] SE ROA 53335 at 876:2-15.
[29] *Id*.
[30] SE ROA 48-49.

B. Hydrologic connection within the LWRFS

SNWA and LVVWD presented evidence that showed a close hydrologic connection between pumping in the LWRFS, especially in the Coyote Spring Valley sub-basin, and the Muddy River.[31] This evidence was based on hydrographs from monitoring wells and springs, which are measurements of water levels over time. Those hydrographs were compared to pumping data, and a direct response was found. SNWA and LVVWD also demonstrated that the decline in spring flows from the Aquifer Test was caused by the close hydrologic connection, not a climate phenomenon like drought.[32] The State Engineer found this evidence, and other similar evidence from the National Park Service, to be persuasive.[33]

C. Protection of Moapa dace

SNWA and LVVWD have prioritized protection of the Moapa dace for decades. Since the 1990s, habitat restoration and other conservation efforts have been completed by SNWA, the United States Fish and Wildlife Service ("USFWS") and others to increase dace populations.[34] SNWA and LVVWD's experts Zane Marshall and Robert Williams are highly experienced in the field of conservation biology and in protecting Moapa dace, and they testified regarding their involvement in the development of the 2006 Memorandum of Agreement, associated Biological Opinion, and other studies and conservation efforts for protection of Moapa dace. They testified that 3.2 cubic feet per second ("cfs") of flow at the Warm Springs West gage is necessary to protect the Moapa

[31] SE ROA 35-36; SE ROA 53340 at 899 – SE ROA 53341 at 900.
[32] SE ROA 34; SE ROA 42187-42189; SE ROA 53341 at 903:14-53343 at 909:9.
[33] SE ROA 53, 56.
[34] SE ROA 42087-89.

dace.[35] This testimony was based on extensive scientific study and documentation. The State Engineer relied on their testimony and found that "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 the habitat for the Moapa dace."[36]

D. Quantity of long-term pumping that is sustainable in LWRFS

SNWA and LVVWD presented evidence that only 4,000 to 6,000 afa can be sustainably pumped from the groundwater aquifer in the LWRFS.[37] Based on the evidence presented, SNWA and LVVWD recommended that the State Engineer limit pumping to protect the Moapa dace and senior rights. Specifically, SNWA and LVVWD urged the State Engineer to limit pumping to sustainable levels, because new communities cannot rely on water that may not exist, and an unsustainable groundwater supply threatens public health and safety.

IV. Ruling 1309

After an evidentiary hearing with extensive testimony from many experts, Order 1309 was issued with four factual findings that are relevant to these appeals. First, the State Engineer delineated the LWRFS Hydrographic Basin.[38] Second, the State Engineer determined the maximum quantity of groundwater that can be pumped in the LWRFS Hydrographic Basin is 8,000 afa, or could be less.[39] Third, the State Engineer found that the 8,000 afa cap may be reduced if it is determined that pumping will impact

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[35] SE ROA 53438 at 1121:21-1122:24; SE ROA 53439 at 1127:2 – SE ROA 53440 at 1128:18.
[36] SE ROA 46.
[37] SE ROA 42014.
[38] SE ROA 66, item 1.
[39] SE ROA 66, item 2.

the endangered Moapa Dace.[40] Fourth, the State Engineer rescinded the provisions in Order 1303 that were not specifically addressed in Order 1309.[41] These appeals followed.

SUMMARY OF ARGUMENT

The State Engineer has broad authority to regulate the withdrawal of groundwater in the State of Nevada to fulfill his or her duty to protect existing rights, the public trust, and wildlife. The office has many statutory tools to carry forth the State Engineer's duties, including the power to study aquifers and determine their available supply of water for appropriation, the power to designate hydrographic areas for additional regulation, power to regulate basins, and the continuing power to manage and regulate permits issued by the office. With these tools, the State Engineer has jointly managed the basins in the LWRFS for decades. Order 1309 is simply the latest of in a forty-year of LWRFS Orders and Rulings issued by the office using the powers conferred by statute.

Based on the best available science, the State Engineer properly designated the boundary of the interconnected aquifer comprising the LWRFS. Substantial evidence supports his decision. In Order 1309, the State Engineer carefully analyzed all evidence that was presented as to the extent of the groundwater aquifer. The State Engineer's analysis was careful and detailed, and substantial evidence supports those conclusions about the LWRFS boundary.

The State Engineer presented a careful review of all evidence in Order 1309 regarding the amount of groundwater available for pumping, and a careful and detailed

[40] SE ROA 66, item 3.
[41] SE ROA 67, item 6.

analysis to support his conclusion. Substantial evidence supports that if more than 8,000 afa is withdrawn from the LWRFS aquifer, deleterious impacts will occur to existing water rights and the environment. SNWA and LVVWD, for example, presented the best available science and substantial evidence that only 6,000 afa can be pumped. The State Engineer's decision to not allow pumping to exceed 8,000 afa, which is approximately equivalent to existing pumping, is supported by the best available science and substantial evidence. The 8,000 afa limitation includes the acknowledgement that pumping may have to be reduced below 8,000 afa in the future to protect the Moapa dace and senior rights based on rigorous monitoring.

ARGUMENT

This Answering Brief refutes three challenges to Order 1309.[42] First, several Petitioners allege the State Engineer lacks statutory authority to delineate the LWRFS boundary and regulate groundwater in that area as one administrative unit. Second, some Petitioners allege the State Engineer's criteria for creating the LWRFS and his decision to designate the LWRFS are not supported by substantial evidence. Third, the same Petitioners claim the State Engineer's 8,000 afa cap on LWRFS groundwater production is not supported by substantial evidence. Each challenge lacks merit for the reasons stated below.

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[42] SNWA and LVVWD presented its challenge to another aspect of Order 1309 in its opening brief. SNWA and LVVWD support all aspects of Order 1309 accept the limited portions that are addressed in that opening brief.

I. The State Engineer Has Authority To Designate The LWRFS And To Jointly Regulate Groundwater In That Area.

The State Engineer's authority to delineate the LWRFS is well established in Nevada law.[43] While several parties claim that the State Engineer does not have authority under Nevada law to establish the LWRFS boundary,[44] those arguments are either based on a misunderstanding of the statutory authority the State Engineer relied upon in Order 1309, or an overly narrow and self-serving reading of statutory authority.

The State Engineer has authority over all water in the State (NRS 533.030(1)), limited only by the continued authority of the courts, or act of Congress (NRS 533.0245). The State Engineer has express authority to "make such reasonable rules and regulations as may be necessary for the proper and orderly execution of the powers conferred by law."[45] The State Engineer has authority to regulate the withdrawal of groundwater within the LWRFS because the LWRFS is entirely located within the State of Nevada. The State Engineer properly used the tools available to him under NRS 534.030, 534.110, and 534.120 to exercise this power to establish the extent of an area in need of special administration and set a maximum quantity of groundwater that can be pumped.

A. The State Engineer had the authority to delineate the LWRFS.

Nevada law gives the State Engineer numerous tools to administer groundwater and surface water. Those tools include the ones the State Engineer expressly relied on - NRS 532.120, NRS 534.030, NRS 534.110 and NRS 534.120.[46] Taken separately, each

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[43] NRS 532.120, 534.030, 534.110, 533.020, 534.120. *See generally,* SE ROA 43 and NRS Chapters 532-534.

[44] Apex Opening Brief at 8:6-10:2; CSI Opening Brief at 17:26-22:19; Georgia-Pacific Opening Brief at 20:27-23:4; LCWD and Vidler Opening Brief at 15:23-20:27; Nevada Co-Gen Opening Brief at 20:4-25:4.

[45] NRS 532.120.

[46] SE ROA 43-44.

power relates to a specific condition for administering groundwater use. But taken as a whole, these statutes form a mosaic of powers evidencing one primary objective – protect the public from over-pumping a groundwater basin so the basin can continue to provide water for future generations.

1. NRS 532.120

The State Engineer's office was created by NRS Chapter 532, and NRS 532.120 directs the State Engineer to adopt "such reasonable rules and regulations as may be necessary for the proper and orderly execution of the powers conferred by law." The powers "conferred by law" include NRS 534.030 which directs the State Engineer to identify whether administration of a basin is justified.

2. NRS 534.030

Based on Order 1169 and Interim Order 1303 investigations, the State Engineer properly delineated the boundary of the LWRFS based on his statutory authority provided by NRS 534.030(2). The legislature expressly provided power to the State Engineer to "designate [an area in need of administration] by basin, or portion therein, and make an official order describing the boundaries by legal subdivision as nearly as possible."[47] The State Engineer is required to hold a hearing and take testimony from the stakeholders in the area to be so designated.[48] If the State Engineer determines, after hearing and investigation, that the proposed basin needs additional administration, the State Engineer may enter a designation order for the basin.[49]

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[47] NRS 534.030.
[48] NRS 534.030(2).
[49] *Id.*

Here, the State Engineer held stakeholder meetings and a formal administrative hearing to take testimony regarding the designation of the LWRFS.[50] The State Engineer specifically held the hearing to determine the geographic boundary of the LWRFS and establish the need for additional administration, as required by NRS 533.030.[51] Based on these meetings and hearings, the State Engineer designated the LWRFS Hydrographic Basin, and established 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 sub-basins.[52] As expressly permitted by NRS 534.030(2),[53] the State Engineer designated the LWRFS as an area in need of administration based on the evidence and input from public meetings and the Order 1303 evidentiary hearing.

3. NRS 534.110

The State Engineer completed a robust, long-term, and thorough "due investigation" of each basin, or portion thereof, that was later consolidated into the LWRFS, as required by NRS 534.110. The "due investigation" began with Order 1169, and continued with Interim Order 1303, wherein the State Engineer first began joint management, and then exercised the powers conferred by NRS 534.110(2). Under NRS

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[50] SE ROA 12; SE ROA 33863-922.
[51] SE ROA 11.
[52] SE ROA 66, 69.
[53] NRS 534.030(2)(b) ("If the basin is found, after due investigation, to be in need of administration the State Engineer may enter an order" designating the area by basin, or portion therein, and make an official order describing the boundaries by legal subdivision as nearly as possible.).

534.110(2), the State Engineer is specifically authorized to determine the specific [sustainable] yield of an aquifer and to determine permeability characteristics.[54]

The LWRFS is, effectively, a single aquifer. An aquifer is "a geological formation or structure that stores or transmits water, or both."[55] The State Engineer found, based on extensive empirical evidence of hydrologic connection, that the LWRFS is a single aquifer with homogenous characteristics that stores and transmits groundwater. The State Engineer concluded the LWRFS is not five or seven separate aquifers, regardless of historic administrative boundary lines generally based on topography and not hydrological considerations. The State Engineer was fully authorized to rely on aquifer characteristics (specific yield and permeability) to define the LWRFS, to determine if over-pumping is occurring, and to set a quantity of available water supply.[56] Therefore, the State Engineer was clearly authorized to designate the LWRFS.

4. <u>Basin should not be narrowly defined.</u>

Several parties argue that NRS 534.030(2) does not give the State Engineer authority to designate an area that is made up of formerly independent sub-basins.[57] They rely exclusively on the fact the term *basin* is singular and not plural in statute. This argument is without merit because it is overly simplistic, ignores the larger statutory scheme in the water law, and disregards the reality of what the Aquifer Test demonstrated. NRS 534.030 does not limit the State Engineer's ability to designate an

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[54] NRS 534.110(2) ("Upon his or her own initiation, [the State Engineer may] conduct pumping tests to determine if overpumping is indicated, to determine the specific yield of the aquifers and to determine permeability characteristics").

[55] NRS 534.0105.

[56] NRS 534.110(2).

[57] Apex Opening Brief at 11-12; CSI Opening Brief at 17-19; LCWD and Vidler Opening Brief at 16-17.

area that consists of already designated basins, as he did in Order 1309.[58] Contrary to other parties' arguments, the fact that the term *basin* is used in NRS 534.030 does not mean that the State Engineer cannot combine previously designated basins.

While *basin* is not a defined term in statute, the term is used in different contexts and has different definitions. For example, in the Division of Water Resources Water Words Dictionary the word *basin* has multiple definitions including the following:

> *The U.S. Geological Survey (USGS)* and the *Nevada Division of Water Resources, Department of Conservation and Natural Resources*, have divided the state into discrete hydrologic units for water planning and management purposes. These have been identified as 232 Hydrographic Areas (256 areas and sub-areas, combined) within 14 major *Hydrographic Regions* or *Basins*.[59]

To the extent the Water Words Dictionary has any legal significance, its definition of the term "basin" does not refer to the 232 Hydrographic areas in Nevada, as opposing parties suggest, but rather to the *14 major Hydrographic regions or basins*. One of these regions, the Colorado River Basin, includes all the formerly independent sub-basins which became the LWRFS Hydrographic Basin in Order 1309.[60] The opposing parties' conclusory argument fails to consider how the term *basin* is actually used in different contexts. By contrast, the overwhelming authority in NRS 534.030(2) for designating

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[58] SE ROA 71-72 (Coyote Spring Valley, Black Mountains Area, Garnet Valley, California Wash, Hidden Valley, and Muddy River Springs Area Hydrographic Basins were all previously designated pursuant to NRS 534.030).

[59] Division of Water Resources Water Words Dictionary at 25-26. Available at http://water.nv.gov/programs/planning/dictionary/wwords-B.pdf (last visited October 12, 2021).

[60] Department of Conservation and Natural Resources, Office of the State Engineer, Division of Water Resources, *Designated Groundwater Basins of Nevada*. Available at http://water.nv.gov/mapping/maps/designated_basinmap.pdf (last visited November 5, 2021).

an area "within a basin" (the Colorado River Basin) clearly authorized designation of the LWRFS.

B. The State Engineer did not rely on NRS 533.024(1) as independent statutory authority.

Several parties argue that the State Engineer improperly relied on NRS 533.024(1) as the exclusive source of authority to designate the LWRFS.[61] This claim is also without merit. In Order 1309, the State Engineer expressly stated he was relying on many different provisions of the water statutes, not NRS 533.024(1). Also, even though NRS 533.024(1) is a legislative declaration of policy, the Supreme Court has held a "declaration of policy by the legislature, though not necessarily binding or conclusive upon the courts, is entitled to great weight."[62]

In 2017, the Nevada legislature clarified that the State Engineer's obligation to protect existing water rights included protection from impacts caused by groundwater pumping that depletes the surface water. Nevada's legislative policy in this respect is to "manage conjunctively the appropriation, use and administration of all waters regardless of the source of the water."[63] This declaration clarified that the State Engineer's express statutory powers must be used to manage all waters – groundwater and surface water – to protect existing surface water rights and the public from over-pumping groundwater.

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[61] Apex Opening Brief at 8 – 9; CSI Opening Brief at 22; Georgia Pacific Opening Brief at 20-23; LCWD and Vidler Opening Brief at 16, 18-19, 25; Nevada Co-Gen Opening Brief at 3, 10, 21-25. Notably, these same parties also rely on NRS 533.024 in other areas of their argument as requiring the State Engineer to act in other regards. See e.g. CSI Opening Brief at 20 and 54, and LCWD and Vidler Opening at 30 (relating to "best available science").

[62] *McLaughlin v. Housing Authority of the City of Las Vegas*, 68 Nev. 84, 93 227 P.3d 206, 210 (1951).

[63] SE ROA 43.

While NRS 534.030 authorized the State Engineer to designate the LWRFS, NRS 533.024(1)(e) is particularly notable in the present case because it clarifies that authority. The legislature directed the State Engineer to recognize that ground and surface water sources routinely have a hydrological connection. For example, groundwater often produces springs, and those springs contribute to river flows. Here, those are the flows relied upon by senior Muddy River surface water rights holders and the Moapa Dace in this case. Thus, groundwater and surface water cannot be viewed in isolation.

That hydrologic connection between groundwater and surface water is certainly relevant in the State Engineer's determination of whether a basin needs additional administration. The factual question of whether a hydrologic connection exists between ground and surface water is also critical to how the State Engineer executes his or her other statutory obligations to protect senior water rights from impacts that are caused by the use and development of junior water rights. In the LWRFS, the State Engineer made strongly supported factual determinations that junior groundwater pumping is impacting senior surface water rights in the Muddy River. The State Engineer is obligated to protect senior water rights by express provisions in Nevada's statutes and case law. NRS 533.024(1)(e) made that obligation clearer.

C. The State Engineer did not re-prioritize the priority dates of water rights in the formerly independent sub-basins.

Despite being conspicuously absent from the State Engineer's findings, several parties incorrectly argue the State Engineer re-prioritized all water rights in the LWRFS

basin by combining the priorities of all water rights into one list.[64] Not a single word in Order 1309 re-prioritizes the water rights in the LWRFS. The only language in Order 1303 related to this question was rescinded in Order 1309.[65] The State Engineer did not address the issue of priorities within the LWRFS in Order 1309, which included the following language, "[a]ll other matters set forth in Interim Order 1303 that are not specifically addressed herein are hereby rescinded."[66] Therefore, the State Engineer did not re-prioritize the priority of water rights in Order 1309.

The State Engineer was just as clear in Order 1309 that the relative priority of water rights in the LWRFS will be addressed in Phase 2 - the management portion of the administrative process regarding the LWRFS. The Order 1303 hearing was intended to address threshold factual issues. Management questions, such as the relative priority of LWRFS water rights, were always intended to be addressed at a later part of the administrative process. Therefore, the issue of priority of LWRFS water rights is not ripe and is irrelevant to the present appeals of Order 1309.[67]

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[64] CSI Opening Brief at 25:9-26:10; Apex Opening Brief at 10:3-11:3, LCWD and Vidler Opening Brief at 20:24-27; Georgia-Pacific Opening Brief at 20:27-21:4. Several parties claim that the State Engineer "re-prioritized" the relative priority of LWRFS groundwater rights in Order 1309. In other words, several parties believe that all water rights were combined in one priority table and parties lost their relative priority within the original sub-basins that make up the LWRFS hydrographic basin.

[65] SE ROA 82 ("All water rights within the Lower White River Flow System will be administered based upon their respective date priorities in relation to other rights within the regional groundwater unit.").

[66] SE ROA 67.

[67] The State Engineer has not taken a final action in relation to management of water rights or their relative priorities, thus this issue is not ripe as a final action appealable under NRS 533.450. *See generally*, *Mesagate Homeowners' Ass'n v. City of Fernley*, 124 Nev. 1092, 1097, 194 P.3d 1248, 1251 (2008).

D. While the State Engineer is authorized to regulate water rights in the LWRFS based on priority, in Order 1309 he did not change any priority dates or initiate curtailment of any specific water rights.

All statutory water rights are issued a "priority" date based on when the first application to appropriate the public waters of the state occurred.[68] These dates are then used to apply the principles of "first in time, first in right,"[69] as all the water rights issued by the State Engineer are permitted subject to prior senior water rights. The State Engineer did not alter the priority date of any water right in the LWRFS, nor has any party argued that their actual priority date has changed.

Also, the specific permit terms that condition the approval for all statutory water rights run counter to the claim of a right to relative priority. In prior appropriation states, a water right holder only owns their right within the prior appropriation system.[70] Under NRS 534.020 all groundwater rights in Nevada are issued subject to existing rights.[71] All statutory water rights also include specific permit terms that state their use of water is "subject to existing rights" as a condition of approval. In other words, no water right holder has a right to use their water if that use would conflict with a water right that existed at the time of its approval. A conflict occurs when a senior right holder is unable

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[68] NRS 533.355(1); NRS 534.080(3) ("Except for [domestic wells], the date of priority of all appropriations of water from an underground source mentioned in this section is the date when application is made in proper form and filed in the Office of the State Engineer pursuant to the provisions of chapter 533 of NRS.").

[69] Priority can only be lost if a water right is cancelled for failure to perfect the appropriation (place the water to the requested beneficial use in a diligent manner) and is later re-instated. NRS 533.395(3) (If the decision of the State Engineer modifies or rescinds the cancellation of a permit, the effective date of the appropriation under the permit is vacated and replaced by the date of the filing of the written petition with the State Engineer.).

[70] *Kobobel v. State Dept. of Natural Resources*, 249 P.3d 1127, 1134 (Col. 2011).

[71] NRS 533.030 also provides that all statutory water rights are issued "subject to existing rights."

to make full beneficial use of its existing rights. Thus, as long as water rights can impact the availability of water to a senior right, regardless of source or arbitrary topographic basin-boundary lines, that water right's priority is relative to those rights.[72] Order 1309 did not change these core concepts of priority and non-impairment.

All groundwater rights in the LWRFS were issued subject to existing rights, including decreed Muddy River water rights.[73] The State Engineer has the power to enforce the permit terms in those groundwater rights to protect senior water rights. Additionally, the State Engineer has a separate affirmative duty to protect vested decreed rights. And he cannot issue a permit, or take any administrative action, that impairs vested rights.[74] The water rights confirmed in the Muddy River Decree were used prior to 1913 and thus are protected against any impairment as vested rights in addition to being protected from conflicts as senior rights.

Other parties argue they should be permitted to continue to use groundwater, even though this use will harm existing rights on the source, including senior decreed rights

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[72] LCWD and Vidler's well was originally drilled in what was believed to be Coyote Spring Valley but later was determined to be Kane Springs Valley. SE ROA 54234. The USGS originally recognized that Coyote Spring Valley and Kane Springs Valley were one hydrographic basin based on similar topographic features. SE ROA 9347.

[73] For Example, CSI's water right has the specific permit term that the "permit is issued subject to existing rights" and that the "State Engineer retains the right to regulate the use of the water herein granted at any and all times." SE ROA 47838. Other water rights in the LWRFS area have similar permit terms. SE ROA 33952; SE ROA 35507-35508; SE ROA 41852.

[74] NRS 533.085 (1) is unambiguous: "Nothing contained in this chapter shall impair the vested right of any person to the use of water, nor shall the right of any person to take and use water be impaired or affected by any of the provisions of this chapter where appropriations have been initiated in accordance with law prior to March 22, 1913." NRS 533.085, and its concept on non-impairment, have been upheld by the Courts since the statute was first litigated in 1914. *See Ormsby County v. Kearney*, 37 Nev. 314, 142 P. 803 (Nev. 1914).

in the Muddy River. Obviously, such a result is prohibited by law as noted above. Therefore, even if the State Engineer had re-prioritized LWRFS water rights based on relative priority, under Nevada law and the prior appropriation system, he is obligated to do so to protect senior water rights and vested water rights.

Finally, the question of priority is only important if a curtailment action is initiated. In a curtailment situation, the State Engineer "restricts water use to conform to priority rights."[75] This means, that junior uses that are in excess of the available supply get curtailed. Order 1309 did not initiate curtailment.[76] Instead, Order 1309 established the factual predicate to the possibility of curtailment in the future (i.e., the State Engineer defined the extent of the aquifer and the quantity of the available supply). If the State Engineer orders a water right to be curtailed in the future, such an action would be separately appealable under NRS 533.450.

E. The State Engineer is legally allowed to defer management decisions to future actions.

1. *Eureka County v. State Engineer*

Lincoln County Water District ("LCWD") and Vidler Water Company ("Vidler") argue that in Order 1309, the State Engineer improperly deferred management and administration decision to the future in violation of *Eureka County v. State Engineer*.[77]

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[75] NRS 534.110(6).

[76] Notable, NRS 534.110(6) provides the State Engineer *shall* conduct investigations where the average supply may not be adequate to satisfy all rights. That is what he did in Order 1309 – he investigated the extent of the groundwater supply available to permittees and vested right owners. However, NRS 534.110(6) does not require curtailment occur at the same time of study. Instead, NRS 534.110(6) provides the State Engineer discretion to curtail use (i.e., limit withdrawals to conform to priority rights). How, or if, the State Engineer proceeds with curtailment is an issue to be heard in later proceedings at the State Engineer's discretion.

[77] LCWD and Vidler Opening Brief at 38.

This argument relies on a misreading of *Eureka County*. In *Eureka County*, the Supreme Court addressed the issue of whether the State Engineer could approve an application that would conflict with an existing right if the State Engineer conditioned his approval on a yet-to-be-developed mitigation plan.[78] The *Eureka County* Court prohibited the State Engineer from relying on future evidence (a mitigation plan to prevent a conflict) that was not available for review prior to approval of the water right application. Logically, the *Eureka County* holding was rooted in due process concerns.

Here, the State Engineer made a decision based on the evidence before him. The State Engineer did not approve an application that would result in a conflict and did not assume that such a conflict could be mitigated through some future management plan. He used specific criteria related to the scope and extent of the boundary of the management system and determined the quantity of water available for pumping. The State Engineer properly deferred other management decisions to future proceedings, which allows all parties the continued opportunity to be heard before those future decisions are made. Order 1309 was narrowly tailored to four factual inquires and related to determining the extent of a management area and the amount of available supply. The determinations of the State Engineer in Order 1309 are related to those specific issues and are not reliant on the outcome of any future proceeding or evidence.

Furthermore, the water statutes specifically contemplate management of groundwater in stages.[79] Order 1309 is the initial designation of the LWRFS under NRS 534.030. Under NRS 534.120(1), the State Engineer has the authority to make rules and

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[78] *Eureka County v. State Engineer*, 359 P.3d 1114, 1120 (2015).
[79] NRS 534.030 and 534.120.

regulations *after designation*.[80] The law expressly recognizes that management decisions can be deferred until after designation and does not require all rules and regulations to be implemented simultaneously with the designation order.

2. Due Process

In an argument similar to LCWD and Vidler, Apex Holding Company, LLC and Dry Lake Water, LLC ("Apex") contends that the due process rights of the Order 1303 Hearing participants were violated because they were not allowed to comment on management decisions.[81] This argument fails to recognize that the State Engineer has not made management decisions and expressly deferred those decisions to a later point in the administrative process.[82] The Order 1303 Hearing was intended to address specific threshold issues that were factual and a necessary predicate to any evaluation of future management decisions.

The scope of the hearing related to the delineation of the boundary of the LWRFS and the amount of groundwater that could be sustainably pumped from the LWRFS. All parties had notice of the limited issues that were being considered. The State Engineer provided all parties adequate notice of those issues through Order 1303 and the pre-hearing notice. All parties had the ability to be heard on the enumerated issues. All parties are also on notice that any future decisions will be subject to further

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[80] NRS 534.120(1) ("Within an area that has been designated by the State Engineer, as provided for in this chapter, 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.") (emphasis added).

[81] Apex Opening Brief at 12.

[82] This argument puts the "cart before the horse" and asks this court to resolve issues that have yet to be heard by the administrative agency.

administrative proceedings, with their own notices and additional opportunities to submit evidence and be heard on the later issues. Thus, no due process violations exist with regard to parties' ability comment of future management decisions.

F. The State Engineer had authority to consider the Endangered Species Act in his public interest analysis.

Georgia-Pacific Gypsum LLC, and Republic Environmental Technologies, Inc. ("Georgia-Pacific") and Apex argue the State Engineer was not authorized to consider the Endangered Species Act ("ESA") in Order 1309.[83] The parties fail to explain why the State Engineer should ignore his agency's need to comply with federal law. Not only is it obvious that the State Engineer must comply with the ESA, the State Engineer also has an express duty to protect the public interest.

The State Engineer's duty to the public interest is twofold: he has a fiduciary public trust obligation and a statutory duty to protect the public interest.[84] Public interest has been defined and interpreted by the State Engineer and the Supreme Court.[85] Pursuant to instructions from the Supreme Court, specific public interest criterion and guidelines exist within the meaning of NRS 533.370.[86] Specifically, the State Engineer

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[83] Apex Opening Brief at 13; Georgia-Pacific Opening Brief at 28.

[84] NRS 533.345; NRS 533.370(2); *Min. Cty. v. Lyon Cty.*, 136 Nev. 503, 514, 473 P.3d 418, 427 (2020) ("Nevada's water statutes constrain water allocations to those that are public uses and require the State Engineer to reject permits if they are unnecessary or detrimental to the public interest. These considerations are consistent with the public trust doctrine.").

[85] *Pyramid Lake Paiute Tribe of Indians* v. *Washoe County,* 112 Nev. 743, 918 P.2d 697 (1996). *See also,* State Engineer Ruling 3786A (October 9, 1992) available at http://images.water.nv.gov/images/rulings/3786Ar.pdf (last visited 10/14/2021);

[86] *See* State Engineer Ruling 6454 (December 26, 2018) at 11-13, available at http://images.water.nv.gov/images/rulings/6454r.pdf (last visited October 14, 2021))

must look to water law statutes and policies in the public interest analysis.[87] Importantly, the protection of wildlife and establishment and maintenance of wetlands and fisheries are statutory mandates in Nevada water law.[88] Additionally, the State Engineer has public trust obligations to responsibly manage water resources.[89] Courts have long held that protection of biodiversity and endangered species is a part of the public trust obligations of the government.[90]

The State Engineer has consistently and historically considered the ESA. Robert Williams, a former State Supervisor for the USFWS, testified that the State Engineer has historically taken ESA compliance into consideration: (1) in 1991, when the State Engineer protected in-stream flows to protect the Lahontan cutthroat trout; (2) in 1998, when the State Engineer granted the Pyramid Lake Paiute Tribe water rights to protect Lahontan cutthroat trout and cui-ui; and (3) when the State Engineer decided to limit water use to protect the Devils Hole pupfish based on federal reserved water rights.[91] Therefore, the State Engineer properly followed the law and his prior practices to consider the impact of the ESA in Order 1309.

In addition to the clear statutory authority that authorized the State Engineer to consider the ESA, the State Engineer correctly recognized that a state agency could be

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("Ruling 6454"). *See also*, State Engineer Ruling 6164 (March 22, 2012) available at http://images.water.nv.gov/images/rulings/6164r.pdf (last visited October 14, 2021) ("Ruling 6164") at 152-158.

[87] Ruling 6454 at 10-11.

[88] *See* NRS 533.023, NRS 533.367.

[89] *Min. Cty. v. Lyon Cty*., 136 Nev. at 520, 473 P.3d at 431 ("To allow the state to otherwise allocate waters without due regard for the public trust would permit the state to evade its fiduciary duties, and this we cannot sanction.").

[90] *Tennessee Valley Auth. v. Hill*, 437 U.S. 153 (1978).

[91] SE ROA 53434 at 1107:14 – SE ROA 53435 at 1108:16.

held liable for "take" under the ESA.[92] As explained in testimony, violations of the take prohibitions under ESA are subject to civil and criminal penalties.[93] In addition, the Federal government can seek injunctive relief to stop an activity that threatens harm or take of a listed species or its habitat.[94] The State Engineer found that managing LWRFS pumping to maintain flows above 3.2 cfs at the Warm Springs West gage would avoid possible civil and criminal penalties for an ESA violation.[95]

Georgia-Pacific also argued that the State Engineer has no authority to determine the circumstances where a "take" would occur.[96] However, the State Engineer did not make such a finding. The State Engineer properly reviewed evidence of the minimal flows necessary to "ensure access of wildlife it customarily uses,"[97] to protect the public interest and fulfill his obligations under the public trust.[98] The State Engineer relied upon USFWS's determination of acceptable incidental take of Moapa dace as defined in multiple Biological Opinions provided as exhibits during the hearing.[99] The State

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[92] SE ROA 45-47 ("a state regulator is not exempted from the EA for takings that occur as a result of a licensee's regulated activity. States have faced 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." *See Strahan v. Coxe*, 127 F.3d 155, 163 (1st Cir. 1997)).

[93] 16 U.S.C. § 1540, *Ctr.for Biological Diversity v. Holsten*, 541 F. Supp.2d 1073, 1079 (D. Minn. 2008).

[94] SE ROA 42121.

[95] SE ROA 42134.

[96] Georgia Pacific Opening Brief at 30.

[97] NRS 533.367.

[98] NRS 533.345; NRS 533.370(2); *Min. Cty. v. Lyon Cty.*, 136 Nev. at 514 , 473 P.3d at 427 ("Nevada's water statutes constrain water allocations to those that are public uses and require the State Engineer to reject permits if they are unnecessary or detrimental to the public interest. These considerations are consistent with the public trust doctrine.").

[99] SE ROA 42124-46, 47605, 47807.

Engineer properly relied on expert testimony supported by substantial evidence, a trigger established by the USFWS, and new information from the Aquifer Test to avoid exceeding that *take* and ensuring that wildlife will have access to the spring water upon which it relies.

II. The State Engineer's Decision To Designate The LWRFS Basin Was Proper.

The LWRFS sub-basins have been the subject of testing and assessment for decades. As a result, the record of available information and data is extensive. The Interim Order 1303 administrative hearing built on the existing record and allowed for stakeholder input and evaluation of the volumes of existing data. The 2010 Aquifer Test produced valuable empirical data about impacts throughout the LWRFS from pumping existing rights. The Aquifer Test yielded critical information, and drastically altered the outlook for groundwater management and availability in the LWRFS. The test revealed a uniquely close hydrologic connectivity within the LWRFS. That unique connectivity is supported by additional information obtained in the years following the Aquifer Test.[100]

As chronicled in Interim Order 1303, the State Engineer made sound factual findings regarding the high degree of hydrologic connectivity within the LWRFS based on the Aquifer Test. Those findings were confirmed during the administrative hearing and acknowledged by a substantial majority of the parties after ample opportunity for additional evidence, cross examination, and rebuttal.[101] A few outliers disregarded of

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[100] SE ROA 53167 at 509:11-12; SE ROA 53453 at 1178:1-18; SE ROA 53341 at 903:2-5; SE ROA 53167 at 509:12; SE ROA 53453 at 1178:10-11.

[101] SE ROA 53060 at 266:3-11; SE ROA 53167 at 509:7-8; SE ROA 53354 at 953:6-8; SE ROA 53453 at 1178:1-18; SE ROA 53618 at 1526:23 - SE ROA 53619 at 1527:5;

the State Engineer's prior and consistent findings of hydrologic connectivity because those findings are not convenient to their business interests. They had a full opportunity to present evidence and rebut opposing evidence at the administrative hearing. For example, CSI argued that drought is the reason for observed groundwater declines and argued that its water rights in Coyote Spring Valley are isolated from the LWRFS.[102] Similarly, Georgia-Pacific and Republic, LCWD and Vidler, and Western Elite Environmental and Bedroc, argued in favor of most sub-basins being included in the LWRFS except – not coincidentally - for the areas containing their own water rights.[103] Those parties are now asking this Court to reweigh their evidence and substitute its judgment for that of the State Engineer, which is improper.[104] The State Engineer's decision is based on a well-reasoned review of substantial evidence, and is supported by the record.

A. The State Engineer's decision to delineate the LWRFS boundary is based on substantial evidence.

In Order 1309, the State Engineer found that "the geographic extent of the LWRFS is intended to represent the area that shares both a unique and close hydrologic

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SE ROA 53670 at 1645:7-10; SE ROA 53722 at 1763 to SE ROA 53723 at 1765; SE ROA 52984 at 95:14-16.

[102] SE ROA 16-19.

[103] SE ROA 19-23, 30-32, 40-42.

[104] The Court may not "substitute its judgment for that of the State Engineer." *Wilson v. Pahrump Fair Water, LLC*, 481 P.3d 853, 858 (Nev. 2021) (internal citation omitted). When reviewing a decision or order of the State Engineer, the court may not "pass upon the credibility of the witness nor reweigh the evidence." *Revert v. Ray,* 95 Nev. 782, 786, 603 P.2d 262, 264 (1979); *see also, Bacher v. State Eng'r,* 122 Nev. 1110, 1121, 146 P.3d 793,800 (2006). The Legislature has specified that "[t]he decision of the State Engineer shall be prima facie correct, and the burden of proof shall be upon the party attacking the same." NRS 533.450(10); *see also, Revert,* 95 Nev. at 786, 603 P.2d at 264.

connection and virtually all of the same source and supply of water, and *therefore will benefit from joint and conjunctive management*."[105] The State Engineer also developed a common set of criteria, that were consistent with characteristics considered in prior rulings regarding the LWRFS, to determine if the hydrologic connection between basins requires joint management.[106] These criteria account for water level, hydrographic, and hydrogeologic data to determine the extent of hydrologic connection between sub-basins in the LWRFS. Such factual determinations should not be lightly disregarded or disturbed.[107] Indeed, the State Engineer is entrusted with administering this important

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[105] SE ROA 55 (emphasis added).

[106] SE ROA 48-49. These criteria include: "(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 close hydrologic connection. (3) Water level hydrographs that demonstrate an observable decrease in drawdown, or a recovery, that corresponds to a decrease in pumping and an observable 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) Geologic structures that have caused a juxtaposition of the carbonate-rock aquifer with low permeability bedrock are consistent with a boundary. (6) When hydrologic information indicates 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 absence of that, to the basin boundary."

[107] *State Eng'r v. Morris*, 107 Nev. 699, 701, 819 P.2d 203, 205 (1991); *Revert*, 95 Nev. at 786, 603 P.2d at 264. *See also, Pyramid Lake Paiute Tribe v. Washoe Cty.*, 112 Nev. at 751, 918 P.2d at 702 (Generally, the State Engineer's "factual determinations will not be disturbed" by the reviewing court on a petition for judicial review pursuant to NRS 533.450 so long as they are "supported by substantial evidence.").

and technical subject because he possesses the necessary technical qualifications and experience to understand and analyze complex issues.[108]

After evaluating the evidence and expert testimony that was presented at the Interim Order 1303 Hearing, the State Engineer delineated the LWRFS boundary in Order 1309.[109] This finding was based on previous findings made by the State Engineer in Rulings 6254-6261 and a general consensus among the experts testifying at the hearing concerning the boundary of the LWRFS.[110] In Rulings 6254-6261, the State Engineer found that the results from the Aquifer Test provided "clear proof of the close hydrologic connection of the basins that distinguishes these basins from other basins in Nevada."[111] Again, the State Engineer is particularly well-suited to assess expert testimony based on his own expertise, as required by NRS 532.030.

At the administrative hearing, there was also a general consensus among experts that pumping in the LWRFS caused corresponding drawdowns throughout the LWRFS groundwater aquifer and a decline of Muddy River spring flows.[112] Volumes of

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[108] NRS 532.030 ("No person may be appointed as State Engineer who is not a licensed professional engineer pursuant to the provisions of chapter 625 of NRS and who does not have such training in hydraulic and general engineering and such practical skill and experience as shall fit that person for the position").

[109] SE ROA 66.

[110] SE ROA 745-746.

[111] SE ROA 746.

[112] SE ROA 13-14 (Center for Biological Diversity), SE ROA 15-16 (City of North Las Vegas), SE ROA 19 (Georgia Pacific and Republic); SE ROA 27 (Moapa Valley Water District); SE ROA 28 (Muddy Valley Irrigation Company); SE ROA 29-30 (United States Department of the Interior, National Park Service); SE ROA 33-34 (NV Energy); SE ROA 34-36 (SNWA and LVVWD); SE ROA 38 (U.S. Fish and Wildlife Service); *See, e.g.*, SE ROA 53340 at 899:17 to SE ROA 53341 at 900:16 (Burns); SE ROA 53170 at 521:5-24 (Waddell); SE ROA 53056 at 251:4 to SE ROA 53057 at 252:12 (Braumiller); SE ROA 53454 at 1187:11 to SE ROA 53455 at 1188:21 (Lazarus); SE

geographic and hydrologic data were submitted to the State Engineer that evaluated the connectivity of all surrounding basins in relation to the Muddy River and each other. While the State Engineer recognized discrete aquifers may conceptually exist within the LWRFS, he found none had been proven to exist.[113]

The contrary evidence submitted by CSI and LCWD and Vidler to cleave specific areas from the LWRFS were thoroughly rebutted at the hearing.[114] Expert after expert testified for numerous parties with varying interests that important and relevant data was "conspicuously absent from [CSI's experts'] report."[115] Order 1303 plainly identifies the initial hydrologic work that was done in the LWRFS, including the significant pumping stress that provided real data, not hopeful speculation, on how various parts of the aquifer responded. That evidence, and the new groundwater level data and analysis, disproved CSI's and LCWD and Vidler's hypotheses that impermeable faults conveniently exist at select locations to insulate their wells from causing any drawdown elsewhere in the LWRFS.

ROA 53618 at 1526:23 to SE ROA 53619 at 1527:5 (Myers); SE ROA 48620; SE ROA 53352 at 945:14 to 946:16 (Burns); SE ROA 53340 at 899:17-20 (Burns). The State Engineer found this evidence more compelling than the counter evidence by CSI, LCWD and Vidler, and the Moapa Band of Paiutes.

[113] SE ROA 54.

[114] SE ROA 42178; SE ROA 42179-42180 (*see* Figure 2-4). SE ROA 53173 at 533-534; SE ROA 53173 at 534:4-7.

[115] SE ROA 42179. Evidence exists to demonstrate there is a clear hydraulic connection between CSI's wells and the rest of the LWRFS. SE ROA 42179 to SE ROA 42181. SE ROA 53173 at 534:11-12; SE ROA 53220 at 628:5-9 (making similar conclusions to those SNWA reached in notes 23-25, *supra*): SE ROA 53173 at 534:8-9; SE ROA 53220 at 629:12-16; SE ROA 53173 at 534:2-7; SE ROA 53452 at 1176:18 to 1177:3; SE ROA 53452 at 1177:1-18; SE ROA 53449 at 1165:23 to 1166:1; SE ROA 53450 at 1169:9-24; SE ROA 53463 at 1220:7-10; SE ROA 53731 at 1800:15-23; SE ROA 53722 at 1761:4-14; SE ROA 53616 at 1518:9-24.

In sum, the State Engineer was persuaded by his own judgment and a consensus view among many experts with decades of experience studying groundwater in southern Nevada who testified on behalf of parties with a wide range of interests. By rejecting the more creative opinions that were repeatedly undermined by other experts and that ignored well-established groundwater dynamics in the region, the State Engineer used his own expertise to reach a decision supported by substantial evidence. From there, the State Engineer provided well-reasoned analysis of the relevant evidence, and sufficiently articulated the basis for determining the LWRFS boundary. Given the weight of the evidence supporting his decisions and the deference the State Engineer's factual findings must receive, this Court should uphold his findings.[116]

B. The State Engineer considered all relevant evidence in delineating the LWRFS boundary.

In any contested hearing, the decisionmaker must decide between competing and conflicting arguments. Through Order 1309, the State Engineer carefully summarized the various parties' evidence and arguments and, with extensive citations to the record, explained why he was persuaded by certain evidence and unpersuaded by other evidence.[117] Certain parties argue the State Engineer ignored their evidence. But this is not the case. Considering evidence and rejecting it in favor of other evidence does not

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[116] *Pyramid Lake Paiute Tribe v. Washoe Cty.*, 112 Nev. at 751, 918 P.2d at 702 (The State Engineer's "factual determinations will not be disturbed" by the reviewing court on a petition for judicial review pursuant to NRS 533.450 so long as they are "supported by substantial evidence."). The Legislature has specified that "[t]he decision of the State Engineer shall be prima facie correct, and the burden of proof shall be upon the party attacking the same." NRS 533.450(10) *see also, Revert*, 95 Nev. at 786, 603 P.2d at 264.

[117] SE ROA 47-55, 66.

mean the testimony or evidence was ignored. It means the State Engineer, with his office's collective expertise, found the opposing evidence more reliable and persuasive.

CSI argues that the State Engineer only relied on the Aquifer Test data to the exclusion of all other evidence.[118] This argument is false. The State Engineer considered geologic mapping, water level measurement accuracy, water budget analysis, water flow paths, and groundwater modeling in Order 1309.[119] While the State Engineer was not convinced by CSI's evidence, he clearly considered it when coming to his decision define the boundary of the LWRFS. For example, the State Engineer found that "while water budget and groundwater flow path analysis [used by CSI] are useful to demonstrate a hydrologic connection, additional information is required to demonstrate the relative strength of that connection."[120] Other parties provided that additional information and demonstrated the high degree of connectivity in the LWRFS.[121] The State Engineer agreed with nearly all other participants that the "regional water budget is not the limiting measure to determine water availability."[122] Accordingly, the State Engineer properly considered and weighed all the relevant evidence, and substantial evidence supports his determination.

CSI also argues that the State Engineer ignored evidence that geologic faults may act as complete or partial barriers to groundwater flow and a close hydraulic connection

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[118] CSI Opening Brief at 29-35.
[119] SE ROA 17, 53, 52, 49-51, 60.
[120] SE ROA 49. The State Engineer further found that "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." SE ROA 58.
[121] SE ROA 13-15, 25-36, 38-39.
[122] SE ROA 59.

does not exist where heterogeneities occur within the LWRFS.[123] Contrary to CSI's claim, however, the State Engineer recognized that heterogeneities exist in the LWRFS, but concluded they do not "create hydraulically isolated compartments or subareas within the LWRFS carbonate-rock aquifer from which pumping can occur without effect on the Warm Springs area."[124]

While CSI and other parties presented evidence of new fault structures, the State Engineer considered this evidence and found the parties failed to demonstrate the faults act as a barrier to flow in any way.[125] For example, CSI and the Moapa Band of Paiute Indians argued against managing the LWRFS as a single basin, claiming that geologic barriers create isolated flow paths.[126] Other parties rebutted this hypothesis, pointing to hydraulic data obtained from observed impacts from pumping that clearly demonstrate a close connectivity.[127] Additionally, the Aquifer Test supports that impacts from pumping were widespread throughout the LWRFS and demonstrate a close hydrologic connection between the sub-basins.[128]

In contrast to CSI and the Moapa Band of Paiute Indians, SNWA and LVVWD presented expert testimony that because wells on different sides of the same faults behaved similarly, those faults did not create discrete pockets where CSI could pump water without impacting groundwater levels throughout the LWRFS.[129] The National

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[123] CSI Opening Brief at 42.
[124] SE ROA 60.
[125] SE ROA 52-54, 59-60.
[126] SE ROA 59-60.
[127] SE ROA 60. *See, e.g.,* SE ROA 42195-96, SE ROA 51543-51547. *See also*, SE ROA 28-30.
[128] SE ROA 65; SE ROA 10883-10974.
[129] SE ROA 53352 at 944:6 to SE ROA 53353 at 950:2.

Park Service ("NPS") also noted that the claim of geological barriers to flow are not only unproven but are also "inconsistent with prevailing opinions and data about the carbonate rock aquifer data."[130] NPS also found that, based on pumping and well data along the alleged barrier, "it is unlikely that the carbonate rock acts as a barrier."[131] The well drilled within the geologic structure at issue (MX-5) is very productive and impacts from its pumping are evidenced on both sides of the structure.[132] To support his finding that CSI did not prove fault structures will prevent impacts from groundwater pumping from propagating throughout the LWRFS, the State Engineer relied on this substantial evidence, which refutes CSI and other parties' geologic evidence.

The State Engineer, therefore, did exactly what he is supposed to do. He relied on the expertise of his office and the best available science to assess the credibility of the various arguments made by expert witnesses. Order 1309 thoroughly sets forth the competing evidence, analyzes it, and then explains the State Engineer's basis for reaching his findings and conclusions. Order 1309 is well reasoned, supported by substantial evidence provided by many credible experts from numerous parties, and is thus not arbitrary or capricious. The Court should therefore uphold the State Engineer's findings.[133]

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[130] SE ROA 51543

[131] SE ROA 51546.

[132] *Id*.

[133] *State Eng'r v. Morris*, 107 Nev. at 701, 819 P.2d at 205; *Revert*, 95 Nev. at 786, 603 P.2d at 264. *See also, Pyramid Lake Paiute Tribe v. Washoe Cty.*, 112 Nev. at 751, 918 P.2d at 702 (Generally, the State Engineer's "factual determinations will not be disturbed" by the reviewing court on a petition for judicial review pursuant to NRS 533.450 so long as they are "supported by substantial evidence.").

C. The criteria used by the State Engineer to delineate the LWRFS boundary are proper.

The criteria used by the State Engineer are scientific ways of demonstrating hydrologic connectivity. As explained in Order 1309, the criteria for inclusion of an area within the LWRFS are based on the characteristics considered critical in demonstrating a close hydrologic connection from Rulings 6254-6261.[134] The criteria take into account geologic data and water level observations in different contexts that provide the State Engineer with the proper tools to determine the hydrologic connection between sub-basins and whether that connection requires joint management.[135] These criteria are also consistent with prior findings in Rulings 6254-6261, and do not represent any surprise or new reasoning the parties could not anticipate.

1. The State Engineer properly considered the results from the Aquifer Test.

CSI argues that the State Engineer should not have relied on water level data from the Aquifer Test because the Aquifer Test was designed to determine how much water was available for additional appropriation, and not to test the *hydraulic* connection between certain wells or basins.[136] CSI further contends the Aquifer Test results do not provide a comprehensive view of the LWRFS hydrographic basin.[137] This argument is baseless, both logically and hydrologically. Regardless of the Aquifer Test's *original objective*, the study produced compelling data and results. The resultant data was not what was expected because many parties expected water to be available for

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[134] SE ROA 48.
[135] SE ROA 48-49.
[136] CSI Opening Brief at 30:19-35:25.
[137] *Id*.

appropriation. Instead, the Aquifer Test revealed widespread impact of groundwater pumping and an extensive hydrologic connection within the LWRFS.

Additionally, CSI is wrong in its assertion that the Aquifer Test's sole purpose was to determine how much water was available for appropriation. Order 1169 states clearly that the purpose of the test was to gain a better understanding of hydrologic connectivity of the groundwater system.[138] As the State Engineer articulated in later rulings "[one] of the goals of the Order 1169 test was to determine the perennial yield of Coyote Spring Valley."[139] The Aquifer Test was also meant to determine if pumping from groundwater rights that had already been issued "will have any detrimental impacts on existing water rights or the environment."[140] The Aquifer Test was also intended to aid in determining ideal locations for monitoring wells and to manage water rights so that groundwater pumping will not harm existing rights.[141] In short, the Aquifer Test's *actual* purpose was to better understand the groundwater system. The Aquifer Test data is indeed being used as it was originally intended, to inform a better understating of the aquifer. The State Engineer properly relied upon this data, fulfilling his direction to rely upon the best available science.[142]

2. <u>The State Engineer properly considered groundwater budgets.</u>

The State Engineer properly found that groundwater budgets are useful, but only a starting point in determining hydrologic connectivity or the amount of water available

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[138] SE ROA 664.
[139] SE ROA 780.
[140] SE ROA 665.
[141] SE ROA 664.
[142] NRS 533.024(1)(c).

to be pumped.[143] Groundwater budgets do not consider whether water is already appropriated, or whether the estimated quantity is able to be captured and developed without harm to others.[144] Instead of a hypothetical connection that results from accounting from groundwater budgets, the State Engineer properly listed five factors based on real-world data that must be considered in determining the boundary of the LWRFS.

CSI argues that the criteria used for inclusion of a basin in the LWRFS boundary is subjective and "dependent on who the [State Engineer] is."[145] CSI then argues that the only "objective" method for determining inclusion of a basin in the LWRFS is to use a groundwater budget method.[146] These arguments are a red herring and meant only to confuse the issue.

Whether or not evidence provided at a hearing meets the criteria is logically subjective, and within the discretion of the State Engineer. Such findings must be upheld by this court if they are supported by substantial evidence and are not otherwise arbitrary or capricious.[147] However, the criteria themselves are objective scientific factors and a list of evidence that must be evaluated in making a determination. The factors to be consider are 1) spatial distribution of water level observations, 2) temporal patterns of hydrographs, 3) correlation of observed water level responses to pumping stress, 4) water

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[143] SE ROA 49-50, 58-59.
[144] SE ROA 59.
[145] CSI Opening Brief at 38:2-4.
[146] CSI Opening Brief at 33:2-5.
[147] *See generally, Revert*, 95 Nev. 782, 603 P.2d 262.

level gradients, and 5) geologic structures.[148] These factors are logically relevant to determining hydrologic connectivity.[149]

CSI also argues that based on the groundwater budget method between 16,000 afa and 17,000 afa of groundwater flows through Coyote Spring Valley and bypasses the Muddy River Springs Area.[150] While Order 1169 did state that "ground water outflow from Coyote Spring Valley is believed to discharge at a rate of approximately 37,000 afa at the Muddy River Springs area and approximately 16,000 to 17,000 afa annually flows to groundwater basins further south,"[151] it did not find that development of this water would not impact the Muddy River or existing rights as CSI claims.[152] Instead, Order 1169 indicated that the estimated 16,000 afa was already appropriated in Coyote Spring Valley alone, but not yet developed (without accounting for appropriations in downgradient basins where the water naturally flows).[153]

Order 1169 specifically found that a portion of the 16,000 afa of water appropriated in Coyote Spring Valley was to be included in the Aquifer Test "to determine if the pumping of those water rights will have any detrimental impacts on

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[148] SE ROA 48-49. Note, the sixth criteria is how the State Engineer is to address uncertainty: if factors 1-5 support a connection, but data is limited, the boundary will match visible features on the land surface.

[149] LCWD and Vidler argued that the State Engineer's criteria were unauthorized ad hoc rule making that should have been done through an administrative process that involves notice and comment. LCWD and Vidler Opening Brief at 23:24-27. This argument is baseless. The State Engineer is exempt from the Nevada Administrative Procedure Act and is not required to provide notice and a comment opportunity for rules of general applicability. NRS 233B.039(1)(i).

[150] CSI Opening Brief at 31:3-32:11.

[151] SE ROA 663.

[152] CSI Opening Brief at 32:5-6.

[153] SE ROA 664.

existing water rights or the environment."[154] The results of the Aquifer Test showed that pumping just a fraction of the 16,000 afa issued in Coyote Spring Valley for only a few years "measurably reduced flows in the headwater springs of the Muddy River."[155] Obviously, if pumping just a fraction of the estimated 16,000 afa harmed existing rights, the full amount is not available for development. Lastly, CSI's argument would have the State Engineer disregard decades of additional science and findings by his office that reduced the initial estimate of 16,000 afa to 9,900 afa.[156] In other words, the State Engineer properly found that the drawdown and recovery that occurred after the Aquifer Test accurately predicts the impact of increased groundwater pumping in the LWRFS, and that 16,000 afa is not available for development in Coyote Spring Valley without harming existing rights and the environment.

D. <u>The State Engineer provided adequate due process.</u>

CSI and other parties argue that the State Engineer violated their due process rights because they were not notified of the State Engineer's criteria for determining hydrologic connection in the LWRFS before the Order 1303 Hearing.[157] This argument lacks merit. Order 1303 put all parties on notice of what factual issues would be addressed at the administrative hearing, and all parties had the opportunity to present evidence and testimony on those factual issues. The extent of hydrologic connection was one of the main issues. Parties submitted expert reports, faced questioning from the

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[154] SE ROA 665.
[155] SE ROA 782.
[156] SE ROA 779 (based on decades of additional studies, the State Engineer revised his initial estimate and determined the subsurface outflow was likely closer to 9,900 afa and not the 16,000 afa as originally estimated).
[157] CSI Opening Brief at 28:12-15, LCWD and Vidler Opening Brief at 22:13-21.

State Engineer and his office's staff, and submitted closing briefs. At no point did these parties object to the fact that they did not have enough direction on this issue.

The State Engineer is not required how to tell parties how to support their case. Instead, he properly posed a question to be answered, and relied upon submitted evidence to answer that question. For example, if the height of a building was a relevant issue at trial, the trier of fact would not have to provide the parties with an exact method of addressing the issue. Instead, each party would offer a method of measuring the building and submit evidence to support their case. The trier of fact would then be able to weigh the evidence and determine which method is most accurate and believable. By selecting a preferred method based on the arguments before it, the trier of fact does not violate any due process rights as all parties had notice and the ability to be heard on the issue.

Along those lines, requiring the State Engineer to establish specific criteria before he has reviewed all the arguments and evidence presented by the hearing participants would be illogical. The State Engineer had to wait and give each party the opportunity to present their own criteria for consideration. All parties were on notice that the SE would be making these determinations. The parties presented arguments on what they felt the criteria should be. They were provided evidence from other parties and given the opportunity to rebut that evidence and cross examine witnesses. Thus, they were provided notice and the opportunity to be heard on the issue.

Additionally, LCWD and Vidler argue that the participants' due process rights were violated because experts testified to new opinions that differed from their reports.[158]

[158] LCWD and Vidler Opening Brief at 40.

This is false, parties had the opportunity to object to expert testimony at the hearing and if they did the hearing officer evaluated the objection and found that the expert was not testifying to new opinions. Furthermore, even if this did occur, LCWD and Vidler fail to explain how these opinions prejudiced them in any way. They also had the opportunity to cross-examine these witnesses and address the same issues with their own witnesses. They also were provided the opportunity to file closing briefs, wherein such issues as this were able to be presented for review and consideration of the State Engineer. Alternatively, to the extent that LCWD and Vidler did not object at the hearing, they have waived their ability to make these objections now.

III. The State Engineer's Decision To Restrict LWRFS Groundwater Pumping To 8,000 Acre Feet, Or Less, Was Proper.

SNWA and LVVWD presented persuasive evidence that only 4,000 to 6,000 afa can be sustainably pumped from the LWRFS.[159] SNWA and LVVWD recommended that the State Engineer limit pumping to protect the Moapa dace and senior rights to an amount less than 6,000 afa. The State Engineer considered this evidence but found groundwater pumping in the LWRFS must be capped at 8,000 afa, *or maybe less*, if pumping 8,000 afa impacts the endangered Moapa dace.[160] The State Engineer relied on his conclusion that approximately 8,000 afa is currently pumped in the LWRFS, and that pumping may *be reaching* equilibrium (i.e., the level of impacts *may be* stabilizing).

[159] SE ROA 35-36.

[160] SE ROA 66, item 2-3 (emphasis added); *see also*, SE ROA 57, 63 ("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").

But, he said, that 8,000 afa cap "may need to be reduced in the future if the stabilizing trend in spring discharge does not continue."[161]

SNWA and LVVWD do not completely agree that 8,000 afa is available to be pumped and stands by its evidence that no more than 6,000 afa is available. Nonetheless, SNWA and LVVWD agree that the 8,000 afa cap is a prudent starting point for limiting groundwater pumpage, particularly given the State Engineer's determination the 8,000 afa cap will be reduced in the future based on monitoring for impacts, and if impacts have not stabilized.[162]

A. The State Engineer relied on substantial evidence to find pumping should be limited to 8,000 afa or less.

The State Engineer based his 8,000 afa cap on several factors and supporting evidence. First, historic pumping data and monitoring data supports the State Engineer's determination. During the Aquifer Test, over 14,535 afa was pumped throughout the LWRFS.[163] That pumping depleted the groundwater reservoir enough to cause deleterious effects on spring flows that support senior Muddy River water rights and the Moapa dace. Since the end of the Aquifer Test, groundwater pumping reduced to between 7,000 afa and 8,000 afa.[164] Experts debated whether the impact from this level of pumping through 2019 has stabilized (i.e., reached equilibrium).[165] Thus, substantial

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[161] SE ROA 63.

[162] If pumping over 6,000 afa is allowed in the LWRFS it should be temporary in nature because the pumping may need to be reduced if impacts do not stabilize.

[163] SE ROA 56.

[164] SE ROA 56, 64.

[165] SE ROA 64. Evidence shows that even the existing pumping of 8,000 afa is causing spring flow declines, just less rapidly. *See* SE ROA 53349 at 932:21-22; SE ROA 53336 at 880:6-9; SE ROA 53169 at 519:24 to 520:4; SE ROA 53623 at 1545:16 to 1546:1; SE ROA 41876; SE ROA 53729 at 1790:6-10.

evidence supports that 8,000 afa is the upper limit on the amount of water that can be safely pumped in the LWRFS based on existing data.

In addition, the State Engineer also relied on the 3.2 cfs threshold at the Warm Springs West gage to support the 8,000 afa pumping limitation. The State Engineer recognized that "it is clear that it is necessary for spring flow measured at the Warm Springs West gage to flow a minimum rate of 3.2 cfs in order to maintain habitat for the Moapa dace."[166] Sufficient evidence exists to demonstrate that spring flow at the Warm Springs West gage is highly correlated to water levels in the LWRFS aquifer.[167] The current levels of production are causing water levels and spring flows at the Warm Springs West gage to fluctuate around 3.2 cfs. Therefore, substantial evidence exists to support that pumping 8,000 afa, or less, is necessary to maintain the 3.2 cfs flows at the Warm Springs West gage and protect the Moapa dace.

B. The State Engineer properly analyzed the evidence to support the 8,000 afa pumping limitation.

Various parties argue that the State Engineer did not develop clear analysis or cite to substantial evidence to support the pumping limitation of 8,000 afa.[168] However, the State Engineer relied upon decades of pumping data, observed flows in the Muddy River, and extensive scientific study to support his conclusion. Since empirical pumping and water level data show the pumping of approximately 8,000 afa in the LWRFS is *approaching steady state*, a reasonable mind can conclude that the amount of water

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[166] SE ROA 45.
[167] SE ROA 41986, Figure 5-9.
[168] Georgia-Pacific Opening Brief at 18:1-20:24; LCWD and Vidler Opening Brief at 36:21-38:8.

available to be sustainably pumped is approximately 8,000 afa.[169] The State Engineer properly recognized that if the system does not continue to approach equilibrium at this level of pumping, that pumping would need to be further reduced to protect existing rights and the environment.

Georgia-Pacific argues that the State Engineer wrongly applied the 8,000 afa limitation to the entire LWRFS without regard to the location of pumping.[170] This argument fails for three reasons. First, the LWRFS is a closely connected hydrologic system, and the pumping limitation should apply throughout that system. Second, the maximum quantity of water that can be pumped from a source is based on a limit of total available water from that source. Total availability is determined by whether the system can reach equilibrium, or *steady state*, given a certain amount of pumping.[171] The State Engineer found that the LWRFS is *reaching equilibrium* from the Aquifer Test and subsequent annual pumping of about 8,000 acre feet. Third, site-specific limitations were included by the State Engineer for impacts from specific points of diversion to be addressed on a case-by-case when acting on a specific application.[172] Even though the 8,000 afa limitation applies throughout the interconnected portion of the LWRFS, the

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[169] *Bacher*, 122 Nev. at 1121, 146 P.3d at 800 (quoting *State, Employee Sec. Dep't v. Hilton Hotels Corp.*, 102 Nev. 606, 608, 729 P.2d 497, 498 (1986) (An agency decision is only supported by substantial evidence if it includes evidence that a "reasonable mind might accept as adequate to support a conclusion.").

[170] Georgia-Pacific Opening Brief at 19:14-19.

[171] *Pyramid Lake Paiute Tribe of Indians v. Ricci*, 126 Nev. 521, 524, 245 P.3d 1145, 1147 (2010) (the amount of water available to be pumped from a groundwater aquifer "is the equilibrium amount or maximum amount of water that can safely be used without depleting the source.").

[172] NRS 533.370(2).

State Engineer properly acknowledged that allegations that certain areas are disconnected from the flow system can be addressed on a case-by-case basis.[173]

Similarly, LCWD and Vidler argue that the pumping cap is "discriminatory and contrary" because the pumping cap ignores the location of pumping.[174] They argue that even though their rights are junior to most rights in the LWRFS, they should be treated differently because their wells are located twenty-two miles from the Muddy River.[175] However, in making such arguments, LCWD and Vidler are confusing the three separate limitations to groundwater pumping: unappropriated water, conflicts, and public interest.[176] The cumulative quantity of water available to all appropriations is relevant under an unappropriated water analysis, which means that all appropriations must be less than or equal to the amount of available supply. The unappropriated water analysis is relevant to a *regional* conflict analysis as pumping above the amount of available supply will necessarily cause conflicts and be detrimental to the public interest.[177] In contrast, location of pumping from a specific well is relevant under a *case-by-case* analysis and not an unappropriated water analysis. Accordingly, the 8,000 afa cap is a proper regional limit, and movement of individual water rights will be considered case-by-case, and these two concepts work together and are not in conflict with each other.

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[173] SE ROA 54.
[174] LCWD and Vidler Opening Brief at 39:15-40:2.
[175] LCWD and Vidler Opening Brief at 39:15-40:2.
[176] NRS 533.370(2).
[177] As explained by the NPS, regardless of the location, pumping anywhere in the LWRFS will "eventually expand from [basins in the LWRFS] to the Muddy River Springs." SE ROA 51545. Similarly, the NPS pointed out that "the effect of distal pumping in the carbonate aquifer of the LWRFS is sufficient to cause considerable impacts on the Muddy River Springs, especially when cumulative pumping effects are considered." *Id*.

The Center for Biological Diversity ("CBD") argues that the *steady state* analysis in Order 1309 was not supported by substantial evidence.[178] SNWA and LVVWD agreed with this argument at the Interim Order 1303 hearing. The thrust of the argument was that groundwater levels continue to decline, and a new equilibrium has not been achieved. Many experts agreed with this proposition. Even though the State Engineer found the system is *appears to be reaching steady state*, he recognized the uncertainty in this determination.[179] The State Engineer recognized that continued monitoring is necessary, and that pumping may need to be further reduced in the future if water levels continue to decline.[180]

CSI also argues that that the State Engineer ignored the location of pumping wells when evaluating aquifer recovery, "such that a change in pumping rates by some wells might mask observations of recovery."[181] This is false. The State Engineer accounted for changes in pumping in all wells located within the interconnected portion of the LWRFS. He properly found that the effects of pumping, and the recovery from pumping throughout the LWRFS eventually manifests in the observed water levels.[182] The current location of wells is impliedly in the current observation of recovery.

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[178] CBD Opening Brief at 24:4-28:10.
[179] SE ROA 64.
[180] SE ROA 63.
[181] CSI Opening Brief at 47:26-28.
[182] SE ROA 63 ("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 the continued monitoring of pumping, water levels, and spring flow is essential to refine and validate this limit.").

C. The State Engineer's determination that capping pumping at 8,000 afa, with possible reductions to that cap in the future, will adequately protect the Moapa dace is supported by substantial evidence.

CBD argues that the State Engineer's cap on pumping in the LWRFS will not adequately protect the Moapa dace.[183] However, CBD's argument fails to recognize that the State Engineer conditioned the 8,000 afa limitation on further reductions if the flow rate at Warm Springs West continues to decline because the minimum flow of 3.2 cfs must be maintained to protect the existing population of the Moapa Dace. More than sufficient evidence indicates flow is necessary at a minimum rate of 3.2 cfs for the Moapa dace.[184] Mr. Marshall testified that in the last few years the flows at Warm Springs West were "bouncing [a]round 3.3 to 3.4 cfs."[185] Then in Order 1309 the State Engineer recognized that pumping at 8,000 afa has coincided with a period where spring discharge may be approaching steady state.[186] Hence, imposing a pumping limitation of 8,000 afa will keep spring flows above 3.2 cfs. But, since the State Engineer was clear that the pumping limit may be reduced further,[187] CBD's argument is without merit.

CBD also argues that even if the 8,000 afa cap protects decreed senior water rights, protecting senior rights does not, in and of itself mean that the Moapa dace will be protected. Rather than use impacts to senior water rights as a proxy for protecting the dace,[188] the State Engineer based his decision about protecting the dace on scientific evidence that was submitted regarding the needs of the fish. Also, since the State

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[183] CBD Opening Brief at 28.
[184] SE ROA 46.
[185] SE ROA 53437 at 1116:14-16.
[186] SE ROA 64.
[187] SE ROA 66.
[188] CBD Opening Brief at 30.

Engineer only has authority over water, and not environmental factors, he properly confined his review and regulation to ensure water availability for the fish.

Finally, CBD argues the State Engineer failed to properly complete a public interest analysis when he established the 8,000 afa pumping limit.[189] Yet, the State Engineer ended his review of the evidence with a conclusion that allowing groundwater pumping to reduce spring flow in the Warm Springs area to a level that would impair the habitat necessary for survival of the Moapa dace is against the public interest,[190] and could result in *take* of the endangered species (as defined by the USFWS).[191] Therefore CBD's argument is without merit.

D. Climate conditions were properly included in State Engineer's LWRFS pumping limit analysis.

Many parties tried to blame water level declines on drought. Experts vigorously debated whether changes in recent climate conditions are a material factor in groundwater level changes. For instance, SNWA and LVVWD's experts developed numerical models to explain that climate conditions are a minor factor in changes to the flows that are critical to the Moapa dace and senior surface water rights. Also, experts for USFWS, NPS, and Moapa Valley Water District ("MVWD") emphatically opined that drought and climate change are not the reason for decline in flow at the Muddy River and its headwater springs. The State Engineer properly relied on this evidence and found pumping, not drought-type climate conditions, is causing the decline in spring flows at the Muddy River.

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[189] CBD Opening Brief at 28.
[190] SE ROA 66.
[191] SE ROA 47.

The State Engineer also properly recognized he must regulate pumping, regardless of changes in climate conditions. If less water is available from rainfall on an annual basis, he must limit groundwater development to protect existing water rights and the environment.[192] The water law is clear, senior users are first in time, and thus first in right. The relationship of junior water right holders to seniors remains unchanged, regardless of negative impacts on supply. In fact, priority is only important in times of shortage – such as drought conditions. The State Engineer properly found that he must protect against impacts from pumping, regardless of climate conditions. Also, to the extent climate conditions reduce recharge to the LWRFS, the State Engineer properly concluded that pumping may have to be reduced below 8,000 afa in the future.

The State Engineer was also aware that short climate trends, like most droughts, are reflected in the long-term averages in the climate record. The sustainable yield of an aquifer system is based on these long-term climate trends. He also understands that long-term water levels are created and maintained by long-term recharge trends. The minor variability of water levels caused by climate fluctuations within the LWRFS evens out to the average observed levels over long periods of time. The changes in water levels in the LWRFS exceed what can be caused by changes in short term climate conditions. The State Engineer properly placed climate conditions in the proper context.

As substantial evidence supports the State Engineer's decision, and his decision is supported by a well-reasoned and thorough analysis that a reasonable mind would

[192] SE ROA 57 ("The State Engineer only has 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.").

accept as supportive of his conclusion, his 8,000 afa pumping limitation should be upheld.

1. SNWA and LVVWD Evidence

SNWA and 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."[193] 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.[194] The MLR analysis confirmed that groundwater production from the aquifer, not climate, is the main cause of the observed long-term declines in aquifer levels and Muddy River spring flows.[195]

2. USFWS, NPS and MVWD Evidence

Dr. Mayer, a USFWS expert, explained clearly there is "no credible evidence that drought has impacted water levels in the LWRFS."[196] Consistent with this, Dr. Waddell, a NPS expert, 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.[197] He testified, "[i]f there

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[193] SE ROA 42188.
[194] *Id.*
[195] *Id.*
[196] SE ROA 53074, 322:15-19.
[197] SE ROA 53183 at 574:4 to SE ROA 53185 at 582:23.

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 response."[198] Mr. Lazarus, a MVWD expert, 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."[199]

3. State Engineer's Conclusion Regarding Climate Conditions

Throughout Order 1309, the State Engineer thoroughly discussed climate factors and the evidence in the record he used to support his decision.[200] Unlike what LCWD and Vidler claim, the State Engineer properly supported his determination that the Aquifer Test, and the lack of recovery thereafter, proves that pumping is causing the impact to senior rights, not climate conditions.[201] The Court need not guess, as LCWD and Vidler claim, about how the State Engineer considered climate evidence. The State Engineer fully evaluated the impacts of climate on the ability of the LWRFS aquifer to recover, making his review far more sound that CSI's hypothetical calculations.[202]

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[198] SE ROA 53455 at 1190:8-12.

[199] SE ROA 53455 at 1190:24-1191:2.

[200] SE ROA 8 (citing NSE Ex. 245), SE ROA 13 (citing CBD Ex. 3, CBD Ex. 4, Transcripts of CBD's experts), SE ROA 17 (citing CSI Ex. 1, CSI Ex. 2), SE ROA 19 (Citing GP-REP Ex. 1 and Closing Arguments of Georgia Pacific); SE ROA 24 (citing MBOP Ex. 2), SE ROA 29-30 (citing NPS Ex. 2, and NPS Closing Arguments); SE ROA 35 (citing SNWA Ex. 9, SNWA Closing Arguments); SE ROA 39 (citing USFWS Ex. 5, USFWS Ex. 7, transcripts of USFWS expert); SE ROA 53 (citing LC-V Ex. 1, LLC-V Closing Arguments, CSI Closing Arguments, Transcripts, NPS Presentation slides); SE ROA 57 (citing USGS 1993 Open File Report 93-642, SNWA Ex. 7, Transcript pages, NPS Ex. 3); SE ROA 60 (citing NSE Exs. 15-21); SE ROA 61 (citing CBD Ex. 3, SNWA Ex. 7, MVIC Ex. 3, NSE Ex. 333); SE ROA 63 (citing NPS Ex. 3, Transcripts, LC-V Ex. 11, CNLV Ex. 3).

[201] LCWD and Vidler Opening Brief at 12, 26.

[202] CSI Opening Brief at 32.

Similarly, Georgia-Pacific's argument that climate controls the observed groundwater levels, and not hydrologic connectivity, ignores that the State Engineer heard this argument, found it lacking, and his determination is entitled to deference.[203] Rather than take a single sentence of Order 1309 out of context, and ignore the voluminous discussion of the State Engineer's analysis of climate impacts, this Court can readily uphold the State Engineer's determination based on his thorough review and analysis of the volumes of evidence related to climate impacts.

E. The State Engineer provided adequate due process.

Georgia-Pacific argues that the State Engineer violated parties' due process rights because the State Engineer failed to provide notice he would consider the ESA in deciding the flow requirements of the Moapa dace.[204] This argument fails because, in Interim Order 1303, the State Engineer put all parties on notice that impacts to the Moapa dace would be considered by the State Engineer.[205] The State Engineer even mentioned the flow requirement for the Moapa dace in Interim Ruling 1303. Then all parties, including Georgia-Pacific, had the opportunity to present evidence regarding the Moapa dace.[206]

CONCLUSION

For the reasons stated herein, the State Engineer's decision to designate the LWRFS, and to cap groundwater use in the LWRFS at 8,000 afa, should be affirmed.

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[203] Georgia-Pacific Opening Brief at 14.
[204] Georgia-Pacific Opening Brief at 31.
[205] SE ROA 79.
[206] Ironically, since Georgia-Pacific has not consulted with the USFWS to have its pumping authorized under the ESA *take* provisions, the State Engineer is protecting parties like Georgia-Pacific from potential liability under the ESA by capping pumping to maintain Moapa dace habitat.

AFFIRMATION: The undersigned does hereby affirm that the preceding document and/or attachments do not contain the social security number of any person.

Dated this 24th day of November 2021.

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ATTORNEY CERTIFICATE

Pursuant to NRAP 28.2, undersigned counsel certifies that:

1. I have read this entire answering brief.

2. To the best of my knowledge, information, and belief, it is not frivolous or interposed for any improper purpose.

3. This answering brief complies with all applicable Nevada Rules of Appellate Procedure, in particular NRAP 28(e)(1), which requires every assertion in the brief regarding matters in the record to be supported by a reference to the page and volume number, if any, of the transcript or appendix where the matter relied on is to be found.

4. This answering brief complies with the formatting requirements of NRAP 32(a)(4), the typeface requirements of NRAP 32(a)(5), and the type style requirements of NRAP 32(a)(6) because this answering brief has been prepared in a proportionally spaced font using Microsoft Word in 14-point Times New Roman font.

5. The page-volume limitations of NRAP 32(a)(7) have been waived in this matter.

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I understand that I may be subject to sanctions in the event that the accompanying answering brief is not in conformity with the requirements of the Nevada Rules of Appellate Procedure.

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CERTIFICATE OF SERVICE

I certify that I am an employee of Taggart & Taggart, LTD, and that on this 24th day of November 2021, 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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DISTRICT COURT

CLARK COUNTY, NEVADA

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

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

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SUMMARY OF CHALLENGES TO ORDER 1309

The challenges to Order 1309 that are raised in these consolidated appeals can be distilled into three categories: (1) creation of the Lower White River Flow System ("LWRFS"), (2) the 8,000 acre-feet per annum ("afa") cap on groundwater development, and (3) the legal conclusion that current groundwater pumping that captures Muddy River water does not conflict with the legal rights to water that were established in the Muddy River Decree.

Category I: Creation Of LWRFS

In this first category some parties allege the State Engineer lacks authority to regulate a group of groundwater basins together, others challenge the scientific determination that certain basins are hydrologically connected to the LWRFS, and others raise due process concerns.

As to the question of legal authority, numerous parties, including the State Engineer, articulate the clear and obvious basis for statutory authority to manage the LWRFS pursuant to Order 1309.[1] The challenge to legal authority is a legal question, so the Court may conduct *de novo* review of that issue,[2] but the statutory basis for the State Engineer's authority is clear,[3] and the Court can uphold the State Engineer's legal authority to create the LWRFS for groundwater management purposes. The Court can

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[1] State Engineer Answering Brief at 30-38; SE ROA 43-44 (citing NRS 534.030; NRS 534.110; NRS 532.120; NRS 534.120; NRS 533.024; and NRS 534.020).

[2] *Wilson v. Pahrump Fair Water, LLC*, 137 Nev. Adv. Op. 2,__, 481 P.3d 853, 856 (2021).

[3] Center for Biological Diversity ("CBD") Answering Brief at 20-25; The Church of Jesus Christ of Latter-day Saints ("LDS") Answering Brief at 12-19; Moapa Valley Water District ("MVWD") Answering Brief at 8; Muddy Valley Irrigation Company ("MVIC") Answering Brief at 5-17, 19; SNWA and LVVWD Answering Brief at 14-30; Sierra Pacific Power Company and Nevada Power Company, doing business as Nevada Energy ("NV Energy") Answering Brief at 5-7.

also easily reject arguments that the State Engineer changed priorities of water rights in Order 1309, since he clearly did not.[4]

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

Most of the due process challenges to the creation of the LWRFS can also be easily resolved because *the first* factual issue State Engineer asked stakeholders to provide evidence on was "the geographic boundary of the hydrologically connected groundwater and surface water systems."[6] Since the standard for due process in water cases is whether a party had a "full opportunity to be heard," all parties clearly had that opportunity regarding the boundaries of the LWRFS.[7] The remaining due process

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[4] NV Energy Answering Brief at 9-10; SNWA and LVVWD Answering Brief at 20-24.
[5] State Engineer Answering Brief at 19-23; CBD Answering Brief at 15-20; MVWD Answering Brief at 10, 13; SNWA and LVVWD Answering Brief at 30-43; MVIC Answering Brief at 13-14, 18; NV Energy Answering Brief at 10-17.
[6] ROA 82-83.
[7] *Revert v. Ray*, 95 Nev. 782, 786-7, 603 P.2d 262, 264-5 (1979).

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

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

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

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

[8] Throughout the State Engineer's Answering Brief, he incorrectly asserts that SNWA and LVVWD do not contest this determination. In fact, SNWA, LVVWD, and most experts in the Order 1303 Hearing, concluded the LWRFS is not reaching a new 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.

duties,[9] and prohibits the State Engineer from sticking his head in the sand if the groundwater permits he issues allow the take of an endangered species.

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

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

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

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[9] CBD Answering Brief at 4-10.

[10] For instance, SNWA and LVVWD filed a Notice of Alleged Violation with the State Engineer that the State Engineer refused to process, presumably until Phase 2 of the LWRFS proceedings. ROA 48131-32.

[11] 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.

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

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

ARGUMENT

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

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[12] State Engineer Answering Brief at 37.
[13] *Id*. at 37.
[14] *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).

of ICS has been certified by the State Engineer and BOR. ICS is a critical element to SNWA's water resource portfolio, particularly during drought.[15]

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

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

In Order 1309, the State Engineer found that existing pumping captures Muddy River water, but the system is approaching a new equilibrium and existing pumping *will not decrease* Muddy River flows any more than *it already has*.[17] This does not mean,

[15] SE ROA 43840-44065.
[16] SE ROA 42005-10.
[17] SE ROA 64.

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

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

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

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

The State Engineer exceeded the scope he defined for Phase 1 of the LWRFS proceedings by including a surprise and faulty conflicts analysis in Order 1309. Only foundational factual questions of geographic extent and availability of supply were to be considered in Phase 1.[19] At the prehearing conference, the State Engineer's office said the initial hearing was part of a "multi-tiered process in terms of determining the appropriate management strategy"[20] for the LWRFS. Parties were told that the issue of conflicts would be addressed in the later phase of the State Engineer's LWRFS proceedings.[21] The State Engineer's office clarified that legal conflicts are part of "larger

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[18] SE ROA 42009.
[19] SE ROA 82-83.
[20] SE ROA 522 at 10: 8-10 (Fairbank).
[21] SE ROA 522 at 12:6-15 (Fairbank).

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

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

But LCWD and Vilder allege SNWA was not prejudiced by the State Engineer's surprise finding because SNWA had submitted its ICS depletion analysis.[28] This argument is without merit. The ICS depletion analysis was not a legal-based conflicts analysis. The ICS depletion analysis was a fact-based quantification of *impacts,* in terms of ICS Credits, not the legal proof that would be submitted on the question of conflicts.[29]

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[22] SE ROA 522 at 10:18-22 (Fairbank).
[23] SE ROA 522 at 12:6-15 (Fairbank) (emphasis added).
[24] *Id.* (Emphasis added).
[25] State Engineer Answering Brief at 11.
[26] CSI Answering Brief at 22.
[27] LCWD and Vidler Answering Brief to LVVWD, SNWA and MVIC at 29.
[28] SE ROA 53400 (ICS depletion analysis was submitted before State Engineer explicitly ruled conflicts would not be considered).
[29] SE ROA 53400 (ICS depletion analysis was relevant to capture of river flows).

The legal conflicts allegation was included in SNWA's Notice of Alleged Violation that the State Engineer repeatedly precluded SNWA from putting on until, presumably, Phase 2 of the LWRFS proceedings.[30]

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

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

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[30] SE ROA 48131-32.
[31] State Engineer Answering Brief at 41.
[32] State Engineer Answering Brief at 41.

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

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

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[33] Summary of Record on Appeal, Index to Administrative Record re: Order 1309 at 75, item 1014 (included as a non-exhibit that was support for "miscellaneous relevant findings").

[34] Nev. Const., art. 1, § 8(2) ("No person shall be deprived of life, liberty, or property, without due process of law").

[35] NRS 534.014 defines "person" to include any municipal corporation, power district, political subdivision of this or any state, or an agency of the United States Government.

[36] *Eureka Cnty. v. Seventh Judicial Dist. Ct.*, 134 Nev. 275, 279, 417 P.3d. 1121, 1124 (2018) (internal quotations omitted) (emphasis added).

[37] *Nevada Power Co. v. Public Service Commission*, 91 Nev. 816, 824, 544 P.2d 428, 434 (1975).

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

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

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

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[38] SNWA and LVVWD Opening Brief at 37 ("the NIWR method and data used by the State Engineer to make this finding were not part of the record or presented at the hearing. Indeed, no party had the opportunity to present evidence rebutting the State Engineer's use the NIWR of alfalfa to calculate the water requirement of decreed Muddy River water rights.").

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

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

[41] NRS 533.0245. ("[t]he 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, an interstate compact or an agreement to which this State is a party for the interstate allocation of water pursuant to an act of Congress."). *See also* NRS 533.210(1) (a decree entered by a court is final and conclusive); NRS 533.220.

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

C. <u>The State Engineer's *no conflict* conclusion is factually incorrect.</u>

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

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

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[42] NRS 533.3703. The State Engineer argues that this statute only applies to change applications. State Engineer Answer at 41 n.10. However, NRS 533.3703 is the only authority that allows the State Engineer to conduct a consumptive use analysis.

[43] 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.

[44] State Engineer Answering Brief at 28, 36.

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

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

1. <u>The State Engineer's *no conflict* findings cannot be verified.</u>

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

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[45] LCWD and Vidler recklessly claim SNWA and LVVWD agreed that 4,000 to 6,000 afa can be pumped without conflicts. LCWD and Vidler Answering Brief to LVVWD, SNWA and MVIC at 7. SNWA and LVVWD have steadfastly held the opposition 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).

[46] SNWA and LVVWD Opening Brief at 36.

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

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

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[47] LCWD and Vidler Answering Brief to LVVWD, SNWA and MVIC at 13 n.7.

[48] *See* Permit 1611, Certificate 1199, available at http://images.water.nv.gov/images/Book_Records/01000/1611.pdf (last visited January 10, 2022).

[49] *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 correct in part, a change application cannot increase the amount of water appropriated under the base right. LCWD and Vidler Answering Brief to LVVWD, SNWA and MVIC 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.

[50] LCWD and Vidler Answering Brief to LVVWD, SNWA and MVIC at 17.

[51] *Id*. at 13.

[52] *Id*. at 13.

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

CSI is similarly perplexed by the State Engineer's conflicts analysis. CSI agrees that an accurate estimate of a minimum volume required to meet decreed water rights is complex and "very difficult."[55] CSI agrees the State Engineer's calculations are erroneous and "must be vacated."[56] CSI's argument demonstrates why a substantially more detailed analysis is required before a proper conflict conclusion can be made, and why the State Engineer's use of consumptive use to quantify Muddy River rights was improper. That analysis is incorrect, cannot be verified, and cannot stand.

2. <u>The Muddy River is fully appropriated, and any capture is a conflict with senior decreed rights.</u>

For over one hundred years, the Muddy River has been decreed as fully appropriated and consumed by vested rights.[57] The State Engineer cannot disobey this decree, and has, until now, protected the Muddy River as a fully appropriated water

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[53] LCWD and Vidler Answering Brief to LVVWD, SNWA and MVIC at 14.
[54] *Id*. at 14-19.
[55] CSI Answering Brief at 13.
[56] *Id*. at 21.
[57] 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.

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

CSI, LCWD and Vidler argue that a consumptive use analysis is proper because the upstream users of the Muddy River must allow water to return to the Muddy River to satisfy downstream users.[59] What these parties ignore is that the Muddy River Decree fully appropriated the *consumption and exhaustion* of all waters of the river.[60] Nevada law often recognizes, as it does here, that the most downstream user on a water system has the right to fully consume its water right when no one relies on its return flows,[61] and that fully consuming Muddy River water for ICS Credits is a beneficial use.[62] Specific laws apply to the Muddy River, namely that consumptive use concepts "[d]o not apply to any decreed, certified or permitted right to appropriate water which originates in the Virgin River or the Muddy River."[63] Additionally, SNWA is the most

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[58] SE ROA 662 n. 12 (Order 1169 recognized the Muddy River and its headwaters as fully appropriated); SE ROA 751 (in Ruling 6254 "the State Engineer [found] the Muddy River and the Muddy River springs, the discharge location of the bulk of the region's 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").

[59] CSI Answering Brief at 10-19.

[60] SE ROA 33792-93 (decreed rights "consume and exhaust *all of the available flow* of the said Muddy River) (emphasis added).

[61] 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).

[62] NRS 533.030(2)(b).

[63] NRS 533.3703.

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

3. ICS certification demonstrates error in State Engineer's *no conflict* finding.

The State Engineer's use of consumptive use to limit the duty of decreed Muddy River water rights is inconsistent with his approval of SNWA's ICS Certification Report.[64] The novel consumptive use approach is also inconsistent with the BOR's approval of the ICS Certification Report.[65] Every year, SNWA submits a report to the State Engineer using the full duty of its Muddy River water rights to create ICS Credits.[66] In approving the ICS Certification Report, the State Engineer has found that the report "demonstrates that the amount of Tributary Conservation ICS created by the Authority and conveyed to Lake Mead are consistent with Nevada Water Law."[67] This certification recognizes the full duty of the water rights. The State Engineer provides no explanation for his arbitrary divergence in Order 1309 from his recognition in approving the ICS Certification Report that consumptive use does not limit Muddy River water rights under Nevada law.

4. SNWA and LVVWD's ICS depletion analysis proves LWRFS groundwater pumping conflicts with Muddy River water rights.

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

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[64] SE ROA 44046-44071, 44107-44110.
[65] SE ROA 44046-44074.
[66] *See e.g.,* SE ROA 8928-9198.
[67] SE ROA 46111.

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

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

SNWA and LVVWD compared the pre-development flow of the Muddy River with the current flow[72] measured at the Moapa gage to determine how much water groundwater pumping captures from the river.[73] Then, using the current flow as a percentage of baseline flow, SNWA and LVVWD were able to determine how many ICS Credits would have been created, using their MVIC shares, if the river was flowing

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[68] SE ROA 53400 at 1049:12-14.
[69] SE ROA 42005-10.
[70] SE ROA 41962.
[71] SE ROA 42008.
[72] The natural-flow record was created by adding annual surface water diversions to the flood-adjusted flow record of the Moapa gage.
[73] SE ROA 42009.

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

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

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

a. <u>Estimate of Muddy River pre-development flows</u>

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

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[74] SE ROA 42009.
[75] SE ROA 42009.
[76] SE ROA 7-9, 56-58; SE ROA 740-43.
[77] SE ROA 662 (36,000 afa); SE ROA 736 (37,000 afa); SE ROA 41962.
[78] SE ROA 41962.
[79] SE ROA 13, 14, 16, 21, 23, 25-26, 27, 29-30, 32, 34, 37. Note, while many parties argue whether the recovery is influenced by climate or pumping, all agree recovery is not yet complete.
[80] 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.*'").

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

LCWD and Vidler cynically question SNWA's data without providing any feasible alternative for how pre-development flows should be estimated. SNWA used the best data available to determine pre-development flow and the impact of increased groundwater pumping on SNWA's ICS Credits. In fact, the pre-development flow estimate used by SNWA is less than some other calculations of pre-development flow.[84]

b. Calculation of ICS credits and depletions

LCWD and Vidler further argue that SNWA's "impairment" calculation assumes it will receive full flow of the Muddy River each year.[85] LCWD and Vidler base this argument on their claim that SNWA assumed the flow of the river will be the same every year.[86] This is false. SNWA's calculations of the impact of streamflow depletions on its ICS Credits were based on the annual flow of the Muddy River.[87] This was not a hypothetical number, as LCWD and Vidler suggest, but was derived from the annual

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[81] LCWD and Vidler Answering Brief to LVVWD, SNWA and MVIC at 21.
[82] SE ROA 41962.
[83] SE ROA 41962.
[84] SE ROA 662 (36,000 afa); SE ROA 736 (37,000 afa); SE ROA 41962.
[85] LCWD and Vidler Answering Brief to LVVWD, SNWA and MVIC at 25.
[86] *Id.* at 26.
[87] SE ROA 42009.

flood-adjusted flow records at the Moapa gage.[88] Therefore, SNWA made no assumption that the flow of the Muddy River would be the same every year when calculating the impact of groundwater pumping on its ICS Credits.

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

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

c. <u>SNWA shares in losses of Muddy River flow.</u>

LCWD and Vidler also argue that SNWA does not share in Muddy River losses because they receive the same volume of water each year for the purposes of creating its

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[88] SE ROA 42008.

[89] LCWD and Vidler Answering Brief to LVVWD, SNWA and MVIC at 26.

[90] *Id*. at 27 (LCWD and Vidler admit "MVIC shareholders do not receive the full volume 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.").

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

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

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

LCWD and Vidler argue that SNWA and LVVWD created fictitious harm by using the Moapa gage to calculate the impact of Muddy River flow reduction on SNWA's ICS Credits.[92] This, too, is false. SNWA used the Moapa gage because the Moapa gage is the same gage used to calculate the baseline flow of the Muddy River, and thus properly shows the impacts from pumping to that baseflow.[93] It would be illogical and misleading to compare the pre-development flow, which was measured at the Moapa gage, to the modern flow of the river measured at a different gage. Consistency required that the same gage that measured pre-development flow be used to measure modern river flow in the depletion analysis. Additionally, Moapa gage evidence is more compelling because the gage has a longer historical record of flow. While SNWA does use the Glendale gage for its ICS Credit calculation, it would be

[91] SE ROA 8939; SE ROA 8685.
[92] LCWD and Vidler Answering Brief to LVVWD, SNWA and MVIC at 27-28.
[93] SE ROA 41962.

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

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

e. <u>Climate conditions are not the cause of Muddy River depletions.</u>

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

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[94] For example, in 2017, the Moapa gage was used to calculate a flow of 30,331 afa. For 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.
[95] LCWD and Vidler Answering Brief to LVVWD, SNWA and MVIC at 21.
[96] SE ROA 41976.
[97] SE ROA 41976.

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

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

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

Since 2009, SNWA has leased this 3,000 afa from MVIC and subleased a portion of the rights to NV Energy.[101] LCWD and Vidler argue that the total number of MVIC shares should have been reduced when this water was moved for use in the Upper Muddy

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[98] LCWD and Vidler Answering Brief to LVVWD, SNWA and MVIC at 22-23.
[99] *Id*. at 24.
[100] SE ROA 8962.
[101] SE ROA 8962.

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

II. The State Engineer's Consideration Of Moapa Dace And The Endangered Species Act Was Sound.

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

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

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[102] LCWD and Vidler Answering Brief to LVVWD, SNWA and MVIC at 24.

[103] SNWA and LVVWD join in the arguments of the State Engineer and CBD on these points.

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

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

LCWD and Vidler also make the flawed argument that the State Engineer is powerless to regulate water rights after he issues a permit. This argument fails for two reasons. First, the State Engineer can limit groundwater permits based on his enforcement of permit terms. Second, the public interest is a factor the State Engineer

[104] CSI Answering Brief at 7.
[105] CSI Answering Brief at 9.
[106] SE ROA 57.

must consider before he issues a water right permit, *and after*.[107] The State Engineer must "regulate groundwater *in the interest of public welfare*, which includes curtailing groundwater rights during water supply shortages," and he has "an *affirmative duty*" to "maintain public trust resources."[108] Therefore, LCWD and Vidler's claims that the State Engineer is powerless to protect an endangered species are incorrect.

CONCLUSION

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

[107] *See* NRS 534.120 (State Engineer can make orders *deemed essential for the welfare of the area*); NRS 533.367 (permittees must "ensure that wildlife which customarily uses the water will have access to it").

[108] *Mineral County v. Lyon County*, 136 Nev. 503, 515, 473 P.3d 418, 427 (2020).

AFFIRMATION: The undersigned does hereby affirm that the preceding document and/or attachments do not contain the social security number of any person.

Dated this 11th day of January 2022.

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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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DATED this 11th day of January 2022.

/s/ Thomas Duensing
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IN THE SUPREME COURT OF THE STATE OF NEVADA

LINCOLN COUNTY WATER DISTRICT, A POLITICAL SUBDIVISION OF THE STATE OF NEVADA; AND VIDLER WATER COMPANY, INC., A NEVADA CORPORATION,
Appellants,
vs.
TIM WILSON, P.E., NEVADA STATE ENGINEER DIVISION OF WATER RESOURCES, DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES; SOUTHERN NEVADA WATER AUTHORITY; LAS VEGAS VALLEY WATER DISTRICT; COYOTE SPRINGS INVESTMENT, LLC; APEX HOLDING COMPANY, LLC; DRY LAKE WATER, LLC; MUDDY VALLEY IRRIGATION COMPANY; GEORGIA-PACIFIC GYPSUM, LLC; REPUBLIC ENVIRONMENTAL TECHNOLOGIES, INC.; NEVADA POWER COMPANY, D/B/A NV ENERGY; AND MOAPA VALLEY WATER DISTRICT,
Respondents.

No. 81792

FILED

APR 15 2021

ELIZABETH A. BROWN
CLERK OF SUPREME COURT
BY S. Young
DEPUTY CLERK

ORDER OF AFFIRMANCE

This is an appeal from a district court order granting a motion to change venue. Seventh Judicial District Court, Lincoln County; Gary Fairman, Judge.

The respondent State Engineer previously granted appellants, Lincoln County Water District (LCWD) and Vidler Water Company (Vidler), jointly held rights to appropriate 1,000-acre feet of water annually from Kane Springs Valley Hydrographic Basin ("Kane Springs"). Kane Springs

is located in Lincoln County, but the State Engineer has deemed it to be hydrographically connected to certain tributaries to the Muddy River, which is located in Clark County. The Muddy River is the habitat of the critically endangered Moapa dace and is part of the Lower White River Flow Systems (LWRFS).

After granting rights to LCWD and Vidler, the State Engineer later issued order 1169, which required participants to perform an aquifer-pumping test to determine the impact of additional LWRFS appropriation on the Muddy River. Despite Kane Springs' unique ties to these bodies of water, the State Engineer excluded it from participation in the test, determining that there was "not substantial evidence that the appropriation of a limited quantity of water in [Kane Springs] will have any measurable impact on [the headwaters that feed Muddy River]." However, the results of the pumping test actually revealed that Kane Springs had a similar water level decline as the LWRFS as a whole. For this, and other reasons related to the chemical makeup of Kane Springs and LWRFS waters, certain participants in the aquifer test and their expert witnesses urged the State Engineer to include and manage Kane Springs as part of the LWRFS. The State Engineer then issued order 1309, which found that "a number of groundwater basins in Lincoln and Clark counties that were previously managed separately," including Kane Springs, "are inextricably connected [to the LWRFS] such that they must be managed conjunctively to avoid detrimental effects to senior water rights on the Muddy River and the habitat of the Moapa dace."

LCWD and Vidler filed a petition for judicial review of order 1309 in the Seventh Judicial District Court in Lincoln County, challenging the State Engineer's inclusion of Kane Springs in LWRFS's management.

Nine other petitions for judicial review of order 1309 were filed by parties affected thereby, each based on different grounds, but all in the Eighth Judicial District Court in Clark County. Accordingly, the State Engineer, the Las Vegas Valley Water District (LVVWD), and the Southern Nevada Water Authority (SNWA) moved the Lincoln County district court to transfer venue for the hearing on LCWD's and Vidler's lone Lincoln County petition to Clark County as well. The Lincoln County district court so ordered, and this appeal followed. The matter comes before this court on the briefs filed in district court, to facilitate expeditious review. See NRAP 3A(b)(6)(B).

NRS 533.450(1) states that a petition for judicial review of a State Engineer's order affecting water rights "must be initiated in the proper court of the county in which the matters affected or a portion thereof are situated" (the "general venue clause"). It is well established that the general venue clause contemplates multiple potential forums for a petition for judicial review: "If 'a portion' of the 'matters affected' being situated in the forum county satisfies the statute, so too, should the remainder of the 'matters affected' qualify the counties in which they are situated." *In re Nev. State Eng'r Ruling No. 5823*, 128 Nev. 232, 420, 277 P.3d 449, 454 (2012). Accordingly, under the general venue clause, this petition could have been filed in either Lincoln or Clark County in the first instance—LCWD and Vidler's affected water rights are located in Lincoln County; but, likewise central to LCWD and Vidler's petition is the State Engineer's determination that Kane Springs is hydrographically connected with the LWRFS, a multi-basin system requiring joint management and conservation, spanning Clark County, and this order by the State Engineer is presumed correct until the conclusion of the judicial review process. *See*

NRS 533.450(5) (stating that a State Engineer decision may only be stayed by certain actions not taken here) and (10) (stating that "[t]he decision of the State Engineer is prima facie correct, and the burden of proof is upon the party attacking the same").

The parties press different interpretations of an exception to the general venue clause that provides that "on stream systems where a decree of court has been entered, the action must be initiated in the court that entered the decree" (the "decree court exception"). NRS 533.450(1); *see also In re Nev. State Eng'r Ruling No. 5823*, 128 Nev. at 240, 277 P.3d at 454 (reading the clause as creating an exception changing the outcome that "the decree court and other non-decree courts that *otherwise, without this clause*, could potentially hear the appeal") (emphasis added). Muddy River, which Order 1309 also includes as part of the LWRFS, is subject to a 1920 decree entered by the district court of the then Tenth Judicial District, encompassing both Lincoln and Clark counties. But the question of which court "entered the decree" over Muddy River was neither well briefed in the district court nor easily answered: the Tenth Judicial Circuit subsequently became what is now the Eighth Judicial District, and in 1945 Lincoln County was severed from the Eighth Judicial District's territory and combined with the Seventh's, leaving only Clark County in the Eighth. *See* Eighth Judicial District Court History (available at www.clarkcountycourts.us/general/court-history/#event-_1905) (last visited March 30, 2021). The parties have not offered legal authority or cogent argument that clarifies the effect of this historical reorganization on the application of the decree court exception here—each summarily stating that the other's position is unfounded, without analysis or support. *See Edwards v. Emperor's Garden Rest.*, 122 Nev. 317, 330, n. 38, 130 P.3d 1280, 1288, n. 38, (2006) (noting

that an argument may be deemed waived where not supported by relevant legal authority). Inadequate briefing aside, the stronger argument does seem to be that Clark County is the decree court within the meaning of the decree court exception, given that the Muddy Water decree issued from "the Tenth Judicial Court of the State of Nevada, *in and for the County of Clark*" and purported to determine the "relative rights in and to the waters of the Muddy River and its tributaries *in Clark County*." (Emphases added). But this is not dispositive here anyway—LCWD and Vidler do not argue that Lincoln County was the *sole* proper venue under the decree court exception. *Powell v. Liberty Mut. Fire Ins. Co.*, 127 Nev. 156, 161, n.3, 252 P.3d 668, 672, n. 3 (2011) (noting that "[i]ssues not raised in an appellant's opening brief are deemed waived"). Thus, at very best (for LCWD and Vidler), both Clark and Lincoln counties would qualify as proper forums under the decree court exception, which leads to the same conclusion as under the general venue clause.

The water statutes have no specific rules governing transfer of venue. But, because "this court has long drawn on procedures and law applicable to civil actions generally in water law cases, to the extent consistent with the governing statutes," the general rules governing transfer of venue found in NRS chapter 13 apply. *In re Nev. State Eng'r Ruling No. 5823*, 128 Nev. at 245, 277 P.3d at 457 (stating that "the district court may, in deciding the motions to change venue that remain, draw on NRS Chapter 13 to the extent appropriate"). To the extent that the decree court exception has application here, and assuming Clark County is the decree court with sole jurisdiction, transfer would therefore have been proper under NRS 13.050(2)(a) (allowing transfer of venue where the initial venue is improper). Setting aside these interesting but undeveloped issues,

the Lincoln County district court decided to transfer venue under NRS 13.050(2)(c), which allows such action where "the convenience of the witnesses and the ends of justice would be promoted by the change." A district court's determination to transfer is subject to a highly deferential standard of review and will only be reversed for a manifest abuse of discretion. *Nat'l Collegiate Athletic Ass'n v. Tarkanian*, 113 Nev. 610, 613, 939 P.2d 1049, 1051 (1997); *Fabbi v. First Nat. Bank of Nev.*, 62 Nev. 405, 413, 153 P.2d 122, 125 (1944) (noting that an application for a change of venue is addressed to the "sound discretion of the court, and the exercise thereof, based on reason, and not arbitrary, will not be disturbed unless manifestly abused").

With regard to the propriety of the transfer under NRS 13.050(2)(c), the parties extensively discuss the "first-to-file" doctrine, with respondents insisting that LCWD's and Vidler's petition could only have been properly filed in Clark County because three other petitions for judicial review of order 1309 had been filed there, and appellants seeming to suggest that the "first-to-file" doctrine only applies in patent cases. We need not look so far in either direction; in this case, the State Engineer has determined that Kane Springs is part of the LWRFS, which must be collectively managed and allocated with an eye toward protecting the critically endangered Moapa dace, and, as noted, this order by the State Engineer is, for present purposes, presumed correct. *See* NRS 533.450(9) and (10).

Whether or not the district court ultimately decides that the State Engineer properly included Kane Springs within the boundaries of the LWRFS, resolution of the appellants' petition presumably impacts the rights of other appropriators in the LWRFS because the scope of each

LWRFS stakeholder's rights appears, on this record, interconnected with the others. And, because of each affected party's interdependent interests, maintenance of petitions for review of order 1309 in multiple venues would also unreasonably demand duplicative participation by those stakeholders in each. Moreover, because each petition involves the same lengthy administrative record, judicial efficiency weighs heavily in favor of having only one court familiarize itself therewith and one court issuing an order on the same. The proposition that multiple courts would consider the same evidence in slightly different contexts, where the outcomes necessarily intertwine is further unwarranted given the potential for inconsistent judgments. *See In re Nev. State Eng'r Ruling No. 5823*, 128 Nev. 232, 224, 277 P.3d 449, 457 (noting that the court "share[d] the Ninth Circuit's solicitude for the general principle of water law that a single court should have exclusive jurisdiction over an interrelated system of water rights" (internal quotations omitted)). This risk is only amplified by the fact that appellants' petition for judicial review asks not only for limited relief related to their rights in Kane Springs, but further that the reviewing court *vacate order 1309 as a whole,* which could run entirely contrary to a Clark County decision.

Finally, appellants complain that the respondents have not met their burden under *Mountain View Rec. v. Imperial Commercial*, 129 Nev. 413, 423, 305 P.3d 881, 887 (2013) to show that the action is maintainable in Clark County. Specifically, appellants appear to allege that the docket in Clark County is backlogged such that the matter will receive closer attention and speedier resolution in Lincoln County. Even assuming such a backlog—which appellants have not provided any record evidence supporting—given the interconnected nature of the LWRFS, the need for a

centralized management program, and Kane Springs's inclusion therein, appellants' petition could not be entirely resolved without resolution of the nine other petitions that are currently on Clark County's docket. The timing of appellants' final resolution is therefore necessarily tied to the other petitions making their way through Clark County's docket—making the relative ease of navigating Lincoln County's docket being entirely beside the point.

In sum, given that this petition seeks review of the same order by the State Engineer as the other nine filed in Clark County—though perhaps on slightly different grounds—we simply cannot say the district court's decision to transfer this lone Lincoln County petition to facilitate consolidation is a mistake of reversible magnitude. We therefore,

ORDER the judgment of the district court AFFIRMED.

_____, J.
Cadish

_____, J.
Pickering

_____, J.
Herndon

cc: Hon. Gary Fairman, District Judge
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