APPENDIX 10

In The Matter Of:

Division of Water Resources

Applications 53987 through 53992, etc.

Public Hearing - Pages 5962-6217

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drawdown levels on the order of 60 to 80 feet, and as you can see, they're starting to overlap many of the water rights locations associated with the ranch.

Next graphic, please.

This is CPB Exhibit 11, Figure 11. This corresponds to the year 2082, which is 40 years after the well construction. And now, we're starting to see green and light yellow areas, which correspond to drawdown values on the order of 100 feet.

Next graphic, please.

This is CPB Exhibit 11, Figure 12, and this is 2117. This is 75 years after the completion of the construction of the wells. And at this point in time, we're we've got the bulk of the aggregate cone of depression is in the yellow to red range, which corresponds to drawdown levels on the order of 120 to 150 feet.

And finally, we have -- next graphic, please.

This is CPB Exhibit 11, Figure 13. And this represents 200 years after completion of the well construction. This was the maximum period of time simulated in the model. Again, we see that -- that you -- if you look at the progression of these maps, you'll note that it -- it doesn't reach a state of equilibrium. The longer the wells are pumped, the larger and deeper the aggregate cone of depression.

At this point in time, we have -- the magenta-colored level is covering most of the aggregate cone of depression. And this corresponds to drawdowns as high as 200 feet.

Some other things to notice in the northern -- northeastern corner of this aggregate cone of depression, this corresponds to the Cleve Creek alluvial fan, which Allen just described.

And as you can see, that -- that alluvial fan is substantially dewatered at this point in time. And this, of course, as Allen described, is a source of the water to the springs that are on the fringe of the alluvial fan here. And I believe that would have a substantial impact to the springs on this alluvial fan for the reasons that Allen described.

Q. Could you clarify what part of the map you're talking about?

A. That was the northwest corner of the aggregate cone of depression.

Q. Thank you.

A. We -- we did not systematically evaluate substance. However, it's our belief that once you get drawdown levels on the order of 200 feet, then there's a real risk for subsidence, and of course the -- the main problem with subsidence is the permanent loss of storage to the aquifer. And that's something that I believe would be a

high-risk area.

Also, one other thing to note is, as I look at the results up in the northeast corner -- excuse me, northwest corner of the map where the alluvial fan is, the alluvial fan goes all the way out to the edge of where those springs are located. But I was curious why the drawdown contours dissipated at some distance away from that when I would think the areas -- the region of drawdown would go right up to the edge of the alluvial fan. And in looking at the input to the SNWA ground water model, we discovered a band of model cells in the middle of the alluvial fan that had hydraulic conductivity values which were lower than what was assigned to the cells in the middle of the valley.

And this seems opposite from what one would normally expect, and I believe that inconsistency or anomaly in the hydraulic conductivity values caused that drawdown to be dissipated more rapidly than it would. And the bottom line, I believe, is this map is somewhat unconservative in that location, and I believe that the -- this region of the aggregate cone of depression would extend out even more into the fringe of the alluvial fan, resulting in even higher drawdown guides than predicted by the model.

Q. Dr. Jones, are you aware of any physical feature in that area that would account for the anomaly you described?

A. No, I'm not aware of that. Normally, as -- in

situations like this, the hydraulic conductivity is maximum at the edge of the mountain block, and as you go towards the center of the valley, the hydraulic conductivity decreases.

Q. Is it possible that anomaly is just an error?

A. Yes, I believe it is.

Q. Thank you.

A. It's an artifact of how the hydraulic conductivity values are formulated for the model.

Q. Okay.

A. Okay. The next thing we did was we took the SNWA model and we removed the four -- excuse me. This is -- we're now looking at CPB Exhibit 11, Figure 18. And we took the four wells which were denied in 2007, shown in red on this map, and we removed them from the model input and reran the model to determine, you know, what the drawdown levels would be without these four wells engaged.

And this is the resulting aggregate cone of depression after 200 years. And the fourth, as we would expect, we have less drawdown in the northern end of the valley -- or excuse me, the northern portion of the aggregate cone of depression. But there's still substantial levels of drawdown on the order of 120 to 160 feet resulting from the remaining wells.

And then finally, if you go to the last map, this is CPB Exhibit 11, Figure 19.

The ranch is protesting 12 wells. We removed all 12 wells from the model and ran the simulation, and in this case, there's very little impact to the water rights associated with the ranch. The blue -- the edge of the blue fringe shown in this map represents the -- one foot of drawdown, and so there's very small levels of drawdown using this scenario.

Okay. The next thing we did, in addition to the drawdown maps, we used the output from the SNWA model to generate time series plots for each of the water rights locations. And we're looking at CPB Exhibit 11, Figure 21. This represents the simulated water levels versus time for Big Reservoir Springs No. 7.

We're only going to show you one of these time series plots. We did this for each of the water rights locations, and these plots are all included in the Appendix to our report.

But what this shows is -- the blue line at the top of the time series plot represents the baseline head from the baseline simulation. So that's the -- what the water level would be if there were no pumping. And the red line represents the model simulated head at this location.

And you can see beginning in about 2028, the wells turn on. There's a little bit of an irregularity in the early years due to the staged introduction of the wells, and

then from then on, you get a steady, almost linear decline in head. And as you can see, the drawdown levels are quite substantial over this period of time.

The difference between the blue and the red lines, of course, is the drawdown.

We also have tabulated the maximum drawdown values in the next figure. This is CPB Exhibit 11, Table 7, and these represent -- this table represents the maximum predicted drawdown of wells and springs located in the alluvial fan or on the valley floor. This does not include the mountain block springs.

And this is at year 2242, so this is 200 years after pumping, and the column labeled "full" and highlighted in magenta, I would guess, represents those simulated values. And as you can see, at least half of them are over a hundred feet. Many of them are over a 150 feet. Some approach 185 feet of drawdown.

With the minus four simulation shown --

Q. Excuse me, Dr. Jones, in that first column, that's demonstrating what would happen if all 12 wells were pumping?

A. Yes, yes. This is with all 12 wells pumping.

The middle column is the minus four simulation with the four wells denied in 2007 removed, and the northern end of the -- or the water rights locations corresponding to

the northern part of Cleveland Ranch, there's substantially less impact, but there's still water or drawdown levels that -- between 50 and a hundred feet. Some exceed 100 feet even with this condition.

And then the final column shows with the minus 12 simulation with all 12 wells removed, there's negligible drawdown at each of these locations.

So that concludes our analysis of the drawdown.

Our report has been criticized by the SNWA because we used the model to analyze impact at site-specific locations. However, the SNWA used the model in the same fashion, as documented in Exhibit 337. The only difference is the manner in which the site-specific values were reported. They reported values using the 50-foot threshold criteria, and we showed the actual model results, the actual drawdown values in more detail.

I agree with the SNWA that using a regional model to look at site-specific values must be used with caution.

If we look at each one of these site-specific results in isolation, there's a tremendous amount of uncertainty. However, when you look at the site-specific results collectively you notice a remarkably consistent pattern from which we can derive some conclusions.

First of all, the time series plots consistently show a steady downward trend in the water levels over time,

and none of these plots indicate the model reaches an equilibrium condition where that drawdown equilibrates after a certain period of time. That's significant. The longer you pump, the more drawdown that will occur at these locations.

Second, the drawdown values simulated by the model are large and relatively uniform, especially at the ranch and south of the ranch. And this is consistent with what we see in the drawdown maps.

So in summary, I believe the SNWA model shows that the project would result in substantial drawdown of the water rights locations corresponding to the Cleveland Ranch, and that drawdown is likely to have severe impact to wells, springs and sub-irrigated lands associated with the ranch.

Q. Did you analyze what the impact on the springs would be?

A. Yes, we did. We looked at the impact on the springs specifically, and the springs are simulated using the drain package in model flow, and the mechanics of the drain package are fairly simple.

Each spring is assigned an elevation, which typically would correspond to the ground surface elevation. And there's also a scaling factor assigned to each spring called conductance, and if the simulated head at the location of the spring is above the spring elevation, then water discharges to the spring, and the quantity of discharge is the

simulated water table elevation minus the spring elevation multiplied by the conductance term.

And if the simulated head falls below the spring elevation, then the spring goes dry and the discharge goes to zero.

Most of the springs in Spring Valley were not directly included in the SNWA model; therefore, we can't use the model results to look at this simulated discharge at the springs in general because that discharge is a function of the conductance term, which must be carefully calibrated.

However, if we want to look at the question of whether or not the springs will go dry, the model results can be useful in that regard, because whether or not the spring goes dry is purely a function of the relationship between the simulated water table and the spring elevation. If the water table drops below the spring elevation, the spring would go dry, regardless of what conductance value you assign during the calibration process.

Q. Dr. Jones, let me interrupt you for just a second because a prediction had been made earlier in these proceedings that your report starts out with the some of the flowing springs dry.

A. Yes, I will get to that in just a second.

But first of all, we're looking at Exhibit -- CPB Exhibit 11, Figure 26. And this is where Big Reservoir

Springs No. 5 -- again, we did this for each of the locations, but we're just showing one location as an example. So the blue line, again, represents the baseline head values. The green dashed line represents the ground surface elevation at this spring, and the red line represents the model simulated head from the predicted model.

So if you look at the intersection between the red line and the green line, at that point, the simulated head drops below the spring elevation and therefore, the model would indicate that the spring goes dry at that point, which in this case is approximately 2041.

We did this analysis for all of the springs in Spring Valley, and virtually the model would indicate that virtually all of the springs go dry just after a few years similar to what we see in this plot.

Now, Paul, as you mentioned, one of the criticisms of our study is that most of these springs start out dry. That is, at the initial stage of the predicted model, the model simulated head is a few feet below the spring elevation. So the model would indicate there's no discharge.

I looked into this, and if you look at the difference between the model simulated head and the spring elevation for all of the valley floor springs, the model simulated head is below the ground surface by a median value of approximately 12 feet. And I also looked at SNWA

the alluvial fan. In other words, there's no wells up there to capture groundwater.

And my view of how the system works, there's a lot of groundwater that's recharging those -- those northerly alluvial fans that these wells -- the cones of depressions unlikely could actually reach up there and get that water. And Norm's analysis of the SNWA model demonstrates that.

So the first thing that I noticed is this. This does not look like an ET salvage project to me. Way too few wells. And then when I looked at the -- at the -- at the nature of the wells, the depth of the -- of the -- of the expiration wells they put in, these wells are a thousand feet deep, seventeen hundred feet deep. I looked at the screen interval of these things 8-, 900, a thousand feet screen interval.

I mean, ET salvage, you want to be -- especially in light of the age of the shallow system, you want to be having a lot of shallow wells, not deep wells.

So my -- my feeling from this is this thing is really starting to look like a groundwater mining project with some ET salvage but not truly a perennial yield capture project.

Q. Thank you.

Dr. Jones.

(BY DR. JONES)

A. Sure.

The next -- next graphic, please.

This is CPB Exhibit 11, Figure 8. And this basically reiterates what Allen just described. He and I developed this map together and basically by inspecting the aerial photo you can see the areas where there's discharge to evapotranspiration and we marked those in red.

And the yellow rectangles shown here are the 12 SNWA wells which are under protest by the ranch and the green are the other wells in the southern end of the valley.

As Allen mentioned, you can see the bulk of the 12 wells in question are concentrated around the center of the valley.

And so after Allen's analysis of ET salvage and the distribution of the wells, I undertook an evaluation using the model results to determine, you know, what does the model tell us about this.

And if you go to the next graphic, please. One more. Okay, this is CPB Exhibit 11, Figure 40.

And the SNWA model uses the drain package to simulate evapotranspiration in Spring Valley. And earlier in this presentation, I described how the drain package works.

When applied to evapotranspiration, the elevation that's assigned to the -- the drain cells corresponds to what we call the extinction depth in the evapotranspiration zone.

And this is the -- the lower limit of the phreatophytes. And I believe for many of these cells that was set to around 33 feet below the ground surface.

Once the water table goes above that -- if the water table is above the extinction depth, then water is discharged from the aquifer to the surface through the drain package. And once it drops below that, this -- the losses to ET are eliminated and that water is then available for pumping by the SNWA wells.

This map shows two zones basically. One -- one inside the other. The outer yellow zone which really includes the -- the green zone represents the set of cells which were marked as ET cells in the drain package and the SNWA model.

However, for some of those cells at the beginning of the simulation in 2006, the models simulated water table elevation was below the extinction depth. And therefore, I -- I've identified those as inactive drainage cells.

The remaining cells which are shown in green are the cells which were -- which are active at the beginning of the simulation. They're actively discharging water to evapotranspiration because the model simulated is above the extinction depth.

Now, if you compare the -- the green zone shown here to the red zones we outlined in the earlier figure, you'll show there's a very close agreement indicating that the

model is fairly well calibrated in terms of the distribution of active ET zones.

Now, if you go to the next graphic, this is CPB Exhibit 11, Figure 41.

And now, in this case, the cells which were formally shown in green are now displayed using a color map that varies between red and -- on the low side, and blue on the high side.

What we're displaying here is a -- is a parameter which we call the fraction of uncaptured evapotranspiration. And this is -- this map corresponds to 2082 which is 40 years after the completion of the SNWA wells.

And what this number represents is if you take the -- the amount of discharge for each individual cell at this point in time, the discharge to evapotranspiration, and then you -- or excuse me, if you take the original evapotranspiration, subtract the existing evapotranspiration and divided by the original discharge evapotranspiration, you get this fraction of uncaptured ET.

Let me explain that a little more simply.

Q. Please.

A. The -- the red cells are the locations where the -- the discharged ET has been completely captured. Meaning at this point in time, the water table is below the extinction depth and there is zero discharge to ET.

The blue cells represent zones where the initial discharge to ET is pretty much unchanged. It's the same as it was at the beginning of the simulation.

So and -- in those -- in the blue zones, there is still ground water actively discharging through evapotranspiration.

And in the red zones, there has been complete ET capture and the other colors represent some fraction in between.

And let's go to the next graphic.

This is CPB Exhibit 11, Figure 43.

Now, in this case, we're looking at 2242. So this is a full 200 years after the wells have been pumping. And you'll see at this point in time at the center and southern parts of the valley, we have complete ET capture. But in the northern part of the valley, there's still substantial amounts of evapotranspiration which remains uncaptured.

That means that -- that the full amount of water extracted by the SNWA's -- SNWA wells has to come from the center and southern parts of the valley. And this creates a water imbalance and results in groundwater mining because that evapotranspiration of the northern end of the valley was part of the ET discharge that's used to calculate the perennial yield.

You should also note that the -- the Cleveland Ranch is located around the center of the map here by the Cleveland Creek alluvial fan. And the ET has been completely captured at that point which, of course, would lead to a loss of the sub irrigated lands on the ranch. And I believe as we've explained earlier, would also lead to a loss of flow to the springs on the ranch.

Now, in addition to analyzing this issue spatially, we also performed a -- a flow budget analysis. A flow budget analysis is a systematic accounting for each of the major sources of water in the groundwater flow system and in Spring Valley.

And if we go to the next graphic, please.

This is a -- a graph showing the -- the discharge the wells, the SNWA wells from pumping. And the values shown on the plot are negative because the utility that we used to do this, now when you remove the quantities that are being removed from the aquifer are designated with a negative value.

And so in the early years here you see a stair step shape of the graph indicates the stage construction of the wells. And then after 2042, you get the -- the constant pumping rate of 91,000 acre-feet per year.

Now, that's -- that's a point of reference for the next graphs.

Go to the next chart, please.

APPENDIX 9

In The Matter Of:

Division of Water Resources

Applications 53987 through 53992, etc

Public Hearing - Pages 2598-2828

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STATE OF NEVADA

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

DIVISION OF WATER RESOURCES

BEFORE SUSAN JOSEPH-TAYLOR, HEARING OFFICER

IN THE MATTER OF APPLICATIONS 53987 THROUGH 53992, INCLUSIVE, AND 54003 THROUGH 54021, INCLUSIVE, FILED TO APPROPRIATE THE UNDERGROUND WATERS OF SPRING VALLEY, CAVE VALLEY, DELAMAR VALLEY AND DRY LAKE VALLEY HYDROGRAPHIC BASINS (180, 181 AND 184) LINCOLN COUNTY AND WHITE PINE COUNTY, NEVADA.

Volume 12
Pages 2598-2828

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TRANSCRIPT OF PROCEEDINGS

PUBLIC HEARING

TUESDAY, OCTOBER 11, 2011

Reported by: CAPITOL REPORTERS
BY: MICHEL LOOMIS, NV CCR #228
515 West Fourth Street, Suite B
Carson City, Nevada 89703

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PANEL MEMBERS:

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Section of the Division of Water Resources

TIM WILSON, Hearing Officer
JASON KING, State Engineer
KEVIN HICKENBOTTOM, Deputy State Engineer
RICK FELLING, Chief Hydrologist

For the Applicant:	Taggart & Taggart, Ltd. By: Paul G. Taggart, Esq. -and- Dana Walsh, Esq. Brownstein, Hyatt, Farber, Schreck BY: Steven O. Sims, Esq.
For Protestant (GBWN):	Simeon Herskovits, Esq. Greg James, Esq.
For Protestant Richard and Lesley Sears:	Richard Sears, Esq. (Not present)
For Protestant Long Now Foundation:	Steven Reich, Esq. & Laura Welcher, Esq. (Not present)
For Protestant Millard County & Juab County:	John Rhodes, Esq. Mark Ward, Esq. (Not present)
For Protestant Confederated Tribes of the Goshute Reservation, Duck Water Shoshone Tribe, Ely Shoshone Tribe:	Paul C. EchoHawk, Esq.
For EskDale Center:	Jerald Anderson, Esq. (Not present)

For Protestant Corporation of the Presiding Bishop of the Church of Jesus Christ of Latter-Day-Saints:	Kaempfer Crowell By: Severin Carlson
For Protestant Nye County:	George Benesch, Esq. (Not present)
For Protestant Henry Vogler:	(Not present)

I N D E X

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CARSON CITY, NEVADA, TUESDAY, OCTOBER 11, 2011, 8:30 A.M.
-oOo-

HEARING OFFICER JOSEPH-TAYLOR: Good morning. Let's be on the record. I will note for the record Mr. Anderson is not here. We were in Mr. Watrus's direct; correct, Mr. Taggart?

MR. TAGGART: That's correct.

HEARING OFFICER JOSEPH-TAYLOR: You want to continue, please.

MR. TAGGART: Yes. Before we begin, I want to mention that last week Mr. Felling asked for additional information about the Excel solver in the White River flow system. And we have collected that information and put it onto a CD that we have distributed to the protestants and the State Engineer. It's marked as Exhibit SNWA 452, and it's called the WRFS solver, additional documentation and related work products.

So we believe this has everything in it that Mr. Felling asked for, but if additional information is necessary, please let us know.

You'll find when you open it a read me file that will instruct what the different files are on this disk and how they fit together, so the GIS shape files are on there and -- and all that information is there -- is there on the disk.

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HEARING OFFICER JOSEPH-TAYLOR: GIS shave or shape?

MR. TAGGART: Shape.

HEARING OFFICER JOSEPH-TAYLOR: Thank you for getting that together, Ms. Drici, we appreciate this. And you wanted that marked as Exhibit 452?

MR. TAGGART: Yes. And we offer Exhibit 452 into evidence.

HEARING OFFICER JOSEPH-TAYLOR: Any objection? Hearing none, SNWA Exhibit 452 will be admitted.

(SNWA Exhibit 452 admitted into evidence.)

HEARING OFFICER JOSEPH-TAYLOR: Please proceed.

MR. TAGGART: Thank you.

FURTHER DIRECT EXAMINATION

BY MR. TAGGART:

Q. Good morning, Mr. Watrus.

A. Good morning, Mr. Taggart.

Q. And we also have Ms. Drici here with us this morning. Good morning.

WITNESS DRICI: Good morning.

MR. TAGGART: And, Ms. Drici, you're still under oath from your prior testimony; do you understand that?

WITNESS DRICI: Yes, I do.

BY MR. TAGGART:

Q. Okay. Yesterday we went through, Mr. Watrus, your analysis in your report and today we're going to finish up with that review. And yesterday we went through the analysis of existing water rights in Spring, Delamar, Dry and Cave Valleys. And where we left off was the environmental areas of interest. So that's where I'm going to start with my questions. And we'll start on page -- page C-6 of your report, which is Table C-4.

With this table please describe how the analysis you have discussed in your report is documented.

A. This table contains the environmental areas of interest and when -- it includes both the qualitative and quantitative analysis for those environmental areas of interest. And we see again the column headings are fairly standard, there's a site ID, a real name hydrographic area, site type, the geographic location of the site and then the model simulated ions created in 50 feet and denoted as to when they occur in the model simulations.

Q. Were 51 environmental areas in total analyzed?

A. They were.

Q. And based upon the quantitative analysis that you performed and discussed yesterday, did you determine that 14 of these areas would not be impacted?

A. It's 15, I believe.

Q. 15. Thank you.

And how -- then how many environmental areas were analyzed using the model?

A. 36.

Q. Of those 36, how many springs were located in an area with a simulated drawdown that exceeded 50 feet there?

A. There were three.

Q. And of those 36 that we started with that you used the model to analyze, were 13 spring flow sites?

A. Yes, there were 13 spring flow sites that were in the model that we could analyze the change of discharge for.

Q. How many spring flow rights were located in an area with a simulated spring flow reduction of greater than 15 percent?

A. There were three.

Q. Now let's go to your report, page 6-12, Table 6-4. Are these the six sites that you needed to do further analysis on?

A. They were.

Q. Please describe the sites that are described in this table.

A. This site, this table contains the three sites with the greater than 50 feet drawdown. Those are Swamp Cedar North, Unnamed Five Spring and Four-Wheel Drive Spring.

It also contains three additional sites where the drawdown did not exceed the 50 feet but did exceed the 15 percent reduction in the spring flow, those included South

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Millick Spring, Butterfield Spring and Flag Springs.
Q. I want to ask you about the sites in the Spring Valley. What are the monitoring activities in these locations?
A. Yes. The monitoring activities include as you've heard testimony already from Jim Prieur and Zane Marshall, these locations are either biologic or hydrologic monitoring locations already. Swamp Cedar North is a current biologic monitoring location. Unnamed Five, Four-Wheel Drive and South Millick Spring are both hydrologic and biologic monitoring locations at this time.
Q. And what is the value of monitoring at these locations?
A. The additional monitoring will help determine the sources of water at these areas or, for example, for the Swamp Cedar North, what factors are contributing to their existence at these locations.
Q. Will that monitoring also allow management decisions to be made if the -- if -- if monitoring indicates that's necessary?
A. Yes, it will. It will also allows us to continue to improve the model through time as we collect additional data.
Q. There's a number of sites here in White River Valley, two in particular. Just please describe these areas.

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A. The two areas that exceeded the 15 percent reduction in spring flow but not a 50-foot or greater drawdown were Butterfield Spring and Flag Springs. They're on the east side of White River Valley. It's important to remember with these two springs that the model was not calibrated to either of these springs, so there's a great uncertainty in the spring flows, however, obviously the results indicate a greater than 15 percent reduction, so --
Q. And are these sites monitored?
A. They are. Butterfield Spring is a current biologic monitoring location. Flag Spring is a current hydrologic and biologic location. You may also remember Jim Prieur discussed a well that will be installed kind of on the outflow of Shingle Pass towards these springs so that we can monitor any changes from Cave Valley that might move in that direction of these springs.
Q. What is the value of monitoring this location?
A. Once again, it's the collection of data to determine the source of the water, how impacts might progress to these springs and how they may be affected.
Q. Was additional analysis done on the potential effects of these environmental areas of interest?
A. It was. It's important to note that I've only identified the areas with the model in this case and then I provided the results to Mr. Marshall who will look at the

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environmental areas of interest from the environmental side of things.
Q. So was that analysis completed in your report?
A. No, it was not.
Q. And as you indicated, it was completed in Zane Marshall's report?
A. It is.
Q. And will he provide testimony regarding these specific effects analysis at these environmental locations?
A. He will.
Q. Now I want to ask you about some of the reports that have been prepared by the protestants. And the first questions I have involve Great Basin Water Network number 3, which is a report by Dr. Myers involving impacts of pumping underground water right application 54003, 54021.
Have you reviewed that document?
A. I have.
Q. And have you prepared a rebuttal report regarding that document?
A. I have.
Q. There's been a number of questions and statements and reports by the protestants, specifically Aquaveo, Dr. Myers and Dr. Bredehoeft that assert that SNWA's project will involve groundwater mining.
How would you define groundwater mining?

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A. I would deny groundwater mining as the pumping in excess of perennial yield or a continued excessive reduction in groundwater table.
Q. In your opinion, why is SNWA's proposed project not groundwater mining?
A. Again, even though we've simulated and I think some of the confusion comes from the fact that we're simulating full application volumes -- we understand that we will not in all likelihood be awarded that, we will be awarded something significant -- well, less depending on determination of what perennial yield is as well as what the committed rights are and the difference leaving the unappropriated water. We have no intention of pumping above the perennial yield year.
Q. What about the continued sustained drawdown that you discussed, why is it not in SNWA's best interest to have a project that engaged in that activity?
A. This would result in devastating effects. It would also cost SNWA money. If you think about excessive drawdowns you're talking about deepening wells, you're talking about having to make mitigation measures for people. It's not in SNWA's best interest to have any of that happen.
Q. And as you just discussed, the -- the draft environmental impact statement model, both the original version and the modified version actually include simulation

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where pumping is greater than perennial yields?
A. That's correct. Again, it depends on the state engineer's determination of what the unappropriated water is. At this point, we can pick a recharge value, for example, out of the Heilweil report instead of ours, so you could go above what we think the number is. So we had simulated this upper bound by application.
Q. And by the Heilweil report you're referring to the Millard County exhibits that is the Utah USGS RASA reports that were recently completed?
A. That's correct.
Q. So in your opinion are the model simulations of pumping greater than perennial yield one of the reasons the protestants are referring to the project as groundwater mining?
A. I think so, I think there's been much confusion. I think one of the protestants questioned Burns on that very -- very thing using the table from my report that showed how we were simulating the full production of the application volumes.
Q. Okay. Now I want to ask about another issue that's been brought up. A number of protestants claim SNWA will not capture evapotranspiration or ET in the projects there for groundwater mining.
In your report, you cite to the inventory in

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Spring Valley that the State Engineer prepared and he cites to the statement in that report which is as follows, groundwater is managed by the State Engineer on a basin scale and can be developed anywhere in the basin.
And then later it says since groundwater is managed on a basin scale it is available anywhere in the basin.
How does this statement by the State Engineer in your view address the protestants' claim that SNWA applications should not be granted because they will not capture ET from plants?
A. Well, my understanding of that statement is that we're not obligated to capture all of the ET. If we think of a basin with multiple well owners it would be nearly impossible for them to capture all of the ET. This statement seems to point out that we just must avoid the conflicts with existing rights, which is our intent.
Q. In your report you also cite to Alley from Alley, et al., 1999. Does Alley in his report indicate that there are three methods that can be used to capture ET in a groundwater project?
A. What he really mentions is three methods of developing a sustainable groundwater project. The first, and this all has to do with, a lot with equilibrium, I think that's been brought up by the protestants in time to full

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capture.
The first is to increase pumping to reach new equilibrium. The second point is you can decrease pumping to reach the new equilibrium. Or third, manage the system to avoid potential unwanted effects.
Q. Describe the method that he has on how you can reach equilibrium.
A. Sure. He describes increasing the pumping to reach this new equilibrium. An example would be if we had or required to capture or reach this new equilibrium in a vast time we could do so by pumping well in excess of a perennial yield capturing all of this discharge and then backing off the perennial yield at some point once all the capture occurred. This obviously is not a good idea, would have rather disastrous effects.
Q. And describe the method that Alley identifies that SNWA is proposing to follow in this project.
A. We would follow item number 3, which actually says use all three of these options, pump more where you can pump more, pump less where you can pump less, manage the system to avoid the conflicts.
Q. There's also been questions at the hearing about subsidence and it was brought up in the report by Aquaveo, which is marked as CPB 11, what factors control subsidence?
A. Subsidence has to do with the significant

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groundwater declines, the lithology of the area, what the compressability of those materials are.
Q. Are these factors fully understood in Spring Valley at this time?
A. They are not.
Q. How did the BLM address subsidence in the DEIS?
A. BLM came to us and actually requested we make model simulations with subsidence through negotiations with the hydro team ourselves, the BLM. It was determined that was just not feasible because we don't have the data.
BLM then decided to take a conservative estimate, assume that the entire valley floor would be subject to some form of subsidence.
They went around to areas such as Las Vegas or California and Arizona where subsidence has occurred, took an average value of a one-foot decline for every 20 feet, dropped in head and applied that basin wide to all of the alluvium.
Q. And how did they address the subsidence issue in the -- in the recommendations in the drought environmental impact statement?
A. As a result of that they obviously had very broad areas that they recommend or that they're being conservative assuming this subsidence may occur so they offered mitigation monitoring specific measures that should be applied.
Q. And so those would be required if the

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BY MR. HEJMANOWSKI:
Q. I understand. In your simulation in your report you run results for 75 years, although your model extends out until the year 2254.
A. Yes.
Q. Why did you stop at 75?
A. Again, this is where I believe we're at the confidence of we're going to have to replace facilities, so we'll have to shut down these facilities in order to do that replacement. It also has to do with the confidence and the predictions. The further out in time the less confidence I have in the model's ability to predict.
Q. Well, with respect to the equipment issue you're actually going to be maintaining the equipment all through the 75 years, aren't you?
A. We are, but this is when you would expect major facility maintenance to occur.
Q. And you would also expect the demand for water to be greater in 75 years, wouldn't you?
A. According to the current demands, yes, we would.
Q. Did you run results out to the full 2254?
A. Yes.
Q. But you didn't include those in your report?
A. They are included in the model DVDs that are provided.

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Q. They're not included in the report?
A. They're not included in the report.
Q. And didn't they show substantially greater drawdowns occurring?
A. Throughout time drawdowns were continuing to increase, yes.
Q. How much did they increase over 50 foot?
A. I did not look into that. I simply applied the water rights to the 75-year prediction to determine the value.
MR. HEJMANOWSKI: I have no further questions, Madam Hearing Officer.
HEARING OFFICER JOSEPH-TAYLOR: Thank you, Mr. Hejamowski.
Mr. Herskovits?
MR. HERSKOVITS: Yes, may I take just a minute?
HEARING OFFICER JOSEPH-TAYLOR: Sure. Do you want to take a quick break here?
MR. HERSKOVITS: Sure.
HEARING OFFICER JOSEPH-TAYLOR: We'll be in recess till just after 10 o'clock. Off the record.
(Short recess taken.)

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HEARING OFFICER JOSEPH-TAYLOR: Let's be on the record.
Cross-examination, please, Mr. Herskovits.
CROSS-EXAMINATION
BY MR. HERSKOVITS:
Q. Yes. Good morning, Mr. Watrus.
A. Good morning, Mr. Herskovits.
Q. I have a few questions for you on a number of different topics. Let me just first ask -- start rather by asking in your testimony yesterday actually, you spoke about a number of different individual wells and your analysis or simulation of effects on them. That's correct; isn't it?
A. That's correct.
Q. And I believe you testified that with regards to a number of the wells that they can accommodate a reasonable lowering of the water table; is that right?
A. That's correct.
Q. Can I ask you, what do you mean by "reasonable," what's your definition of "reasonable lowering"?
A. Well, "reasonable" is one of those tricky questions, in effect, that is thankfully left up to the State Engineer to make that final determination rather than myself.
What I'm just saying is that, obviously, unreasonable is easy to define if we dry up and harm the water rights specifically, that's unreasonable. Easy call.

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Reasonable lowering, again, is the tough decision that State Engineer has to look at for these wells. But what I'm saying is this allows for that reasonable to occur and complaints to be made to the State Engineer, somebody believes it's unreasonable and then his determination.
Q. Okay. So if I understand correctly, you don't have any sort of objective quantified type of standard that you mean by when you say "reasonable."
A. Again, this would depend on the site itself. If you went way down and harmed the water right, that would be unreasonable. But a reasonable lowering of the water table is thankfully not my decision.
Q. Okay. Now, let me ask, your effects report considers effects on resources in Spring, Cave, Dry Lake and Delamar Valleys, correct?
A. On existing water rights in those locations and environmental areas as I alluded to included areas outside those locations.
Q. Okay. You did not consider effects on existing water rights in the other hydrological connected basins?
A. I did not.
Q. Why not?
A. Again, I was looking at that 50-foot of drawdown at greater than 15 percent reduction in spring flow. Those drawdowns don't get outside of those basins. My confidence in

APPENDIX 8

In The Matter Of:

Division of Water Resources

Applications 53987 through 53992, etc.

Public Hearing - Pages 2324-2597

Vol. 11

October 10, 2011

Certified Transcript

CAPITOL REPORTERS

(775) 882-5322

515 W. Fourth Street

Carson City, NV 89703

Original File 10-10-11 DWR Hearing Volume 11 - PGS 2324-2597 CORRECTED CAPTION_SCOPED.txt

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dealing with this baseline data collection, can you give me a feel for what kind of annual budget you have for this type of work?

A In the last two years, SNWA has spent 3 -- approximately $330,000 in consulting time and the equivalent of four permanent staff to implement the Spring Valley stipulation over the last two years.

There was a significant effort in the initial setup. But what I described to you is what's taken to collect the data to implement the monitoring for the -- the biological stipulation.

Q And is that budget going to continue?

A That -- yes. That's my understanding.

MR. KING: Thank you.

EXAMINATION

BY MR. KING:

Q Mr. Prieur, I believe you've already testified to this, but -- and, Mr. Taggart, if you want to have Mr. Watrus, maybe he's a better one to answer the question.

But are you familiar where the points of diversion are in Spring Valley and Cave, Dry Lake, and Delamar?

A (Prieur) Yes, I am.

Q And are you also familiar with the various

springs and water righted, perhaps wells, in those same basins?

A Yes.

Q Specifically to Spring Valley, do you -- you've testified that you think there's going to be more than the 19 wells that are being applied for in this hearing; is that correct?

A Yes.

Q Can you give me an idea of how many wells you have contemplated; and again, if you want to have that -- another witness answer that, I'm fine with that.

Okay. Go ahead.

A Well, based upon what performance we've seen in the wells that have been put in so far, we were looking on the order of -- of 50 to perhaps 100 locations to be able to have excess capacity to be able to move pumping to different locations or varying the pumping regimes at those locations.

Q These are my words, not yours, but would it be fair to characterize both your testimony about this adaptive management process, this monitoring management mitigation process, again -- our criteria in Statute 533.370 when we talk about interbasin transfers, says "In determining whether an application for an interbasin transfer ground water must be rejected" -- I'm sorry --

APPENDIX 7

NEVADA LEGISLATURE

SEVENTY-FOURTH SESSION
2007

TWENTY-THIRD SPECIAL SESSION
JUNE 5, 2007

SUMMARY OF LEGISLATION

PREPARED BY
RESEARCH DIVISION
LEGISLATIVE COUNSEL BUREAU

INTRODUCTION

The 2007 Regular Session of the Nevada Legislature considered 1,208 bills—629 from the Assembly and 579 from the Senate. Of this total, 554 bills were approved. The Governor signed 540 bills, allowed 7 to become law without his signature, and vetoed 7 bills. During the 23rd Special Session, 11 bills were introduced. Of these, 11 bills were enacted into State law.

The 74th Legislative Session adjourned Sine Die at 2:40 a.m. on June 5th. The Governor called the 23rd Special Session in the late afternoon of June 5th, and the Special Session adjourned Sine Die at 8:49 p.m. that same day.

The *Summary of Legislation* reviews each of the bills and joint and concurrent resolutions passed by the 2007 Regular and the 23rd Special Session. These summaries do not constitute legal analyses and are not intended for use by the legal community in place of the actual statutes.

Unless otherwise noted, the measures passed during the 2007 Regular Session and the 23rd Special Session are effective on October 1, 2007.

Occasionally, descriptions of "current" or "existing" law are used to illustrate the changes resulting from a bill. These descriptions refer to the law in effect prior to the passage of new legislation. In many cases, the "current" law so referenced will already have been changed at the time of this document's publication. Furthermore, numerous measures required inclusion in more than one chapter of this document.

Except as otherwise expressly provided in a particular statute or required by the context, the masculine gender includes the feminine gender.

Thorough coverage of appropriations acts is available in a document titled *Nevada Legislative Appropriations Report*, prepared by the Fiscal Analysis Division of the Legislative Counsel Bureau.

Please see the "Numeric Index" for a complete list of legislation or consult the "Table of Contents" and "Subject Index" for reference to legislation enacted within selected major or specific topic areas. For a comprehensive index to all legislative measures considered, please consult the *Index and Tables* for the 74th Legislative Session.

Research Division
Legislative Counsel Bureau
September 2007

S.B. 274 (Chapter 429)

Senate Bill 274 authorizes the State Engineer to adopt regulations for the imposition of administrative fines for violations of certain statutes relating to water resources. This measure also specifies topics that the State Engineer must consider when adopting regulations and the Engineer must submit a written report detailing the regulations to the Legislative Counsel Bureau by January 1, 2009. Although regulations may be adopted, the State Engineer may not impose any administrative penalties related to this measure before July 1, 2009.

Senate Bill 274 requires the State Engineer to notice a new period of protest of 45 days for successors in interest or affected water rights holders if the Engineer, within seven years, fails to act on or hear certain applications filed after July 1, 2007. In addition, successors of a person who filed a written protest during the first notice period have the right to continue the protest if they notify the State Engineer. The measure confirms the authority of the State Engineer to limit the initial use of approved water rights to a lesser quantity, and to approve junior applications requesting a minimal amount of water. Senate Bill 274 also provides that each applicant and protestant shall file information as required by the State Engineer and shall provide such information to the other parties. The bill declares that the State Engineer may consider consumptive uses of water in reviewing certain applications, except as to water rights originating in the Muddy and Virgin Rivers, and provided such consideration is consistent with applicable federal or State decrees.

Senate Bill 274 requires the State Engineer to render a decision on a water rights application within 240 days after the hearing transcript is available or the date for filing additional information, unless the State Engineer grants an extension for good cause.

The bill is effective on July 1, 2007.

S.B. 275 (Chapter 246)

Senate Bill 275 relates to groundwater. The bill converts the maximum pumping limit on a domestic well from 1,800 gallons per day to two acre feet per year. The bill clarifies that a domestic well may serve an accessory dwelling unit to a single family dwelling provided certain conditions are met, including approval of the accessory dwelling unit by the local government, and monitoring the annual withdrawal from the well. The priority date of a domestic well is set as the completion date recorded on the well driller's log or as otherwise documented and, for a domestic well serving an accessory dwelling unit, the date of approval of the accessory dwelling unit by the local government.

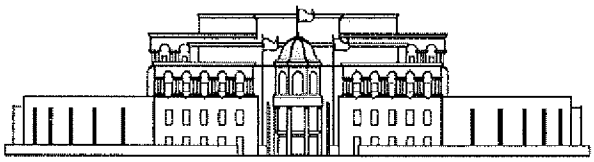
Senate Bill 275 requires notice of forfeiture of water rights based on nonuse to be given by the State Engineer in all basins in Nevada. In basins where the State Engineer does not keep pumping records, other documents specified may be used to determine nonuse of water.

If a local government has not adopted an ordinance requiring dedication of water rights for new parcel maps, the State Engineer is authorized to require such dedications in designated basins to ensure a sufficient supply of water. A county that requires a dedication of water

APPENDIX 6

Use, Management, and Allocation of Water Resources

January 2007



Legislative Counsel Bureau

Bulletin No. 07-11

LEGISLATIVE COMMISSION'S COMMITTEE TO STUDY THE USE, MANAGEMENT, AND ALLOCATION OF WATER RESOURCES

BULLETIN NO. 07-11

JANUARY 2007

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SUMMARY OF RECOMMENDATIONS

Legislative Commission's Committee to Study the Use, Management, and Allocation of Water Resources

(Senate Concurrent Resolution 26, File No. 100, *Statutes of Nevada 2005*)

This summary presents the recommendations approved by the Legislative Commission's Committee to Study the Use, Management, and Allocation of Water Resources (Senate Concurrent Resolution 26, File No. 100, *Statutes of Nevada 2005*) at its June 21, 2006, meeting.

WATER LAW AND ADMINISTRATION

RECOMMENDATION NO. 1 — Amend statutes to authorize the State Engineer in the Division of Water Resources (DWR), State Department of Conservation and Natural Resources, to order any person in violation of the provisions of *Nevada Revised Statutes* (NRS) Chapters 533, 534, 535, and 536 and *Nevada Administrative Code* (NAC) Chapters 534 and 535 to: (a) pay an administrative fine not to exceed $10,000 per day for each violation; and (b) be liable for any expense incurred by the Division of Water Resources in investigating and stopping the violation. Any appeal of a violation would be done through the courts under NRS 533.450. Administrative details for addressing violations, assessing fines or penalties, and procedures would be done through the promulgation of rules and regulations. [BDR 48-206]

RECOMMENDATION NO. 2 — Include a statement in the final report noting, for the record, the State Engineer's testimony on the recommendation to authorize administrative fines for certain violations of Nevada water law. Specifically, the State Engineer testified that he does not enforce residential watering restrictions and administrative fines would not be imposed for violations of residential watering restrictions or other local ordinances. Further, the State Engineer testified that the regulations implementing the fines will create a sliding scale of fines based on the severity of the violation. Finally, the Committee directed the State Engineer to provide examples of the proposed regulations at the time the bill amending the statutes to authorize administrative fines is heard by the Legislature.

RECOMMENDATION NO. 3 — Include a statement in the final report noting the Committee's strenuous endorsement of the State's policy against speculation in water rights, including without limitation, the findings required by NRS 533.370 that were added in 1995 to prevent speculation in water rights.

RECOMMENDATION NO. 4 — Include a statement in the final report noting that the public often needs assistance in understanding the water rights application process, including protests, and that education is critical to avoiding or resolving unnecessary conflicts. Further, the Committee considers this an important issue that may be appropriate for further study.

WELL AND GROUNDWATER ISSUES

RECOMMENDATION NO. 5 — Amend the statutes to require the State Engineer to give notice in all basins prior to forfeiture for nonuse of water. In the absence of pumping records in certain basins, the State Engineer may base a notice of forfeiture on other evidence of nonuse. As currently set forth in NRS 534.090, prior to forfeiture the State Engineer must give notice of four years of nonuse only in basins for which the State Engineer has pumping records, also referred to as inventoried basins. [BDR 48-208]

RECOMMENDATION NO. 6 — Amend the statutes to set the priority date for all domestic wells as the completion date of the well as stated on the well log submitted to the DWR by the well driller. For wells drilled prior to the requirement for submittal of well logs, other competent evidence shall be used to determine the completion date. [BDR 48-208]

RECOMMENDATION NO. 7 — Amend the statutes to address water service to auxiliary dwellings, e.g., caretaker's quarters or mother-in-law units, from a domestic well if: (a) local ordinances allow for such uses; and (b) with the condition that a meter be installed on the well to measure usage to ensure the total water pumped does not exceed two acre feet (see NRS 534.013 and 534.180). In addition, the proposed amendment would quantify the limit on domestic use as two acre-feet per year instead of 1,800 gallons per day (gpd). This change recognizes that typically domestic use increases in the summer months and decreases in the winter months and, further, that the total annual pumpage from a domestic well is used for planning purposes. [BDR 48-208]

RECOMMENDATION NO. 8 — Amend the statutes to authorize the State Engineer to designate basins in jurisdictions that do not require a certain minimum dedication of water rights for parcel maps creating one or more parcels that are less than 40 acres and eligible to drill a domestic well. Further, in such designated basins, authorize the State Engineer to impose a requirement, if appropriate, for a minimum dedication of water rights for such parcel maps. [BDR 48-208]

RECOMMENDATION NO. 9 — Adopt a resolution directing the State Engineer, and the counties and cities that acquire water rights dedications when new parcels are created, to work together on a process for consolidation of such water rights into a single permit, or other appropriate document, and on a process for adding future water rights dedications as they occur. The intent of this collaboration is to save time and money for the counties, cities, and State in the processing of applications for extensions of time to put such water rights to beneficial use, while addressing priority dates and other considerations. [BDR R-204]

RECOMMENDATION NO. 10 — **Send a letter** to the State Engineer requesting the development of policies for mitigation for over-appropriations of groundwater and asking the State Engineer to report his findings to the 2009 Legislature.

RECOMMENDATION NO. 11 — **Include a statement in the final report** asking the State Engineer to consider, where appropriate, the use of new technology or updated information to determine perennial or basin yields.

WATER RESOURCE STUDIES AND DATA

RECOMMENDATION NO. 12 — **Adopt a resolution** directing collaboration between the State Engineer, local governments, water districts and authorities, water purveyors, large commercial/agricultural users, and other water users, and the sharing of water use data, with the goal of implementing a statewide information management system to assist in the development and management of groundwater resources. [BDR R-204]

RECOMMENDATION NO. 13 — **Send a letter** to Nevada's Congressional Delegation, Desert Research Institute, the University of Nevada, Reno, and University of Nevada, Las Vegas, urging them to work together to obtain funding for development of a statewide research program on sustainable groundwater development, including agricultural and urban conservation, policy research, and governance structures.

RECOMMENDATION NO. 14 — **Include a statement in the final report** noting the Committee's interest in the conjunctive use of surface and groundwater and recommending this issue for future study by the interim committee on water resources. Conjunctive use is the coordinated management of surface water and groundwater to maximize the yield of the overall water resource and to avoid negative impacts. Conjunctive use is especially relevant if the surface and groundwater sources are hydrologically interconnected.

WATER CONSERVATION AND PLANNING

RECOMMENDATION NO. 15 — **Request an appropriation** of $1 million to continue the Water Rights Technical Support Fund, as enacted by Senate Bill 62 (Chapter 493, *Statutes of Nevada 2005*) through the next biennium and to expand the Fund to include need-based grants for local water resource planning and information management. The legislation would create a framework for long-term funding and provide clear direction for program administration by the State Board of Financing Water Projects. In addition, priority would be given to rural counties and local governments outside the urban areas within Clark and Washoe Counties. The Legislature's intent to consistently fund water resource planning and information management should be explicit in the bill. [BDR 48-207]

RECOMMENDATION NO. 16 — **Amend the statutes** to expand the eligible uses of the Fund for Grants for Water Conservation, Capital Improvements to Certain Water Systems and Improvements to Certain Sewage Disposal Systems to include requests for need-based funding for water resource plan implementation, e.g., infrastructure development. This fund is administered by the State Board for Financing Water Projects and is commonly referred to as the A.B. 198 program (NRS 349.984). Although new development must always be encouraged to pay for its own infrastructure, communities that lack the financial capacity, that is, an established body of rate-payers to supply primary infrastructure necessary to properly locate development, may need assistance. In addition, priority would be given to rural counties and local governments outside the urban areas within Clark and Washoe Counties. Appropriate assistance for these communities can be provided by allowing the A.B. 198 program to make need-based grants or low-interest loans aimed at expanding supply and transmission capability to meet future growth needs as identified in water resource plans. [BDR 48–207]

RECOMMENDATION NO. 17 — **Include a statement in the final report** noting that the State Engineer has never commenced forfeiture proceedings based on the nonuse of water due to the application of conservation measures and further that the Committee strongly supports the continuation of this policy.

RECOMMENDATION NO. 18 — **Adopt a resolution** encouraging rural development that matches the availability of water resources with new businesses and industry. [BDR R–204]

INTERBASIN TRANSFERS

RECOMMENDATION NO. 19 — **Include a statement in the final report** urging consideration of the following issues in connection with an interbasin transfer: (1) development of a clear description of the project; (2) identification and investigation of the potential environmental and socio-economic impacts of the project; (3) future development of rural communities have adequate water; (4) development and implementation of a rigorous monitoring program; and (5) consideration of the conveyance of water by lease rather than transfer of ownership.

RECOMMENDATION NO. 20 — **Include a statement in the final report** to recommend further consideration of a concept to authorize the counties to set aside up to $2 of the fee on intercounty transfers to be used for compensating private parties impacted by water exports (see NRS 533.438). The counties would adopt ordinances setting forth the application process and criteria to be used for dispersal of the funds and for the administration of the set-aside, including any provisions for reversion to the county. According to testimony, protection of senior water rights would be a priority of such "reparations" set-asides. Further, the Committee recommends this issue for future study by the interim committee on water resources.

DIVISION OF WATER RESOURCES

RECOMMENDATION NO. 21 — Send a letter of support to the Governor and the Chairmen of the Senate Committee on Finance and Assembly Committee on Ways and Means for the State Engineer's budget request for additional funding for water planning activities, including funding for the position of Chief of the Water Planning Section (NRS 540.036).

RECOMMENDATION NO. 22 — Send a letter of support to the Governor and the Chairmen of the Senate Committee on Finance and Assembly Committee on Ways and Means for the State Engineer's budget request for additional funding to activate the Advisory Board on Water Resources Planning and Development (NRS 540.111).

RECOMMENDATION NO. 23 — Send a letter of support to the Governor and the Chairmen of the Senate Committee on Finance and Assembly Committee on Ways and Means recommending funding or other support for increased resources and staff within the DWR to address staffing and other needs as determined by the State Engineer.

OTHER ACTIONS

RECOMMENDATION NO. 24 — Amend the statutes to create an ongoing interim Legislative Committee on Water Resources with a sunset date of June 30, 2015. [BDR 17-205]

RECOMMENDATION NO. 25 — Adopt a proclamation from the Committee commending Hugh Ricci for his years of State service and retirement as State Engineer.

REPORT TO THE 74th SESSION OF THE NEVADA LEGISLATURE BY THE LEGISLATIVE COMMISSION'S COMMITTEE ON THE USE, ALLOCATION, AND MANAGEMENT OF WATER RESOURCES

I. INTRODUCTION

The work of the Legislative Commission's Committee on the Use, Allocation, and Management of Water Resources underscores the importance of water resources in both the driest state and the fastest-growing state in America.

In 2005, the Legislature enacted Senate Concurrent Resolution No. 26 (File No. 100, *Statutes of Nevada 2005*) creating an interim study on the use, management, and allocation of water resources. Establishment of the interim study committee was in response to a recommendation from the Legislative Committee on Public Lands to the 2005 Legislature. Senate Concurrent Resolution No. 26 established an eight-member Committee on the Use, Allocation, and Management of Water Resources (Water Resources Committee) to review: (1) the laws, regulations and policies regulating water resources in Nevada; (2) the status of existing information and studies on water resources; (3) the need for additional studies of water resources; (4) recommendations on statutory provisions for administrative penalties for water law violations; (5) the ramifications of initiating adjudication procedures; (6) the feasibility and desirability of quantifying Nevada's groundwater resources; (7) statewide water use and efficiency; (8) the effectiveness of existing water systems for distributing and protecting water resources; (9) the potential for the State to provide technical assistance and services to local governments and increased access to informational and educational services to residents; and (10) the advisability of creating a statutory Legislative Committee on Water Resources. Appendix A contains Senate Concurrent Resolution No. 26, which created the Committee and makes provisions for its membership, powers, duties, and related matters.

Members of the Committee during the 2005-2006 interim included the following legislators:

Senator Dean A. Rhoads, Chair
Assemblyman Jerry D. Claborn, Vice Chair
Senator Mark E. Amodei
Senator Warren B. Hardy
Senator Dina Titus
Assemblyman Kelvin D. Atkinson
Assemblyman Pete Goicoechea
Assemblyman David R. Parks

Legislative Counsel Bureau staff services for the Committee were provided by:

Susan E. Scholley, Chief Principal Research Analyst, Research Division
Lucinda Benjamin, Senior Research Secretary, Research Division
Kimberly Marsh Guinasso, Senior Principal Deputy Legislative Counsel, Legal Division
Matthew G. France, Deputy Legislative Counsel, Legal Division

The Committee held a total of seven meetings during the interim: one in 2005, and six in 2006. Three of the Committee's meetings were held in cities in rural eastern Nevada: Caliente, Ely, and Elko. The Committee received several overview presentations by the Office of the State Engineer, Division of Water Resources, State Department of Conservation and Natural Resources. Other entities making presentations included the United States Geological Survey (USGS), the U.S. Bureau of Land Management (BLM), the Colorado River Commission, the Southern Nevada Water Authority, the Truckee Meadows Water Authority, Washoe County's Division of Water Resources, the Lincoln County Water District, the Moapa Valley Water District, and the Virgin Valley Water District.

Regional water entities appearing before the Committee were the Central Nevada Regional Water Authority and the Humboldt River Basin Water Authority. Several local governments made presentations including the cities of Carson City, Fallon, and Fernley, and Churchill, Elko, and White Pine Counties. The Committee invited out-of-state experts to speak on water rights adjudications in Idaho, desalination, water conservation, and the Owens Valley water exportation in eastern California. Other speakers included representatives from Coyote Springs and Aqua Trac, LLC.

The Committee approved 25 proposals with regard to the use, allocation, and management of water resources in Nevada. Major recommendations approved include proposals to:

- Authorize the State Engineer to order persons violating State water law to pay an administrative fine and to be liable for expenses incurred by the Division of Water Resources to investigate and stop the violation;

- Require notice – in all groundwater basins – of forfeitures for nonuse of water rights;

- Define the priority date for a domestic well as the date the well was drilled;

- Clarify that ancillary residential uses must comply with the limits on domestic wells and convert the domestic well limitation from 1,800 gallons per day to 2 acre feet annually;

- Seek an appropriation of $1 million to continue the Water Resources Technical Support Fund and expand the use of the Fund to include water resource planning, as well as data collection and management;

- Expand the uses of the Fund for Grants for Water Conservation, Capital Improvements to Certain Water Systems and Improvements to Certain Sewage Disposal Systems (commonly known as the Assembly Bill 198 program) to include water resource plan implementation projects;

- Address the need for local regulation of water rights dedications for parcel maps and to provide for state regulation, if warranted;

- Recommend the creation of an ongoing interim Legislative Committee on Water Resources that would sunset in 2015;

- Urge the Governor and the Chairmen of the Senate Committee on Finance and Assembly Committee on Ways and Means to fund additional water planning staff in the Division of Water Resources, the Advisory Board on Water Resources Planning and Development, and such other positions or resources deemed necessary by the State Engineer; and

- Adopt a resolution supporting various water resource management activities, including collaborating on information management, consolidating water rights for certain domestic wells, and encouraging the location of new development in areas with available water resources.

II. BACKGROUND

The idea for an interim study on water resources came from a recommendation of the Legislative Committee on Public Lands during the 2003-2004 interim. In the 2005 Session, over three dozen bills addressed a wide variety of water resource issues, including the governance structure for statewide management and planning, inventories of water resources, and funding for adjudications and studies. In addition, concerns about proposed interbasin transfers of water from eastern Nevada to the Las Vegas Valley prompted proposals to amend State water law. Given the variety and complexity of the water resource issues raised in the 2005 Session, the Legislature concluded that an interim study on water resources was needed to allow adequate time for review and consideration of the many issues.

Senate Concurrent Resolution No. 26 created the Water Resources Committee for the purpose of an in-depth review of current water resource issues in Nevada during the 2005-2006 interim. As set forth in S.C.R. 26, the membership was appointed as follows, with the Chair and Vice Chair being elected by the members of the Committee.

The members who served based on their appointment as a chairman of a 2005 Legislative Session committee were:

- Senator Warren B. Hardy – Chair, Senate Committee on Government Affairs
- Assemblyman David R. Parks – Chair, Assembly Committee on Government Affairs
- Senator Dean A. Rhoads – Chair, Senate Committee on Natural Resources
- Assemblyman Jerry D. Claborn – Chair, Assembly Committee on Natural Resources, Agriculture and Mining

The members who served by virtue of leadership appointments were:

- Senator Mark E. Amodei – appointed by Senate Majority Leader
- Senator Dina Titus – appointed by Senate Minority Leader
- Assemblyman Kelvin D. Atkinson – appointed by the Speaker of the Assembly
- Assemblyman Pete Goicoechea – appointed by the Assembly Minority Leader

III. REVIEW OF MAJOR ISSUES AND COMMITTEE ACTIVITIES

The availability of water in the arid West is a matter of critical importance. The criticality of water in Nevada is evident in the number of prior legislative studies on water. The earliest published study was in the 1950s and other studies have followed with increasing frequency:

- *The Beneficial Use of Water in Nevada*, LCB Bulletin No. 35 (1959)
- *Regional Water and Sewer in Washoe County*, LCB Bulletin No. 77-14 (1977)
- *Water Problems in the State*, LCB Bulletin No. 81-5 (1981)
- *Regional Water Authorities and Other Water Issues*, LCB Bulletin No. 85-10 (1985)
- *Study of the Laws, Regulations and Policies Relating to Water and Waste Water Resources in Nevada*, LCB Bulletin No. 91-8 (1991)
- *Use, Allocation and Management of Water*, LCB Bulletin No. 95-4 (1995)

In 2003, the duties of the Legislative Committee on Public Lands were expanded to include reviews of the Colorado River Commission, water districts, and other entities involved with the distribution, planning, and development of water resources in Nevada. Those duties in subsection 4 of NRS 218.5368, are due to sunset on June 30, 2007. Because the jurisdictions of the Legislative Committee on Public Lands and the Water Resources Committee overlapped on water resource issues for the 2005-2006 interim, the Legislative Committee on Public Lands deferred, for the most part, to the Water Resources Committee, thereby avoiding duplicate presentations and overlapping recommendations.

As directed by S.C.R. 26, the Water Resources Committee considered a wide range of topics relating to water resources, including water rights adjudications, interbasin transfers, existing water data and reports, federal water studies, pending applications for transfers of water rights, and water law in other states. The Committee also spent a significant portion of its time receiving testimony from regional water authorities and local governments. More information on the Water Resources Committee's activities, including minutes and copies of the presentations and other exhibits, may be accessed on the Committee's Web site at: http://www.leg.state.nv.us/73rd/Interim/Studies/Water/

A. *Water Resource Issues in Nevada*

According to NRS 533.025 and NRS 534.020, all sources of water within Nevada, whether above or below the surface of the ground, belong to the people of Nevada. Therefore, with the exception of domestic wells, all uses of water require a permit from the State.

Nevada water law, like most other western states, is based on the prior appropriation doctrine. The prior appropriation doctrine is premised on the following three principles:

- Beneficial use is the basis, measure, and limit of a water right;
- The right to use water is lost if the water is not actually used – "use or lose it"; and
- The rule of priority controls in times of shortage – "first in time, first in right."

The Nevada Legislature enacted statutes related to water as early as 1866. In 1913 the water laws were rewritten and the resulting principles continue to form the basis for Nevada's water law. Groundwater was included within the statutory framework beginning in 1939, much earlier than many other western states.

Like many other western states, Nevada's population growth and increasing urbanization is putting greater and greater demands on the limited water resources within the State. Communities throughout Nevada are working to find a balance between growth and limited water resources. Conversions of water rights from agricultural to municipal use will present challenges for rural communities and transfers of water from one basin or county to another will sometimes become matters of statewide interest.

As in other western states, the cumulative impact of domestic wells on groundwater supplies is an ongoing concern. Because domestic wells do not require a permit from the State Engineer but are deemed by Nevada law to be a "protectible interest," the relative priority of domestic wells to other water rights is not clear. Drought and growth have combined to create increasingly contentious water resource issues related to domestic wells.

Virtually all of the surface waters in Nevada are appropriated and administered in accordance with civil, federal, or state decrees. New growth – be it residential, commercial, tourist, industrial, mining, or agricultural – generally looks to unappropriated groundwater or to changes in use of existing water rights.

In the first part of the twentieth century, southern Nevada relied exclusively on groundwater. Today, the Las Vegas Valley gets 90 percent of its water from the Colorado River, which is controlled by an interstate compact limiting Nevada to 300,000 acre-feet annually (a.f.a.). However, the water allocations of the Colorado River Compact were negotiated in the 1920s when the population of Las Vegas was about 5,000. With the population of Las Vegas about to reach 2 million, demand for water is projected to exceed the current supply. Other areas of the State are also experiencing high demand for water, including the Truckee Meadows, Churchill County, and communities along the Carson River, such as Carson City and Dayton.

In Nevada, the Office of the State Engineer in the Division of Water Resources, State Department of Conservation and Natural Resources (SDCNR) is responsible for the appropriation, distribution and adjudication of water resources in the State. The State Engineer is appointed by the Director of the SDCNR who is appointed by the Governor. Appeals from decisions of the State Engineer go to the state district courts. Federal courts may also have jurisdiction over certain water resource decisions, such as federal decrees, interstate disputes, and other adjudications.

B. *Existing Water Resources Data and Studies*

The adequacy of data and studies related to water rights and usage, particularly groundwater resources, was the subject of several bills during the 2005 Session. Proposals to transfer large quantities of water from rural eastern Nevada to urban southern Nevada have raised questions about the quantity of groundwater available for transport and the potential impacts of interbasin transfers on the sending basins. Economic and social concerns include impacts on future residential, commercial and industrial development, agriculture, and mining, in the sending basin. Environmental concerns include the potential lowering of groundwater levels with resulting impacts on seeps, springs, meadows, and wildlife.

In accordance with S.C.R. 26, the Water Resources Committee devoted a substantial amount of time to reviewing existing data and studies. The Division of Water Resources reported on its collection of data on groundwater, including crop and pumpage inventories and precipitation levels. The State Engineer also monitors groundwater levels in certain hydrologic basins. Much of the available data is available online on the Division of Water Resources' Web site at: http://www.water.nv.gov/.

The USGS conducts many of the water resource studies in Nevada and has approximately 11 studies underway or near completion. In addition, the USGS has published a number of papers over the years on groundwater resources in Nevada and adjacent states. In accordance with the federal Lincoln County Conservation, Recreation and Development Act of 2004 and a $6 million appropriation, the USGS is conducting a three-year study of groundwater quantity, quality, and flow characteristics in the deep carbonate and alluvial aquifers of White Pine County, and any groundwater basins located in White Pine or Lincoln Counties, and adjacent areas in Utah. The study is named the Basin and Range Carbonate Aquifer System Study or BARCASS. The draft study must be submitted to the U.S. Congress by June 2007 and the final study is due December 2007. More information is available on BARCASS at: http://nevada.usgs.gov/barcass/index.htm.

C. *Transfers of Water*

Against the backdrop of the Southern Nevada Water Authority's (SNWA) applications to appropriate and transport groundwater from eastern Nevada to Las Vegas, several bills during the 2005 Session proposed to add procedural or other requirements prior to approving interbasin water transfers. Senate Bill 35 (Chapter 146, *Statutes of Nevada 2005)* raised the fee on interbasin transfers from $6 to $10 per acre foot annually, effective January 1, 2007, but other proposals to change the interbasin transfer statutes were not successful.

The SNWA has assumed the applications filed in 1989 by the Las Vegas Valley Water District to transfer over 180,000 a.f.a of groundwater from White Pine and Lincoln Counties to the Las Vegas Valley. Since that time, 32 applications in ten basins have been withdrawn and 12 applications have been approved for a total of 15,305 a.f.a. Additional groundwater transfers from six basins in eastern Nevada are a key part of SNWA's in-state groundwater resources development plan designed to reduce dependency on Colorado River resources. Due to the continuing drought in the Colorado River system, SNWA is moving forward with plans to

develop groundwater in eastern Nevada by building a 250-mile pipeline to transport the water to users in the Las Vegas Valley. More information about the SNWA and its water resource plan are available online at: www.snwa.com.

Currently, the SNWA is actively pursuing 34 applications seeking permits for over 175,000 a.f.a. The State Engineer held a hearing on 19 applications for groundwater appropriations in Spring Valley in September 2006. In an intermediate order dated March 8, 2006, the State Engineer stated that he will schedule two more hearings on the remaining applications – one for the applications in Snake Valley and another for the applications in Cave Valley, Delamar Valley, and Dry Valley. In addition, the U.S. Bureau of Land Management (BLM) is preparing an environmental impact statement on rights-of-way for the pipeline and wells (see www.nvgroundwaterproject.com) needed to transport the water to Las Vegas. Completion of the BARCASS study and negotiations with Utah are also underway and are part of the process for final implementation of the water transfers.

The Committee also heard testimony about ongoing interbasin transfers in Carson City as well as other approved or proposed interbasin transfers in Pershing and Washoe Counties.

IV. FINDINGS AND RECOMMENDATIONS

At the June 21, 2006, work session meeting of the Water Resources Committee in Carson City, the newly-appointed State Engineer, Tracy Taylor, provided the Committee with his written comments on the "Work Session Document." The State Engineer's comments are attached as Appendix B and, where appropriate, are referenced below.

A. *Water Law and Administration*

1. Administrative Fines: The ability of the State Engineer to enforce State water law and the need for additional authority has been raised in the past several legislative sessions. In the 2003 Session, the Legislature enacted Assembly Bill 213 (Chapter 113, *Statutes of Nevada 2003)* directing the State Engineer to review whether his "administrative powers are sufficient for the essential welfare of those basins designated for as in need of additional administration under NRS 534.030." The bill went on to ask the State Engineer to identify additional administrative powers, such as assessment of monetary fines, that may be necessary to carry out his duties.

In his January 31, 2005, letter submitted in accordance with A.B. 213 to the Director of the LCB, the State Engineer suggested that authority to levy fines may be a useful tool and further suggested that the best way to address the topic would be to submit the matter to an interim legislative committee.

The issue of fines for water law violations, particularly over-pumping of domestic wells, has been a longstanding topic of concern for the well owners in the Las Vegas Valley. The Advisory Committee for Groundwater Management in the Las Vegas Valley also brought forward a recommendation to the Water Resources Committee asking that well owners be

brought into compliance with permit or statutory limits on groundwater pumping through a graduated assessment structure based upon the quantity of water over-pumped and the duration of noncompliance, with an allowance for meter error. Further, for certain residential properties with allocations of less than 1,000 gallons per day (gpd) per residence, the Advisory Committee recommended that penalties only be applied to water use over 1,000 gpd.

The State Engineer made a presentation on domestic wells and related issues at the Water Resources Committee's January 2006 meeting in Las Vegas. The Committee also received testimony from the Nevada Well Owners Association in opposition to the proposal to impose fines for over-pumping and the Association proposed several alternatives to address the problem. The State Engineer's recommendation on bill draft requests to the Committee included a request for a bill authorizing the imposition of administrative fines for violations of Nevada water law. See State Engineer's letter dated June 2, 2006, attached as Appendix C.

Therefore, the Committee recommended that the Legislature:

> **RECOMMENDATION NO. 1 — Amend statutes to authorize the State Engineer in the Division of Water Resources (DWR), State Department of Conservation and Natural Resources, to order any person in violation of the provisions of *Nevada Revised Statutes* Chapters 533, 534, 535, and 536 and *Nevada Administrative Code* Chapters 534 and 535 to: (a) pay an administrative fine not to exceed $10,000 per day for each violation; and (b) be liable for any expense incurred by the DWR in investigating and stopping the violation. Any appeal of a violation would be done through the courts under NRS 533.450. Administrative details for addressing violations, assessing fines or penalties, and procedures would be done through the promulgation of rules and regulations. [BDR 48–206]**

To clarify the record on its intent, the Committee voted to:

> **RECOMMENDATION NO. 2 — Include a statement in the final report noting, for the record, the State Engineer's testimony on the recommendation to authorize administrative fines for certain violations of Nevada water law. Specifically, the State Engineer testified that he does not enforce residential watering restrictions and administrative fines would not be imposed for violations of residential watering restrictions or other local ordinances. Further, the State Engineer testified that the regulations implementing the fines will create a sliding scale of fines based on the severity of the violation. Finally, the Committee directed the State Engineer to provide examples of the proposed regulations at the time the bill amending the statutes to authorize administrative fines is heard by the Legislature.**

2. Water Rights Speculation: As water becomes an increasingly valuable commodity, the potential for speculation in water rights also increases. Nevada law states that the water belongs to the people of the State, and it is generally accepted that the State's continued well being depends, in part, upon maximizing the use of water to sustain and promote industry, agriculture, recreation, and the residential and tourist populations, among other things. Since

applying for water rights or otherwise tying up water for speculative purposes means that water is not being put to beneficial use, the State has an interest in avoiding speculation in water.

The 1993-1994 interim legislative study on water resources considered the problem of speculation at length. Pursuant to the interim study's recommendation, the 1995 Legislature enacted Senate Bill 98 (Chapter 192, *Statutes of Nevada)* amending NRS 533.370 to require a water rights applicant to prove "his financial ability and reasonable expectation actually to construct the work and apply the water to the intended beneficial use with reasonable diligence."

The Water Resources Committee heard testimony throughout the interim from persons concerned about speculation in water rights. The State Engineer testified that the current statutes were adequate to avoid speculation and did not object to including a statement of support. (See Appendix B, No. 5 on page 35.)

Therefore, the Committee voted to:

> **RECOMMENDATION NO. 3 — Include a statement in the final report noting the Committee's strenuous endorsement of the State's policy against speculation in water rights, including without limitation, the findings required by NRS 533.370 that were added in 1995 to prevent speculation in water rights.**

3. Ombudsman: One of the recommendations from the Central Nevada Regional Water Authority and the Great Basin Water Network was to create an ombudsman position within the Division of Water Resources. The Director of the SDCNR opposed the concept on the grounds it would be "detrimental to the neutrality of the Department" and might put the SDCNR in the role of "legal counsel" to applicants or protestants. (See Appendix B, No. 8 at page 37.) The Water Resources Committee members discussed the proposal at length. Some members thought that assistance could be given in a non-adversarial way and the position could also be used to educate members of the public to avoid problems and unnecessary protests and litigation. Other members echoed the Director's concerns that creation of an ombudsman position to assist persons with applications or other procedures might result in conflicts within the Division and suggested, as an alternative, that later recommendations for additional resources for the Division may be a better way to address the problem. Overall, the Committee was sympathetic to the difficulties faced by the average person when navigating the water rights application process or other procedures related to water rights.

Therefore, the Committee voted to:

> **RECOMMENDATION NO. 4 — Include a statement in the final report noting that the public often needs assistance in understanding the water rights application process, including protests, and that education is critical to avoiding or resolving unnecessary conflicts. Further, the Committee considers this an important issue that may be appropriate for further study.**

B. *Wells and Groundwater Issues*

1. Forfeiture: In its opening presentation on Nevada water law, the State Engineer discussed the statutes on forfeiture proceedings based on the nonuse of water. In response to a question from the Committee, the State Engineer advised that the statutes do not require advance notice of forfeiture proceedings in basins in which pumping inventories are not conducted (so-called "non-inventoried" basins). Water Resources Committee members expressed concern that, because of the onerous nature of forfeiture proceedings, notice of forfeiture proceedings should be given in all basins. The State Engineer did not oppose expansion of the notice requirements to all groundwater basins although he asked that the record be clear that amending NRS 534.090 would not "restart the clock" on the calculation of nonuse of water that is ongoing. (See Appendix B, No. 35 at pages 48-49.)

Therefore, the Committee recommended that the Legislature:

> **RECOMMENDATION NO. 5 — Amend the statutes to require the State Engineer to give notice in all basins prior to forfeiture for nonuse of water. In the absence of pumping records in certain basins, the State Engineer may base a notice of forfeiture on other evidence of nonuse. As currently set forth in NRS 534.090, prior to forfeiture the State Engineer must give notice of four years of nonuse only in basins for which the State Engineer has pumping records, also referred to as inventoried basins. [BDR 48-208]**

2. Priority Date: As the populations of western states continue to grow, the proliferation of domestic wells is causing concerns about the cumulative effect of such water use. At the January 2006 meeting in Las Vegas, the State Engineer gave a presentation on the issue of domestic wells and the problems being experienced or anticipated in several areas of the state. According to the Division of Water Resources, there are approximately 47,000 domestic wells in Nevada. As in some other western states, these domestic wells are exempt from permitting requirements although Assembly Bill 16 (Chapter 736, *Statutes of Nevada 1981)* instituted a requirement for registering wells, including domestic wells. In 1993, the Legislature created a "protectible interest" in domestic wells as set forth in NRS 533.024. However, the State Engineer has testified that, in the case of a conflict between permitted water rights and domestic wells, the statutes are silent on which interest has priority.

In its testimony at the March 2006 meeting, the Central Nevada Regional Water Authority suggested the need for clarifying "protectible interest" and establishing priority dates for domestic wells. At the May 2006 meeting, the State Engineer asked the Committee to consider legislation setting priority dates for domestic wells. (See Appendix C.)

Therefore, the Committee recommended that the Legislature:

RECOMMENDATION NO. 6 — Amend the statutes to set the priority date for all domestic wells as the completion date of the well as stated on the well log submitted to the DWR by the well driller. For wells drilled prior to the requirement for submittal of well logs, other competent evidence shall be used to determine the completion date. [BDR 48–208]

3. Auxillary Uses: Another issue related to domestic wells that has been a continuing subject of legislative water studies, is the treatment of an ancillary or auxillary use to a single family residence with a domestic well. The statutes define "domestic purposes" in relation to a single family dwelling but do not address ancillary uses. Further, domestic well pumping is generally limited to 1,800 gallons per day (NRS 534.180). Construction of a caretaker's quarters or a mother-in-law unit results in additional burdens on the domestic well from the second kitchen, additional bathrooms, and other water consuming appliances in the second residence. Since domestic wells can only supply a single family residence, it appears that a quasi-municipal permit is needed for a secondary residence to be served by an existing domestic well. However, as noted by the State Engineer, some basins are over-appropriated and subject to an order denying future permits. The State Engineer presented his concerns on auxillary uses to the Water Resources Committee at its January 2006 meeting and proposed a bill draft on the issue. (See Appendix C.)

Another issue raised by well users was the "gallons per day" standard. Enforcement of a daily standard is problematic and, as noted by the State Engineer, annual usage is the standard used for planning purposes. Further, water usage fluctuates seasonally and so substitution of a comparable annual standard was suggested by the State Engineer. The Nevada Well Owners Association also recommended a change to an annual rather than a daily standard.

Therefore the Committee recommended that the Legislature:

RECOMMENDATION NO. 7 — Amend the statutes to address water service to auxiliary dwellings, e.g., caretaker's quarters or mother-in-law units, from a domestic well: (a) if local ordinances allow for such uses; and (b) with the condition that a meter be installed on the well to measure usage to ensure the total water pumped does not exceed two acre feet (see NRS 534.013 and 534.180). In addition, the proposed amendment would quantify the limit on domestic use as two acre-feet per year instead of 1,800 gallons per day (gpd). This change recognizes that typically domestic use increases in the summer months and decreases in the winter months and, further, that the total annual pumpage from a domestic well is used for planning purposes. [BDR 48–208]

4. Parcel Maps: The proliferation of domestic wells is due, in part, to local government approvals of parcel maps. Under Nevada law, parcel maps are defined as subdivisions of land of four or less parcels that are less than 40 acres in size. Unlike subdivision maps, State law does not require parcel maps to demonstrate the availability of water and the newly-created parcels are eligible to drill domestic wells. At the January 2006 presentation on domestic

wells, the State Engineer testified that he did not know the exact number of vacant parcels eligible to drill domestic wells without a water right but estimated it to be a significant number. The State Engineer has the authority under NRS 534.120, in designated basins, to prohibit the drilling of domestic wells if water can be furnished by a water district or municipality. The State Engineer may also limit deepening and repair of domestic wells in some situations and may require a well owner to hook up to a municipal water supply if certain conditions are met.

As demonstrated by testimony at the Elko meeting in April 2006, some local jurisdictions have enacted ordinances to address this issue. Some local ordinances require a dedication of water rights as a condition of approval of a parcel map. In this way, the local jurisdiction avoids the cumulative impact of domestic wells on its water supply. Further, if and when the parcel is connected to and served by the municipal water system, the dedication of water rights will avoid an undue impact on the municipal water supply. However, not all jurisdictions have enacted such ordinances despite possible future water shortages.

According to testimony, such regulation is best done at the local level but, if a jurisdiction is experiencing or is about to experience water supply problems, the State Engineer should be able to step in and address the matter. The State Engineer supported the recommendation but asked that his authority to require a dedication of water rights be discretionary rather than mandatory. (See Appendix B, No. 40 at page 50.)

Therefore the Committee recommended that the Legislature:

> **RECOMMENDATION NO. 8 — Amend the statutes to authorize the State Engineer to designate basins in jurisdictions that do not require a certain minimum dedication of water rights for parcel maps creating one or more parcels that are less than 40 acres and eligible to drill a domestic well. Further, in such designated basins, authorize the State Engineer to impose a requirement, if appropriate, for a minimum dedication of water rights for such parcel maps. [BDR 48-208]**

5. Consolidation of Water Rights: In the context of requiring dedications of water rights for parcel maps, the Water Resources Committee was advised that the State Engineer's office and various cities and counties are working to address the problem of multiple filings for extensions of time to put water rights associated with parcel maps to beneficial use. When a local government requires dedicated water rights for a parcel map, a change application (for future municipal use of the water right and to transfer ownership to the municipality) must be submitted and approved by the State Engineer. Until such time as the local government can serve the newly-created parcels, it must file annual requests for extensions of time to put the water to beneficial use, along with a filing fee of $100. Each dedicated water right requires a separate extension application and associated fee. The time, effort, and expense involved in monitoring and preparing the extension applications is significant, and there is always the potential for losing track of one or more water rights. Consolidation of such water rights into a single permit would streamline the process and result in fewer fees being paid by local governments. While the State Engineer supports this effort, certain details, such as tracking multiple priority dates in a single permit, must be worked out.

Therefore, the Committee recommended that the Legislature:

RECOMMENDATION NO. 9 — Adopt a resolution directing the State Engineer, and the counties and cities that acquire water rights dedications when new parcels are created, to work together on a process for consolidation of such water rights into a single permit, or other appropriate document, and on a process for adding future water rights dedications as they occur. The intent of this collaboration is to save time and money for the counties, cities, and State in the processing of applications for extensions of time to put such water rights to beneficial use, while addressing priority dates and other considerations. [BDR R-204]

6. Mitigation for Over-Appropriation: The Central Nevada Regional Water Authority testified at the March 2006 meeting in Ely on rural counties' concerns about over-appropriation of groundwater. Noting that some groundwater basins are fully or over-appropriated, the Authority observed that currently the primary "cure" is regulation and that regulation is an "expensive, long and litigious solution that does not always best serve the public interest." The Authority suggested development of a menu of mitigation options, such as water rights buyout, water banking, or water conservation provisions, to provide alternatives to regulation.

The State Engineer expressed concern that development of mitigation policies would divert staff from other activities and be a time-consuming effort. Furthermore, the State Engineer felt the statutes already contain sufficient options to deal with over-appropriation and many such situations were best addressed through negotiation on a case-by-case basis. For these and other reasons, he opposed the recommendation. (See Appendix B, No. 47 at page 52.)

Therefore the Committee voted to:

RECOMMENDATION NO. 10 — Send a letter to the State Engineer requesting the development of policies for mitigation for over-appropriations of groundwater and asking the State Engineer to report his findings to the 2009 Legislature.

7. Perennial/Basin Yield: The calculation of perennial or basin yields is a critical component of the decision-making process for water rights allocations. Determining the amount of water available for appropriation is a difficult task and, since groundwater supplies cannot be quantified with absolute certainty, the science of making such determinations continues to evolve. The State Engineer testified that his office uses a variety of sources when determining perennial yield, including USGS models and studies. At its April 2006 meeting in Elko, the Committee heard from a water development company, Aqua Trac, LLC. According to Aqua Trac, new methodologies and more current data may result in more accurate estimates of perennial yield. The State Engineer cautioned that new methodologies are not necessarily more reliable and assured the Committee that he uses the best available methodologies and data in making his decisions and would continue to do so. (See Appendix B, No. 7 at page 36.)

Therefore, the Committee recommended to:

RECOMMENDATION NO. 11 — Include a statement in the final report asking the State Engineer to consider, where appropriate, the use of new technology or updated information to determine perennial or basin yields.

C. Water Resources Studies and Data

1. Collaboration on Data: The Central Nevada Regional Water Authority testified on its efforts to collect data and create a centralized system to optimize the knowledge of Nevada's water resources. Noting that data is collected at a variety of levels from the State Engineer to irrigation districts, the Authority intends to pursue its goal of a statewide database for use by water regulators and users alike. The State Engineer noted that collaboration was occurring and that the DWR's Web site made much of the information collected by the State available to the public. He expressed concern about the fiscal impact of a statewide information management system. (See Appendix B, No. 18 at page 41 and No. 19 at page 42.)

Water Resources Committee members questioned the availability of data from water entities and the withholding of such data from public record requests.

Therefore, the Committee recommended that the Legislature:

RECOMMENDATION NO. 12 — Adopt a resolution directing collaboration between the State Engineer, local governments, water districts and authorities, water purveyors, large commercial/agricultural users, and other water users, and the sharing of water use data, with the goal of implementing a statewide information management system to assist in the development and management of groundwater resources. [BDR R-204]

Further, the Committee voted to:

RECOMMENDATION NO. 13 — Send a letter to Nevada's Congressional Delegation, Desert Research Institute, the University of Nevada, Reno, and University of Nevada, Las Vegas urging them to work together to obtain funding for development of a statewide research program on sustainable groundwater development, including agricultural and urban conservation; policy research; and governance structures.

2. Conjunctive Use and Management: Conjunctive use is the coordinated management of surface water and groundwater to maximize the yield of the overall water resource and to avoid negative impacts. The benefits of conjunctive use of surface and groundwater are being recognized throughout the West and several states have enacted legislation implementing conjunctive management of surface and groundwater.

At the Water Resources Committee's Elko meeting in April 2006, Churchill County made a presentation. Two of the County's more urgent concerns were that not enough attention is being given to the interrelationship of surface and groundwater and that surface and groundwater are administered separately by the State Engineer. According to Churchill County representatives, the State Engineer has largely ignored the Nevada Supreme Court ruling in *Griffin v. Westergard*, 96 Nev. 627 (1980), in which the Court noted the connectivity of groundwater and surface water in Smith Valley. Churchill County and others recommended that conjunctive use and management be studied further.

Therefore, the Committee voted to:

> **RECOMMENDATION NO. 14 — Include a statement in the final report noting the Committee's interest in the conjunctive use of surface and groundwater and recommending this issue for future study by the interim committee on water resources. Conjunctive use is the coordinated management of surface water and groundwater to maximize the yield of the overall water resource and to avoid negative impacts. Conjunctive use is especially relevant if the surface and groundwater sources are hydrologically interconnected.**

D. Water Conservation, Planning, and Development

1. Additional Funding: During the 2005 Session, several proposals to fund various activities related to water were considered. Senate Bill 62 (Chapter 493, *Statutes of Nevada* 2005) created the Water Rights Technical Support (WRTS) Fund and appropriated $1 million for grants to local governments to assist rural counties working to protect existing water rights. The Water Resources Committee heard testimony about additional needs for funding related to water planning, studies, and data collection. The Central Nevada Regional Water Authority, the Great Basin Water Network, Humboldt River Basin Water Authority and others, urged the Committee to continue the funding for the WRTS Fund and to create another fund for groundwater studies and additional assistance for rural counties.

The Central Nevada Regional Water Authority suggested an appropriation of $1 million for a new fund similar to the WRTS Fund to make grants for studies and other assistance. The Authority noted that, although funding for implementation of water plans is available, funding for water planning and information management is not. The proposed new fund would focus on water planning and information management. Like the WRTS Fund, this new fund would be administered by the State Board of Financing Water Projects that is staffed by the Nevada's Division of Environmental Protection (NDEP) within the SDCNR.

The Administrator of NDEP testified that the duties of the State Board of Financing Water Projects have been increasing but the level of staff support level remains the same (one engineer and a secretary). He expressed concerns that continuing administration of the WRTS Fund and adding administration of a second fund would raise issues about the adequacy of resources. The NDEP has not included more positions in its budget proposals but if the Board's duties are expanded, then expansion of staff support should be considered also.

The Water Resources Committee complimented the Board and NDEP staff on the criteria for grants and administration of the WRTS Fund. Although not part of the original request from the Central Nevada Regional Water Authority, the Committee included a priority that funds be used in rural counties or in rural areas of Clark County and Washoe County. Due to fiscal concerns, the Committee suggested renewing the prior (S.B. 62) funding level of $1 million and combining the existing WRTS Fund with the proposed new fund.

Therefore, the Committee recommended that the Legislature:

RECOMMENDATION NO. 15 — Request an appropriation of $1 million to continue the Water Rights Technical Support Fund, as enacted by Senate Bill 62 (Chapter 493, *Statutes of Nevada 2005*) through the next biennium and to expand the Fund to include need-based grants for local water resource planning and information management. The legislation would create a framework for long-term funding and provide clear direction for program administration by the State Board of Financing Water Projects. In addition, priority would be given to rural counties and local governments outside the urban areas within Clark and Washoe Counties. The Legislature's intent to consistently fund water resource planning and information management should be explicit in the bill. [BDR 48-207]

2. Infrastructure Funding: Another recommendation from the Central Nevada Regional Water Authority pertained to funding for water infrastructure implementation to enable local governments or water entities to more actively guide future development compatible with water planning goals. The Authority testified that the A.B. 198 program (NRS 349.984) generally finances retrofit of existing water systems or treatment facilities, but is not currently available for construction of certain infrastructure to ensure compatibility with local land use plans and consistency with water planning goals. After some discussion, funding was not included since the bonding cap for the A.B. 198 program was increased last session to $125 million through Assembly Bill 20 (Chapter 71, *Statutes of Nevada 2005*). The Administrator of NDEP noted that his comments on Recommendation No. 15, above, pertained equally to an expansion of the A.B. 198 program and the corresponding increase in duties for the Board and NDEP staff.

Therefore, the Committee recommended that the Legislature:

RECOMMENDATION NO. 16 — Amend the statutes to expand the eligible uses of the Fund for Grants for Water Conservation, Capital Improvements to Certain Water Systems and Improvements to Certain Sewage Disposal Systems to include requests for need-based funding for water resource plan implementation, e.g., infrastructure development. This fund is administered by the State Board for Financing Water Projects and is commonly referred to as the A.B. 198 program (NRS 349.984). Although new development must always be encouraged to pay for its own infrastructure, communities that lack the financial capacity, that is, an established body of rate-payers to supply primary infrastructure necessary to properly locate development, may need assistance. In addition, priority would be given to rural counties and local governments outside the urban

areas within Clark and Washoe Counties. Appropriate assistance for these communities can be provided by allowing the A.B. 198 program to make need-based grants or low-interest loans aimed at expanding supply and transmission capability to meet future growth needs as identified in water resource plans. [BDR 48-207]

3. Conservation Incentives: Throughout the interim, the Water Resources Committee received testimony on water conservation. Noting on many occasions that Nevada law did not include incentives for water conservation, the Committee looked to models from other states for ideas. Utah water law includes a specific provision that non-use of water due to implementation of conservation measures is not considered grounds for forfeiture. The State Engineer testified that, although there is not a specific provision in Nevada law, that no water rights have been forfeited in Nevada due to non-use resulting from water conservation. Further, the State Engineer stated his intent to continue that policy. (See Appendix B, No. 22 at page 43.)

Therefore, the Committee voted to:

RECOMMENDATION NO. 17 — Include a statement in the final report noting that the State Engineer has never commenced forfeiture proceedings based on the non-use of water due to the application of conservation measures and further that the Committee strongly supports the continuation of this policy.

4. Economic Development: The Humboldt River Basin Water Authority testified at the Committee's April 2006 meeting in Elko on a number of issues and concerns, including economic development in the rural counties. The Authority noted that when water resources were available in rural areas, siting new development near water was more efficient than transporting water to an urban area.

Therefore, the Committee recommends that the Legislature:

RECOMMENDATION NO. 18 — Adopt a resolution encouraging rural development that matches the availability of water resources with new businesses and industry. [BDR R-204]

E. Water Transfers

1. Water Transfers: Interbasin and intercounty transfers have generated legislative concern for many years. Transporting water from one basin to another raises issues and transferring water from one county to another (even within the same groundwater basin) raises another set of issues. In both situations, the State Engineer must balance competing interests. On one hand, it is generally thought to be in the best interests of the State to have its waters put to beneficial use. On the other hand, transporting water out of a basin or county may hamper future development in the sending area and result in undesirable environmental impacts.

The proposal by the SNWA to transport large quantities of water via a pipeline from eastern Nevada to the Las Vegas Valley has raised both interbasin and intercounty issues. The State Engineer held a hearing in September 2006 on the first group of applications for water rights in Spring Valley in White Pine County. The remaining SNWA transfer applications will be scheduled for hearings in 2007 or later. The BLM is preparing an environmental impact statement on the proposed pipeline and wells to be located on BLM property and the USGS is working on the BARCASS (water study) due to Congress in December 2007.

The Water Resources Committee heard testimony on other interbasin and intercounty transfers occurring in Nevada as well as how other states handle water transfers. The Committee was reminded that interbasin transfer issues have been considered during earlier interim studies and Senate Bill 108 (Chapter 236, *Statutes of Nevada 1999*) set forth review criteria for interbasin transfers in subsection 5 of NRS 533.370. A speaker at the May 2006 meeting testified on the Owens Valley experience that involved transporting water from eastern California to Los Angeles at the environmental expense of the Owens River and surrounding areas. To avoid the environmental impacts caused by the Owens Valley water transfers, the speaker had several suggestions for policies on interbasin transfers.

Therefore, the Committee voted to:

> **RECOMMENDATION NO. 19 — Include a statement in the final report urging consideration of the following issues in connection with an interbasin transfer: (1) development of a clear description of the project; (2) identification and investigation of the potential environmental and socio-economic impacts of the project; (3) that rural communities have adequate water for future development; (4) development and implementation of a rigorous monitoring program; and (5) consideration of the conveyance of water by lease rather than transfer of ownership.**

2. Intercounty Transfer Fees: At the March 2006 meeting in Ely, county representatives addressed mitigation for interbasin transfers as provided for in NRS 533.438, which authorizes the imposition of a fee by the county of origin on groundwater transfers to another county. Effective January 1, 2007, the fee increases from $6 per acre-foot per year to $10 per acre-foot per year. Under current law, the fee proceeds are remitted to the county and may only be used for health, education or economic development. The testimony centered on concerns that that there is no provision for mitigation of impacts to individual landowners or businesses. The conceptual recommendation made at the Ely meeting was to amend the statutes to permit a portion of the intercounty transfer fee to be used for "reparations" to individuals.

The State Engineer expressed concerns that the proposal might have unintended consequences and opposed the recommendation. (See Appendix B, No. 28 at page 45.) The Committee felt the concept merited further consideration.

Therefore, the Committee voted to:

RECOMMENDATION NO. 20 — Include a statement in the final report to recommend further consideration of a concept to authorize the counties to set aside up to $2 of the fee on interbasin transfers to be used for compensating private parties impacted by water exports (see NRS 533.438). The counties would adopt ordinances setting forth the application process and criteria to be used for dispersal of the funds and for the administration of the set-aside, including any provisions for reversion to the county. According to testimony, protection of senior water rights would be a priority of such "reparations" set-asides. Further, the Committee recommends this issue for future study by the interim committee on water resources.

F. Division of Water Resources

At the Committee's meeting in October 2005, the State Engineer provided an overview of his office's activities. During the 2005 Session, the State Engineer received funding for 11 new positions and reported to the Committee on the progress in filling those positions and reducing the backlog of applications. The State Engineer announced his intent to fund a water planner position created in the 2005 Session that had not been funded at that time and to seek funding for an advisory board that exists in statute but is not currently functioning. (See Appendix C.)

Therefore, the Committee voted to:

RECOMMENDATION NO. 21 — Send a letter of support to the Governor and the Chairmen of the Senate Committee on Finance and Assembly Committee on Ways and Means for the State Engineer's budget request for additional funding for water planning activities, including funding for the position of Chief of the Water Planning Section (NRS 540.036).

RECOMMENDATION NO. 22 — Send a letter of support to the Governor and the Chairmen of the Senate Committee on Finance and Assembly Committee on Ways and Means for the State Engineer's budget request for additional funding to activate the Advisory Board on Water Resources Planning and Development (NRS 540.111).

Throughout the interim, various other persons and organizations testified as to the need for adding staff or hiring staff with certain expertise, due to the increasing complexity of water rights transactions. In particular, several persons and organizations expressed a desire for more studies and for more oversight or analysis by the DWR of such studies.

Therefore, the Committee also voted to:

RECOMMENDATION NO. 23 — Send a letter of support to the Governor and the Chairmen of the Senate Committee on Finance and Assembly Committee on Ways and Means recommending funding or other support for increased resources and staff within the DWR to address staffing and other needs as determined by the State Engineer.

G. *Other Actions*

1. Interim Committee: Senate Bill 216 (Chapter 408, *Statutes of Nevada 2003*), added the review of water authorities, water districts; and other public and private entities involved in water resources, to the duties of the Legislative Committee on Public Lands (NRS 218.5368). However, that provision expires on June 30, 2007, and the Legislative Committee on Public Lands is not recommending continuation of its review of water resource issues and entities. Further, in S.C.R. 26, the Water Resources Committee was directed to consider the advisability of creating an ongoing interim Legislative Committee on Water Resources to monitor water resource issues between sessions and to formulate recommendations to the Legislature.

Therefore, the Committee recommended that the Legislature:

RECOMMENDATION NO. 24 — Amend the statutes to create an ongoing interim Legislative Committee on Water Resources with a sunset date of June 30, 2015. [BDR 17-205]

2. Retirement of State Engineer: At the May 2006 meeting of the Committee, Hugh Ricci announced his retirement from the Office of the State Engineer effective in June 2006 and advised the Committee that the Director of the SDCNR had appointed Tracy Taylor as the new State Engineer. Appendix D contains Mr. Ricci's proclamation.

Therefore, the Committee acted to:

RECOMMENDATION NO. 25 — Adopt a proclamation from the Committee commending Hugh Ricci for his years of State service and retirement as State Engineer.

V. APPENDICES

APPENDIX A

Senate Concurrent Resolution No. 26 (File No. 100, *Statutes of Nevada 2005*)

APPENDIX A

Senate Concurrent Resolution No. 26
Committee on Natural Resources

FILE NUMBER 100

SENATE CONCURRENT RESOLUTION—Creating an interim study of the use, allocation and management of water resources in Nevada.

WHEREAS, The waters of the State of Nevada are among its most precious and vital resources; and

WHEREAS, The State of Nevada is the most arid state in the country and has relatively few supplies of surface water and ground water, a condition which is periodically exacerbated by drought conditions in Nevada and in the Rocky Mountains which supply the headwaters of the Colorado River; and

WHEREAS, Adequate, long-term supplies of water are essential to maintaining stable economic growth and the development of rural and urban areas of this State; and

WHEREAS, The conservative and prudent use of supplies of water is necessary to promote adequate, long-term supplies and to protect the environment of this State; and

WHEREAS, The rapid growth in the population and the economy of this State within the last 30 years has placed growing demands on the limited water supplies and has resulted in an increasing number of projects for the reallocation of water resources from areas of supply to areas of demand; and

WHEREAS, The residents of this State are vitally interested in the decisions made relating to the use, management and allocation of Nevada's scarce water resources; and

WHEREAS, The Nevada Legislature has conducted several interim studies on the general topic of laws and activities related to water resources and large amounts of information concerning Nevada's water resources have been compiled through the years and the degree to which these materials fill the current needs is not immediately evident; and

WHEREAS, The provision of services related to water, including the supply of safe water for municipal and industrial uses, the management of wastewater and storm drainage, the management of floodplains and the administration of water reclamation projects, in an efficient manner is critical to the current and future welfare of the citizens of Washoe County; and

WHEREAS, In Washoe County, these water-related services are presently provided through several governmental entities; now, therefore, be it

RESOLVED BY THE SENATE OF THE STATE OF NEVADA, THE ASSEMBLY CONCURRING, That the Legislative Commission is hereby directed to appoint a committee to conduct an interim study of the use, management and allocation of water resources in this State; and be it further

RESOLVED, That the committee must:

1. Be composed of eight Legislators as follows:

(a) The Chairman of the Senate Standing Committee on Government Affairs;

(b) The Chairman of the Senate Standing Committee on Natural Resources;

(c) One member appointed by the Majority Leader of the Senate;

(d) One member appointed by the Minority Leader of the Senate;

(e) The Chairman of the Assembly Standing Committee on Government Affairs;

(f) The Chairman of the Assembly Standing Committee on Natural Resources, Agriculture, and Mining;

(g) One member appointed by the Speaker of the Assembly; and

(h) One member appointed by the Minority Leader of the Assembly.

2. Select a chairman and vice chairman from among its members; and be it further

RESOLVED, That the study must include, without limitation:

1. An analysis of the laws, regulations and policies regulating the use, allocation and management of water in this State;

2. A review of the status of existing information and studies relating to water use, surface water resources, and groundwater resources in this State;

3. An evaluation of the need, if any, for additional information or studies of water use and water resources in this State, including, without limitation, an analysis of whether:

(a) A need exists for additional field investigations to quantify surface water resources, groundwater resources and water uses, and if so, the procedures and costs associated with such investigations; and

(b) Valuable information can be obtained through placing groundwater basins, or portions thereof, under hydrologic stress by drilling and pumping wells over a period of time within those basins, and if so, the procedures and costs associated with these actions;

4. A review of the report of the State Engineer provided pursuant to Assembly Bill 213 of the 2003 Session of the Nevada Legislature;

5. Development of recommendations concerning appropriate statutory provisions for administrative procedures and penalties to be imposed upon a person who violates the provisions of NRS 533.460;

6. An analysis of the potential ramifications of initiating procedures for the adjudication of existing rights within hydrologic basins in the State;

7. An evaluation of the feasibility and desirability of quantifying the groundwater resources of this State using existing information;

8. A review of statewide water use and the efficiency of water use, including, without limitation:

(a) Per capita water consumption;

(b) Water use by the economic sector; and

(c) Potential methods of increasing the efficiency of water use in this State;

9. An analysis of the effectiveness of existing water systems for administrating, controlling, allocating, distributing and protecting the water resources of this State;

10. An evaluation of the potential for the government of this State to provide:

(a) Technical assistance and information services regarding water resources to local governments within the State; and

(b) Increased access to informational and educational services regarding water resources to the residents of the State;

11. An evaluation of the feasibility and advisability of creating a statutory Legislative Committee on Water Resources and prescribing its membership and duties; and be it further

RESOLVED, That the Legislative Commission is hereby directed to appoint a subcommittee of the committee to study the feasibility and advisability of consolidating the water-related services in Washoe County; and be it further

RESOLVED, That the subcommittee must:

1. Be composed of six Legislators as follows:

(a) One member of the Senate appointed by the Chairman of the Committee;

(b) One member of the Assembly appointed by the Chairman of the Committee;

(c) One member appointed by the Majority Leader of the Senate;

(d) One member appointed by the Minority Leader of the Senate;

(e) One member appointed by the Speaker of the Assembly; and

(f) One member appointed by the Minority Leader of the Assembly;

2. Select a chairman and vice chairman from among its members; and be it further

RESOLVED, That the study conducted by the subcommittee must include, without limitation:

1. An analysis of relevant financial considerations, ownership and operation of facilities, and potential management and staffing structures;

2. A review of potential alternatives including, without limitation, consolidation of:

(a) All water supply, wastewater treatment, flood control, storm drainage and water reclamation programs;

(b) Only water supply and wastewater treatment programs;

(c) Only the water supply programs;

(d) Only the responsibilities for procuring water and water rights, treating the water and providing the water to the existing distributors; and

(e) Only the responsibilities for procuring water and water rights and providing the water to the water treatment facilities managed by the various distributors; and be it further

RESOLVED, That the entities providing water-related services in Washoe County are hereby directed to participate and cooperate in the study and furnish all necessary assistance to the subcommittee; and be it further

RESOLVED, That any recommended legislation proposed by the committee or subcommittee must be approved by a majority of the members of the Senate and a majority of the members of the Assembly appointed to that committee or subcommittee; and be it further

RESOLVED, That the Legislative Commission shall submit a report of the results of the studies and any recommendations for legislation to the 74th Session of the Nevada Legislature.

APPENDIX B

State Engineer's Comments on the S.C.R. 26, June 21, 2006,
"Work Session Document"

KENNY C. GUINN
Governor

STATE OF NEVADA

ALLEN BIAGGI
Director

HUGH RICCI, P.E.
State Engineer

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF WATER RESOURCES
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MEMORANDUM

Date: June 21, 2006

To: Members of the Legislative Commission's Committee to Study the Use, Management and Allocation of Water Resources
(S.C.R. 26, File No. 100, *Statutes of Nevada 2005*)

Through: Susan Scholley, Chief Principal Research Analyst, Research Division

From: Tracy Taylor, P.E., State Engineer

Subject: Comments to Work Session Document Recommendations

The attached document is our comments to the fifty-one (51) recommendations posed in the Work Session Document.

We look forward to working through any and all language you will be considering for bill drafts. As always, thank you for all your help during this interim-study period.

STATE ENGINEER'S COMMENTS ON THE SCR 26 JUNE 21, 2006, WORK SESSION DOCUMENT

WATER LAW AND ADMINISTRATION

1. PROTESTS – REOPENING OF PROTEST PERIOD. **Amend the statutes** relating to the protest procedures for water rights applications to require that the protest period be reopened for 30 days if an application is not processed within 7 years. Further, if a protest is based on impacts to a specific property, amend the statutes to allow successorship of protestant status to successive owners of the property (by sale or inheritance). The burden of notifying the Division of Water Resources, State Department of Conservation and Natural Resources (SDCNR), of a claim of succession and any change of address shall be on the person seeking successor status. See NRS 533.365. (Central Nevada Regional Water Authority, Las Vegas, May 2006)
Note: The effective date of any change to the protest period should be considered. Options include making the changes effective as to: (1) all pending applications; (2) pending applications for which hearings have not been scheduled; or (3) only applications filed after effective date of bills.

COMMENTS: The State Engineer supports this type of action in concept; however, there are a number of details that would require further consideration.

This suggestion would require the State Engineer to re-publish an application in the appropriate newspaper in order to assure everyone was aware of the dates for filing new protests. However, re-publication indicates a fiscal impact and there is no indication as to who will be responsible for the costs incurred in the re-publication. Is it contemplated that the applicant will be responsible for said costs; otherwise, the State Engineer's budget will require additional funding to provide for the cost of re-publishing applications.

Nevada Revised Statute 533.365 requires that protests must set forth with reasonable certainty the grounds of such protest and are to be verified by the affidavit of the protestant, his agent or attorney. The State Engineer takes no issue with clarifying the succession of a protest to a specific property owner when the protest was addressed to the impacts to water rights to a specific property; however, perhaps general protest grounds also asserted by that property owned should also be considered.

The State Engineer would recommend the period of time be set at 10 years as re-publication and processing of new protests will take a substantial amount of effort and a decade is a reasonable amount of time for changes in landownership and new information to have been presented. The State Engineer believes the request is to address the larger proposed water projects; therefore, he suggests that the provision only apply to requests that singularly or in multiple applications request to appropriate an amount of water equal to or greater than 500 acre-feet annually and for which hearings have not been held or scheduled.

2. FINES. **Amend statutes** to authorize the State Engineer to order any person in violation of the provisions of NRS Chapters 533, 534, 535, 536 and *Nevada Administrative Code* (NAC) Chapters 534 and 535 to: (a) pay an administrative fine not to exceed $10,000 per day for each violation; and (b) be liable for any expense incurred by the Division of Water Resources, SDCNR, in investigating and stopping the violation. Any appeal of a violation would be done through the courts under NRS 533.450. Administrative details for addressing violations, assessing fines or penalties, and procedures would be done through the promulgation of rules and regulations. (State Engineer, Las Vegas, May 2006)

COMMENTS: The State Engineer originated this recommendation and continues to support it. Please note that Recommendations No. 38 is encompassed in this item and is somewhat related to Item No. 42.

Please see the memorandum from the State Engineer attached to the Work Session Document under Tab A.

3. LOCAL GOVERNMENTS HOLDING WATER RIGHTS. **Amend the statutes** to allow local governments to "hold" water rights for a longer time recognizing their extended planning horizon and give private parties less time to prove beneficial use. (Bevan Lister, Caliente, February 2006)

COMMENTS: The State Engineer does not believe this recommendation is necessary because such considerations are already provided for in Nevada water law

Current law provides the State Engineer flexibility in the determining timeframes initially granted a permittee for perfecting a water right and provides the State Engineer with discretionary authority in considering requests for extensions of time. Nevada Revised Statute 533.380 provides that applicants have 5 years in which to complete the construction of their works of diversion and 10 years for placing the water to beneficial use. Nevada Revised Statute 533.380 provides the State Engineer with the discretion to shorten the time for the completion of work and, for good cause shown, to extend the time in which the construction of the works of diversion must be completed. In a request for extension of time, a permittee must provide evidence of reasonable diligence and good faith in pursuing perfection of the application. Nevada Revised Statute 533.390 provides a similar provision with respect to the filing of proof of beneficial use. Since every permittee may present a different factual scenario, the State Engineer recommends this discretion not be limited by statute.

Nevada Revised Statute 533.380(4) already provides the State Engineer with many factors to consider in granting the holders of municipal or quasi-municipal water rights extensions of time for perfecting such rights. These factors include whether the holder of the water right permit has shown good cause for not having placed the water to beneficial use, the number of parcels or commercial or residential units to be served by the county, city, town, public water district or public water company, any economic conditions which affect the water right holder's ability to make complete application of the water to beneficial use, any delays in the development of the land or the area being served which were caused by unanticipated natural

conditions, and the period contemplated in the plan for the development of a project approved by the local government, or plan for development of a planned unit development.

4. 100 YEAR SUPPLY. **Amend the statutes** to require evidence of a 100-year water supply as a condition of approving new subdivisions, using the Arizona model. (Val Taylor for Snake Valley Citizens Alliance, Ely, March 2006) See relevant Arizona statutes under Tab B.

COMMENTS: The State Engineer does not support this recommendation as Nevada water law is already more protective and restrictive.

Arizona's water law presents a completely different method as to the use of water and the State Engineer does not believe statutes from other states should be readily adopted without focusing on the difference in those laws. Water rights in Nevada are administered on the perennial yield analysis of the quantity of water that can be appropriated from a groundwater basin year to year. This analysis as to the quantity of water available provides greater assurance as to a long-term supply than the 100-year supply recommended.

5. **Include a statement in the final report** urging the State Engineer to be mindful of the state policy against speculation in water rights and to prevent speculation for profit. (Val Taylor for Snake Valley Citizens Alliance, Ely, March 2006)

COMMENTS: The State Engineer takes no issue with such a statement being included in the final report because Nevada water law already directs him to consider whether applications for speculative purposes.

Nevada Revised Statute 533.370(1)(c) was enacted in reaction to the Legislature's concern about speculation in water rights. This statutory provision requires an applicant provide proof satisfactory of his intention in good faith to construct any work necessary to apply water to its intended beneficial use and the financial ability and reasonable expectation to actually construct the work and apply the water to the intended beneficial use with reasonable diligence. These provisions are sufficient for the State Engineer to determine whether an application has been filed merely for the purpose of sale.

6. SUBORDINATION OF APPLICATIONS. **Include a statement in the final report** requesting the State Engineer to consider taking action on subsequent applications when earlier filed applications are held in abeyance, if appropriate, given the specific circumstances of the affected applications. (Bevan Lister, Ely, March 2006)

COMMENTS: The State Engineer supports this recommendation only if it applies to basins with pending interbasin transfers. Otherwise, the State Engineer believes the prior appropriation system should govern.

The State Engineer is aware that water right applications filed for large interbasin transfers of water have held up the consideration of smaller applications for uses of water within the basin of origin for a number of years due to the prior appropriation system established under Nevada water law. However, the interbasin transfer statute found in Nevada Revised Statute 533.370(6) requires the State Engineer to consider whether the proposed action is an appropriate long-term use which will not unduly limit the future growth and development in the basin from which the water is exported. The State Engineer would not oppose clarification that he can act on applications junior to the exportation project for uses of water within the basin of origin prior to acting on the request for the interbasin transfer of water.

7. NEW TECHNOLOGY OR UPDATED IN FORMATION. 7. **Include a statement in the final report** asking the State Engineer to consider, where appropriate, the use of new technology or updated information to determine perennial or basin yields. (Aqua Trac LLC, Elko, April 2006)

COMMENTS: The State Engineer supports such a statement in the final report because the State Engineer always wants to consider the best available science.

DIVISION OF WATER RESOURCES

8. OFFICE OF WATER RESOURCE USERS ADVOCATE. **Amend statutes** to create the Office of Water Resource Users Advocate in the State Department of Conservation and Natural Resources. This position is intended to: (a) help filter tenuous charges of injury or mismanagement related to water resources; (b) provide guidance to individuals or interests who feel injured, but may not have the sophistication to act on their concerns; and most importantly, (c) build a sense of parity among parties engaged in emerging water resource disputes. (Central Nevada Regional Water Authority and Great Basin Water Network, Las Vegas, May 2006)

COMMENTS: The State Engineer must oppose this recommendation as drafted as it presents the potential for internal conflict within the Department of Conservation and Natural Resources and would be detrimental to the neutrality of the Department. The State Engineer's office is always available to the public in order to educate those who do not have the level of sophistication to act on their concerns. The Department should not take on the role of legal counsel the individuals who wish to protest a particular application.

9. FUNDING FOR WATER PLANNING. **Send a letter of support** to the Governor and the Chairmen of the Senate Finance and Assembly Ways & Means Committees for the State Engineer's budget request for additional funding for water planning activities, including funding for the position of the Chief of the Water Planning Section within the Division of Water Resources, SDCNR. See NRS 540.036. (State Engineer, Las Vegas, May 2006)

COMMENTS: The State Engineer originated this recommendation and continues to support funding the position of a Chief of Water Planning.

10. FUNDING FOR ADVISORY BOARD ON WATER RESOURCES PLANNING AND DEVELOPMENT. **Send a letter of support** to the Governor and the Chairmen of the Senate Finance and Assembly Ways & Means Committees for the State Engineer's budget request for additional funding to activate the Advisory Board on Water Resources Planning and Development. See NRS 540.111. (State Engineer, Las Vegas, May 2006)

COMMENTS: The State Engineer originated this recommendation and continues to support it.

11. FUNDING FOR INCREASED TECHNICAL CAPACITY OF THE DIVISION OF WATER RESOURCES. **Send a letter of support** to the Governor and the Chairmen of the Senate Finance and Assembly Ways & Means Committees recommending funding or other support for an increase in the technical capacity of the Division of Water Resources, SDCNR, (e.g. hiring persons with degrees in hydrology or hydrogeology) to allow greater monitoring, evaluation and oversight. According to testimony, this recommendation is aimed at improving the public's confidence that impacts caused by rapid water resource development will be: (a) timely recognized by the State Engineer; and (b) addressed when impacts emerge, and before they become disruptive and costly. (Central Nevada Regional Water Authority and Great Basin Water Network, Las Vegas, May 2006)

COMMENTS: The State Engineer supports the Governor's Budget as proposed, but recognizes the need for additional technical capacity in the Office of the State Engineer and would put any additional funding to use for the benefit of the public.

The State Engineer has knowledge of the concern that the appropriation of water be based on technical analyses that are supported by a conclusive data and would be in support of increasing the number of hydrologists or hydrogeologists on staff. However, while recognizing the concern, the State Engineer understands there are significant fiscal impacts associated with this recommendation. The use of such personnel is becoming increasingly important in the review of information being presented by applicants in order to support their water right applications, particularly where the filings are for substantial quantities of water far in excess of the amount of water historically believed to be available for appropriation as established in the United States Geological Reports. However, even if these positions are supported, it must be recognized the State Engineer finds it challenging to find such skilled personnel willing to work under present salary constraints.

12. FUNDING TO INCREASE ABILITY TO CONDUCT INVENTORIES. **Send a letter of support** to the Governor and the Chairmen of the Senate Finance and Assembly Ways & Means Committees recommending the addition of staff in the Division of Water Resources, SDCNR, to increase the capacity of the Office of the State Engineer to conduct and maintain water resource inventories, through monitoring and identification of water sources, including without limitation, wells, large local springs, and surface waters. (Assemblyman Pete J. Goicoechea, District No. 35, Ely, March 2006)

COMMENTS: The State Engineer supports the Governor's Budget as proposed, but is aware of the need for additional water resource inventories and would put any additional funding to use for the benefit of the public.

The State Engineer recognizes the concern for collection of additional data and the public's request that significant amounts of data be accumulated prior to the State Engineer acting on pending applications. However, the State Engineer recognizes that associated with this recommendation there are significant fiscal impacts.

13. FUNDING TO UPDATE AND CREATE WATER RESOURCE INVENTORIES AND TO EXPEDITE HEARINGS. **Send a letter of support** to the Governor and the Chairmen of the Senate Finance and Assembly Ways & Means Committees recommending funding for additional staff in the Division of Water Resources, SDCNR, to handle the backlog of pending requests for adjudications and other hearings. (Brent Eldridge, White Pine County Commissioner, Ely, March 2006)

COMMENTS: The State Engineer supports the Governor's Budget as proposed, but is aware that additional resources are needed to handle the backlog of pending adjudications and other hearings and would put any additional funding to use for the benefit of the public, but notes that this recommendation has significant fiscal impacts.

14. FUNDING TO UPDATE AND CREATE WATER RESOURCE INVENTORIES AND EXPEDITE HEARINGS. **Send a letter of support** to the Governor and the Chairmen of the Senate Finance and Assembly Ways & Means Committees recommending additional funding for the Division of Water Resources, SDCNR, to facilitate the update and creation of water resource inventories and to expedite hearings. (Bob Erickson, Fallon City Council Member, Elko, April 2006)

COMMENTS: The State Engineer supports the Governor's Budget as proposed, but is aware that additional resources are needed to facilitate the updating and creation and to expedite hearings and would put any additional funding to use for the benefit of the public, but notes that this recommendation has significant fiscal impacts.

STUDIES/DATA

15. $1 MILLION TO CONTINUE WATER RIGHTS TECHNICAL SUPPORT FUND. **Request an appropriation** of $1 million to continue the Water Rights Technical Support Fund, as enacted by Senate Bill 62 (Chapter 493, *Statutes of Nevada 2005*) through the next biennium and until 2009. (Central Nevada Regional Water Authority, Ely, March 2006; Great Basin Water Network, Las Vegas, May 2006)

COMMENTS: The State Engineer is neutral as to this recommendation as it does not directly affect the Office of the State Engineer.

16. FUNDING FOR BASIN INVENTORIES. **Request an appropriation** to the Division of Water Resources for the purpose of contracting for groundwater basin studies to inventory surface, ground and domestic well water in basins where conflicts are identified and prioritized. The approximate cost is $1.6 million per basin study or about $3.2 to $4.8 million annually (2-3 studies). Studies would take approximately three years to complete and include the following:

> (a) Phase 1 comprised of geochemical studies; aerial photos of phreatophytes (vegetation which may provide evapotranspiration estimates); samplings of existing wells and springs for quantity and quality (water level measurements); precipitation information (collection of new data using USGS, PRIZM, or other calibrated models); installation of stream gages on perennial streams, estimation of non-perennial streams, and definition of existing uses: crops, livestock needs, wildlife needs, phreatophyte needs to prevent air quality/soil erosion problems; and
> (b) Phase 2 (for priority basins) with aquifer testing (well drilling, pumping and monitoring); recharge estimates from precipitation and from irrigation; hydrogeologic mapping to determine the framework or geometry of the aquifer or saturation of alluvial fills and bedrock limits; complete inflows or chloride mass balance tests; develop a groundwater budget of input and output to reach a balance; and use all the collected data and assumptions to create a full numerical model that can be used as a management tool to test water management scenarios.

This should assist the Office of the State Engineer in meeting the requirements of NRS 532.165. (Great Basin Water Network, Las Vegas, May 2006)

COMMENTS: The State Engineer supports the Governor's Budget as proposed, but recognizes the need for funding additional studies that may be required. However, the State Engineer would propose a less restrictive funding structure and more flexibility on the types and length of studies than outlined under Recommendation No. 16. The State Engineer suggests an approach similar to the revolving fund that found in NRS 532.320.

The State Engineer recommends the Committee consider a $5 million dollar fund that is to be replenished every biennium, which provides the State Engineer the discretion to determine the priority of basin studies and the type of study needed. These studies should be approached individually and it cannot be categorically stated that a particular basin study will require a specific amount of money or can be completed within a specific timeframe. The State Engineer understands the need for additional study, but suggests that a constant source of funding be provided that would assure the State Engineer the flexibility needed to determine which basin should be considered for study.

17. LEGISLATIVE COUNSEL BUREAU COMPARATIVE STUDY. **Direct the Legislative Counsel Bureau** (LCB) to undertake a comparative study of water resource organizational structures for several western states (Utah, Idaho and Arizona) to identify: (a) responsibilities for groundwater studies and conservation programs; (b) required water commitments for development; and (c) methods of how each state constructs the definitions of public benefits and public interests. The LCB study would be submitted to the 2009 Legislature. ALTERNATIVELY OR IN ADDITION TO SUBMITTAL TO THE LEGISLATURE, the Committee could direct that the report be submitted by January 1, 2008, to the interim committee assigned to review water resource issues. (Great Basin Water Network, Las Vegas, May 2006)

COMMENTS: The State Engineer is neutral as to what areas the Legislative Counsel Bureau should be studying, but also believes this recommendation is unnecessary.

The State Engineer is presently a member of the Western States Water Council that meets yearly to discuss the issues the various states are addressing and holds workshops twice a year where the State Engineer meets with other state engineers to discuss specific issues. The State Engineer is also a member of the Western State Engineers Association, which also annually holds a spring workshop and a fall meeting. Therefore, as part of the State Engineer's current job he has ongoing discussions with the western states as to their organizational structures and the other issues referenced.

18. ADOPT OF RESOLUTION DIRECTING COLLBORATION IN SHARING OF DATA. **Adopt a resolution** directing collaboration between the State Engineer, local governments, water districts and authorities, water purveyors, large commercial/agricultural users, other water users, and the sharing of water use data, with the goal of implementing a statewide information management system to assist in the development and management of groundwater resources. (Central Nevada Regional Water Authority, Ely, March 2006)

COMMENTS: The State Engineer believes this recommendation is unnecessary as there is already significant collaboration between entities within Nevada. We recommend the Committee not consider this recommendation under the time consuming process of adopting a resolution, but rather only as a statement in the report.

The State Engineer already makes every effort to make the data possessed by the Division of Water Resources readily available to the public. A considerable amount of time and effort has gone into the creation of databases of information that are now available to the general public over the internet. The State Engineer presently has the ability to enter into cooperative agreements with the United States Geological Survey and other entities for the sharing of data and sharing is taking place; therefore, the State Engineer believes there is already a mechanism in place for collaboration and it is being done. The State Engineer believes this recommendation has substantial fiscal impacts with regard to the maintenance of a statewide information management system and questions the anticipated funding source and staffing to maintain such a system.

19. LETTER FOR SUSTAINABLE GROUNDWATER DEVELOPMENT. **Send a letter** to Nevada's Congressional Delegation, Desert Research Institute, the University of Nevada Reno, and University of Nevada Las Vegas, urging them to work together to obtain funding for development of a statewide research program on sustainable groundwater development, including agricultural and urban conservation, policy research, and governance structures. (Central Nevada Regional Water Authority, Ely, March 2006)

COMMENTS: The State Engineer provides no comment regarding this recommendation because this office is unclear as to what objective this item hopes to achieve.

CONSERVATION/PLANNING

20. FUND FOR LOCAL WATER RESOURCE PLANNING. **Amend the statutes and request an appropriation** of $1 million to create a permanent need-based fund for local water resource planning and information management. The fund would provide grants similar to the grants provided by the Water Rights Technical Support Fund (S.B. 62) but the legislation would create a framework for long–term funding and provide clear direction for program administration by the State Board of Financing Water Projects. In addition, priority would be given to rural counties and local governments outside the urban areas within Clark and Washoe Counties. The Legislature's intent to consistently fund water resource planning and information management should be explicit in the bill. (Central Nevada Regional Water Authority and Great Basin Water Network, Las Vegas, May 2006)

COMMENTS: The State Engineer takes no position with regard to this recommendation.

21. FUND FOR GRANTS FOR WATER CONSERVATION, CAPITAL IMPROVEMENTS TO CERTAIN WATER SYSTEMS AND IMPROVEMENTS TO CERTAIN SEWAGE DISPOSAL SYSTEMS. **Amend the statutes** to expand the eligible uses of the Fund for Grants for Water Conservation, Capital Improvements to Certain Water Systems and Improvements to Certain Sewage Disposal Systems to include requests for need-based funding for water resource plan implementation, e.g., infrastructure development. This fund is administered by the State Board for Financing Water Projects and is commonly referred to as the A.B. 198 program (See NRS 349.984). Although new development must always be encouraged to pay for its own infrastructure, communities that lack the financial capacity, that is, an established body of rate-payers to supply primary infrastructure necessary to properly locate development may need assistance. In addition, priority would be given to rural counties and local governments outside the urban areas within Clark and Washoe Counties. Appropriate assistance for these communities can be provided by allowing the A.B. 198 program to make need-based grants or low interest loans aimed at expanding supply and transmission capability to meet future growth needs as identified in water resource plans. (Central Nevada Regional Water Authority and Great Basin Water Network, Las Vegas, May 2006)

COMMENTS: The State Engineer takes no position with regard to this recommendation.

22. NO FORFEITURE FOR CONSERVATION. **Amend the statutes** to prohibit forfeiture of water rights due to implementation of conservation measures, using Utah Code §73-1-4 as a model. (Water Resources Committee)

See attached Utah statute with pertinent sections highlighted under Tab C.

COMMENTS: The State Engineer does not oppose the concept that conserved water is not subject to the forfeiture provisions of Nevada water law; however, the specific provisions found in the Utah law may not translate appropriately into Nevada law. Nevada water law already provides a mechanism whereby a water right holder can file a request for extension of time to prevent forfeiture. The State Engineer would be more than willing to work with the bill drafters on the details and definitions of any proposed bill, but this is a very intricate area of the law and should be approached thoughtfully.

23. ROTATIONAL CROP MANAGEMENT. **Amend the statutes** to allow the State Engineer to approve rotational crop management contracts that thereby permit other uses of the conserved water, including leasing of such conserved water rights. The program would be based on recent Colorado legislation. See attached Colorado House Bill 06-1124 under Tab D. (Water Resources Committee)

COMMENTS: The State Engineer supports the concept of rotational crop management and Nevada Revised Statute 533.075 already provides for the rotation of surface water. However, the specific provisions found in the Colorado law may not translate appropriately into Nevada law. The State Engineer would be more than willing to work with the bill drafters on the details and definitions of any proposed legislation, but this is a very intricate area of the law and should be approached thoughtfully.

24. CONSERVATION PLANS. **Amend the statutes** to require water conservation plans to include what steps will be, and have been, taken to use water more efficiently and how much water may have been saved in various water use sectors, including urban, residential, commercial, agriculture, golf courses, and public facilities, such as schools, colleges, public buildings' indoor and outdoor use, and athletic fields. (Great Basin Water Network, Las Vegas, May 2006)

COMMENTS: The State Engineer believes this recommendation is unnecessary because Nevada Revised Statute 540.141 already define the factors that should be considered in a conservation plan.

25. ANNUAL REPORTING OF WATER USE. **Amend the statutes** to require annual reports from water providers serving 600 or more customers in counties whose population is greater than 100,000. These reports would accompany the annual water quality report and be distributed to ratepayers and the appropriate local government. Reports would include: (a) locations and amounts of water supplied by source; (b) total and average use of water by user groups, e.g., single-family, multi-family, commercial, resort-hotel casino, public facilities, golf courses; (c) total water loss in the water supply system; and (d) totals for income, expenditures, and debts of the water provider, as well as anticipated costs for each project planned within the upcoming 10 years. (Great Basin Water Network, Las Vegas, May 2006)

COMMENTS: The State Engineer is neutral on this recommendation as written, the State Engineer does recognize the value of this type of information on a statewide basis for regional planning and studies. The State Engineer already has the ability to require and has required annual reporting from many permittees.

26. RESOLUTION SUPPORTING WATER CONSERVATION. **Adopt a resolution** emphasizing the importance of and encouraging water conservation and further urging water providers to demonstrate water savings and to implement conservation (tiered) pricing. (Great Basin Water Network and Snake Valley Citizens Alliance, Ely, March 2006)

COMMENTS: While the State Engineer supports water conservation as an important element of planning, the State Engineer believes it would be wise to change this recommendation from the time consuming process of adopting a resolution to a statement in the report.

27. RESOLUTION ENCOURAGING RURAL DEVELOPMENT. **Adopt a resolution** encouraging rural development that matches the availability of water resources with new businesses and industry. (Humboldt River Basin Water Authority, Elko, April 2006; Val Taylor for Snake Valley Citizens Alliance, Ely, March 2006)

COMMENTS: While the State Engineer supports the concept that the availability of water resources should be considered in water planning and already reviews water plans submitted, the State Engineer believes it would be wise to change this recommendation from the time consuming process of adopting a resolution to a statement in the report.

INTERBASIN TRANSFERS

28. COUNTY SET ASIDE OF FEE FOR COMPENSATION FOR IMPACTS. **Amend the statutes** to authorize the counties to set aside up to $2 of the fee on interbasin transfers to be used for compensating private parties impacted by water exports (See NRS 533.438). The counties shall adopt ordinances setting forth the application process and criteria to be used for dispersal of the funds and for the administration of the set-aside, including any provisions for reversion to the County. According to testimony, protection of senior water rights would be a priority of any such "reparations" set-aside. (Brent Eldridge, White Pine County Commissioner, Ely, March 2006)

COMMENTS: Recommendation No. 28 appears only to affect local government and the distribution of funds under NRS 533.438; however, it appears to the State Engineer that the recommendation could have unintended consequences that will likely affect the Office of the State Engineer. The Legislature has already directed the State Engineer to review impacts to existing water rights as part of the application review process and an application cannot be granted if the State Engineer believes there will be impacts to existing rights. The State Engineer does not believe this recommendation is as simple as it appears and cannot support the recommendation at this time.

29. CONSUMPTIVE USE CAN ONLY BE TRANSFERRED. **Amend the statutes** to clarify that only consumptive use can be transferred between water basins. (Brent Eldridge, White Pine County Commissioner, Ely, March 2006)

COMMENTS: The State Engineer supports consumptive use limitations and under his current authority has been placing consumptive use limitations on the transfer of water to municipal purposes that has been previously used for irrigation. The State Engineer would like to work with the bill drafter on details and definitions as this a complex concept.

30. TEMPORARY INTERBASIN TRANSFERS. **Amend the statutes** to allow issuance of temporary permits for interbasin transfers and require data reports for three to five years as a condition of the permit. Data reports shall include water levels, recharge rates, impacts to habitat, and environmental impacts. At the end of the monitoring period the State Engineer shall hold a public hearing and determine whether to issue a final permit. (Warren Russell, Elko County Commissioner, Elko, April 2006)

COMMENTS: The State Engineer does not support this recommendation. Water developed under a temporary transfer should not be used for a permanent use, such as development in our cities and towns. The State Engineer signs off on subdivision maps and questions how those maps can be signed if the water rights are only considered to be temporary. The State Engineer has tools at his disposal to acquire data from the use of water permitted under an interbasin transfers and such a tool was utilized in State Engineer's Order No. 1169, wherein water right holders were required to pump existing rights and gather data before additional water going to be considered for appropriation.

31. RESOLUTION ON FACTORS STATE ENGINEER TO CONSIDER IN PERMITTING INTERBASIN TRANSFER. **Adopt a resolution** directing the State Engineer to consider the following during the permitting process for interbasin or intercounty transfer projects that result in the exportation of a significant portion of the groundwater resources: (1) a comprehensive baseline inventory of historical and current water uses and related environmental factors; (2) an in-place, continuing monitoring system to ascertain impacts; (3) incorporation of the baseline inventory and monitoring into the project, along with the hydrogeology studies; (4) implementation of testing; and (5) incremental development of the project. (Dean Baker for Snake Valley Citizens Alliance, Las Vegas, May 2006)

COMMENTS: The State Engineer believes this recommendation is unnecessary because he already has the statutory authority to perform these functions and can take these into account when reviewing interbasin transfer applications.

The State Engineer is not sure what a resolution hopes to accomplish, but this resolution is similar to legislation proposed last session that called for the adjudication of water rights in a basin before the allowance of an interbasin transfer. A comprehensive baseline inventory of historical and current water uses is the work that is performed in an adjudication. Requiring a comprehensive baseline inventory (an adjudication) and related environmental factors would have an enormous economic impact on Nevada in that it would essentially halt development all over the state in areas such as Reno, Sparks, Churchill County, Las Vegas and Mesquite, which are all looking outside the basins in which they are physically located for water to support their communities and would essentially stop all interbasin transfers from many years.

To complete a comprehensive baseline inventory of historical and current water uses and related environmental factors would first mean funding and finding dozens and dozens of qualified employees that would require significant training, would require millions of dollars on an annual basis for their salaries and equipment and would require support staff for data entry, and would require years of fieldwork. The State Engineer is already requiring monitoring plans for interbasin transfers of water and it is not clear what the recommendation means by implementation testing.

32. RESOLUTION DIRECTING BASELINE INVENTORY. **Adopt a resolution** directing the Division of Water Resources, SDCNR, to establish a baseline inventory over time, including: (a) information and data on certificated rights; (b) historical and actual uses; (c) proof of beneficial uses; and (d) itemization of acres affected by surface/subsurface flows or water tables that create meadows or pastures. Further, direct the Division to implement monitoring systems. (Connie Simkin, Caliente, February 2006)

COMMENTS: The State Engineer believes this recommendation is unnecessary because he already has the statutory authority to perform these functions and much of the information currently exists within the Division of Water Resources.

The Division of Water Resources already has information on certificated water rights in its database. In basins where annual pumpage inventories are performed, the Division of Water Resources has information on historical and actual water use. Where pre-statutory water right holders have filed claims of vested water rights, that information is also available in the Division of Water Resources. All permittees are required to file proof of beneficial use during the certification process. As to the itemization of acres affected by surface/subsurface flows or water tables that create meadows or pastures, in Nevada it is most likely that a claim of pre-statutory vested right exists and would be considered during the adjudication process. This request, like the one in Item No. 31 would require a substantial increase in the workforce and budget of the Division of Water Resources. To inventory every basin every year would require an extremely large financial expansion of the budget for the Division of Water Resources for fieldwork and furtherance of the adjudication of every basin.

33. NEW MODELS. **Send a letter** requesting the State Engineer to investigate new models estimating impacts from interbasin transfers of large quantities of water. (Brent Eldridge, White Pine County Commissioner, Ely, March 2006)

COMMENTS: The State Engineer has no objection to a letter being issued as he always considers the newest models.

34. STATEMENT TO SOUTHERN NEVADA WATER AUTHORITY. **Include a statement in the final report** urging the Southern Nevada Water Authority and the State Engineer, in connection with an interbasin transfer, to: (1) develop a clear description of the project; (2) identify and investigate the potential environmental and socio-economic impacts of the project; (3) ensure that rural communities have adequate water for future development; (4) develop and implement a rigorous monitoring program; (5) regulate purchases from urban areas; and (6) consider conveyance of water by lease rather than transfer of ownership. (Greg James, Attorney, Las Vegas, May 2006)

COMMENTS: The State Engineer believes this recommendation is unnecessary, as he is already required by statute to perform the functions suggested in this proposal.

The State Engineer believes the potential environmental impacts will be addressed during the water rights hearing process and the federal environmental review process conducted under the National Environmental Policy Act. Nevada water law found in NRS 533.370(6) requires the State Engineer to address whether an interbasin transfer is environmentally sound as it relates to the basin from which the water is exported and whether the proposed interbasin transfer is an appropriate long-term use which will not unduly limit the future growth and development in the basin from which the water is exported. The State Engineer is already requiring monitoring programs on interbasin transfers of water. The State Engineer is not clear as to what the proposal is attempting to address as to regulating purchases from urban areas, and therefore, makes no comment on this provision. It is unclear what the person proposing the conveyance of water by lease rather than transfer of ownership meant and therefore makes no comments on this provision.

WELLS/GROUNDWATER ISSUES

35. FORFEITURE NOTICE. **Amend the statutes** to require that the State Engineer to give notice in all basins prior to forfeiture for nonuse of water. In the absence of pumping records in certain basins, the State Engineer may base a notice of forfeiture on other evidence of nonuse. Currently, prior to forfeiture the State Engineer must give notice of four years of nonuse only in basins for which the State Engineer has pumping records, also referred to as inventoried basins. See NRS 534.090. (Assemblyman Pete J. Goicoechea, District No. 35, Las Vegas, October 2005)

COMMENTS: The State Engineer will support this recommendation with considerations similar to those discussed during the previous amendments of NRS 534.090. This provision should not be used to re-start the clock on water rights having more than 5 consecutive years of non-use at the time any legislation is enacted. The recommendation also raises a number of practical considerations described below.

In basins where the State Engineer does not conduct pumpage inventories, a person or entity outside the Office of the State Engineer may initiate a forfeiture proceeding. In order to determine if there was any validity to the allegation, the State Engineer would be required to hold a hearing to determine if there is clear and convincing evidence of non-use. Under this provision the person would then get notice after the hearing of the potential forfeiture? Another example is where a water right permit holder has filed extensions of time to prevent forfeiture. It is the water right holder themselves that has informed the State Engineer that the water is not being used. If use of the water is not timely resumed, is the water right forfeited or would this provision then require an additional notice of possible forfeiture? The State Engineer would be concerned about the retroactive application of such as statute, as he was when the statute applicable to inventoried basins was enacted.

36. PRIORITY DATE ON DOMESTIC WELL. **Amend the statutes** to set the priority date for a domestic well as the completion date of the well as stated on the well log submitted to the Division of Water Resources, SDCNR, by the well driller. (State Engineer, Las Vegas, May 2006; Central Nevada Regional Water Authority, Ely, March 2006)
See attached memorandum from State Engineer under Tab A.

COMMENTS: The State Engineer originated this recommendation and continues to support it. Please see the memorandum from the State Engineer attached to the Work Session Documents as Tab A.

37. MOTHER-IN-LAW QUARTERS: **Amend the statutes** to address water service to auxiliary dwellings, e.g., caretaker's quarters or mother-in-law unit, from a domestic well if: (a) local ordinances allow for such uses; and (b) with the condition that a meter be installed on the well to measure usage to ensure the total water pumped does not exceed 2 acre feet. In addition, the proposed amendment would quantify the limit on domestic use as 2 acre-feet per year instead of 1,800 gallons per day (gpd). This change recognizes that more water is usually needed in the summer months than in the winter months and that the total annual use from a domestic well is what is used for planning purposes. See NRS 534.013 and 534.180.
(State Engineer, Las Vegas, May 2006)

COMMENTS: The State Engineer originated this recommendation and continues to support it. Please see the memorandum from State Engineer attached to the Work Session Documents as Tab A.

38. FINING AUTHORITY. **Amend the statutes** to authorize the State Engineer to order any person in violation of the provisions of NRS Chapter 534 and NAC Chapter 534 to: (a) pay an administrative fine not to exceed $10,000 per day for each violation; and (b) be liable for any expense incurred by the Division of Water Resources, SDCNR, in investigating and stopping the violation. Any appeal of a violation will be done through the courts pursuant to NRS 533.450. The details for addressing violations, assessing fines or penalties, and procedures will be done through the promulgation of rules and regulations. (State Engineer, Las Vegas, May 2006)
Note: This recommendation may be moot if the Committee approves Recommendation No. 2. See attached memorandum from State Engineer under Tab A.

COMMENTS: The State Engineer originated this recommendation and continues to support it. Please see the memorandum from State Engineer attached to the Work Session Documents as Tab A.

39. CEASE PUMPING ORDER. **Amend the statutes** to clarify that the State Engineer can order a groundwater permittee to cease pumping if monitoring shows significant impacts. (Senator Mark E. Amodei, Capital Senatorial District; Warren Russell, Elko County Commissioner, Elko, April 2006)

COMMENTS: The State Engineer supports this recommendation as it clarifies his present authority.

Under NRS 534.110 the State Engineer can regulate the use of water under a municipal, quasi-municipal or industrial permit to limit or prohibit the pumping of water to prohibit any unreasonable adverse effect on an existing domestic well located within 2,500 feet of the well, unless the holder of the permit and the owner of the domestic well have agreed to alternative measures to mitigate the adverse effects. The State Engineer may currently order a water right holder to cease pumping if adverse impacts are being caused to a senior water right holder.

40. DEDICATION FOR DOMESTIC WELLS. **Amend the statutes** to require a minimum dedication of water rights for parcel maps if local ordinances do not regulate domestic wells. ALTERNATIVELY, amend the statutes to require the State Engineer to initiate designation of basins in jurisdictions without local regulation of domestic wells and to require the dedication of water rights for parcel maps in designated basins. See NRS 278.462 and NRS 534.430. (Senator Mark E. Amodei, Capital Senatorial District, Elko, April 2006)

COMMENTS: The State Engineer supports this recommendation but the authority to require the dedication of water rights should be discretionary instead of being required.

41. DOMESTIC WELL IMPACTS. **Adopt a resolution** urging counties and cities concerned about the impact of domestic wells on water resources to enact local ordinances that require water rights for drilling of domestic wells on newly created parcels. Furthermore the water right dedicated for the domestic well, held by the county or city, could be transferred to a public utility when or if the parcel is served by a municipality or a water purveyor regulated by the Public Utilities Commission or the Nevada Division of Environmental Protection, SDCNR. (Steve Walker, Ely, March 2006)

COMMENTS: The State Engineer supports urging cities and counties to consider the impacts of domestic wells on water resource availability.

42. GROUNDWATER PUMPING. **Send a letter** to the State Engineer urging him to consider the recommendations of the Advisory Committee for Groundwater Management in the Las Vegas Valley to bring well owners into compliance with permit terms or statutory limits on groundwater pumping through a graduated assessment structure based upon the quantity of water overpumped and the duration of non-compliance with permit or statutory limits, with an allowance for meter error. Further, for certain residential properties with allocations of less than 1,000 gpd per residence, urge the State Engineer to support the Advisory Committee's recommendation that penalties only be applied to water use over 1,000 gpd.
Note: This letter would be sent upon the passage of a bill amending the statutes to authorize the State Engineer to levy fines for overpumping. (John Hiatt, Advisory Committee for Groundwater Management, Las Vegas, May 2006)

COMMENTS: Please see the State Engineer's comments as to Recommendation No. 2 – fining authority for overpumping.

The State Engineer does not agree there should be any provision for graduated assessment. Either a permit holder is pumping within the conditions of the water right permit or the limitations on domestic wells or he is not. The proposal confuses water right permits with the statutory limitations placed on domestic wells and the two should not be mixed. Community wells operating under water right permits are distinct from domestic wells presently exempt from the permitting process.

43. DOMESTIC WELL QUANTITY PUMPED. **Amend the statutes** to allow the daily pumping limit of 1,800 gpd for domestic wells to be averaged over a calendar year for the purpose of determining compliance with pumping limits. (Ray Preston for Nevada Well Owners Association, Las Vegas, May 2006)

COMMENTS: Under Item No. 37, the State Engineer has proposed amending the statutes to allow 2 acre-feet per year to be pumped from a domestic well; therefore, this recommendation may be unnecessary.

44. OVER PUMPING BY DOMESTIC WELL OWNERS. **Amend the statutes** to enable domestic or quasi-municipal well owners to "purchase" additional water (over the 1,800 gpd)

from the local water purveyor to address overuse through an offset mechanism whereby the water purveyor would reduce its pumping by an equivalent amount. (Ray Preston for Nevada Well Owners Association, Las Vegas, May 2006)

COMMENTS: The State Engineer opposes this recommendation.

If a domestic well owner is going to use more water than allotted for a domestic purpose, the well owner should obtain a water right. This proposal conflicts with the fundamental application of Nevada water law.

45. TRADING ALLOCATION POOL. **Amend the statutes** to enable domestic or quasi-municipal well owners to form a "Trading Allocation Pool (TAP)" consisting of credits from owners of wells using less than 1,800 gpd that are sold to the TAP for purchase by well owners desiring to exceed the 1,800 gpd limit. The TAP could be a non-profit organization or implemented by a willing water purveyor. (Ray Preston for Nevada Well Owners Association, Las Vegas, May 2006)

COMMENTS: The State Engineer opposes this recommendation.

There has been continual confusion by domestic well owners between the rights of use under a domestic well and the rights of use under community well permit holders. If the domestic well owner is going to use more water than allotted for a domestic purpose, the well owner should obtain a water right and file a change application under Nevada's water law. This provision would require meters to be placed on all domestic wells resulting in a need for additional monitoring of those wells.

46. DOMESTIC WELL USE. **Adopt a resolution** urging the State Engineer and local governments, water districts and authorities, water purveyors, and others, to work together to predict and quantify domestic well use to facilitate planning and mitigation. (Central Nevada Regional Water Authority, Ely, March 2006)

COMMENTS: The State Engineer believes this recommendation may be unnecessary as the number of domestic wells are already qualitified.

47. MITIGATION POLICY. **Send a letter** to the Division of Water Resources, SDCNR, requesting the development of policies for mitigation for over-appropriation of groundwater and asking the Division to report its findings to the 2009 Legislature. (Central Nevada Regional Water Authority, Ely, March 2006)

COMMENTS: The State Engineer believes this recommendation is unnecessary and that the activities it contemplates with such a broad directive would be extremely time consuming and a waste of valuable staff time that is being demanded in other places. Nevada water law provides a policy for over-appropriation and it is found in the concept of basin regulation by priority of right. *See* NRS § 534.110 and 534.120. Additionally, the State Engineer has the

authority to order cessation of pumping if impacts are demonstrated to existing rights. The State Engineer believes mitigation should be considered on a case-by-case basis and often is a matter of resolution between parties with conflicting rights. The State Engineer does not agree that specific written policies are useful or warranted, and as such would have to oppose this recommendation at this time.

48. SUBSURFACE IRRIGATED LANDS. **Include a statement in the final report** urging the State Engineer to look at impacts on subsurface irrigated lands when approving groundwater permits. (Connie Simkin, Caliente, February 2006)

COMMENTS: The State Engineer believes this recommendation is unnecessary. The State Engineer addresses impacts to existing rights during the application review process and would assess whether a water right had been alleged as to irrigated lands.

MISCELLANEOUS

49. INTERIM STANDING COMMITTEE. **Amend the statutes** to create an interim standing committee on water resources with a sunset date of June 30, 2015. (Water Resources Committee)

COMMENTS: Over the last 46 years numerous interim committees have been created and committee reports exist from 1959, 1981, 1985, 1991 and 1994 with another going to be presented by this Committee. These committees have performed comprehensive reviews of Nevada water law and policy and all have reached similar basic conclusions, that Nevada's water law works well and the policy should be to maintain and preserve the water resources of the state and to promote, participate in and fund basic studies. These committees have also spent considerable amounts of time discussing speculation, conservation, interbasin and intercounty transfers of water and development of resources from the carbonate-rock aquifer(s), staffing and water planning. These reports have provided valuable and productive information and have adequately addressed the policy matters that will face us in the future. While the work of these committees have resulted in important legislation, the State Engineer does not believe a standing committee is warranted, but rather the committees appointed every decade or so are sufficient to address the issues important to Nevada's citizens. In addition, while appreciating the work of the committees, the State Engineer notes that significant amounts of time are spent by the State Engineer and his staff in preparation for and attendance at the committee meetings, while at the same time the Legislature has directed the State Engineer to handle the backlog of pending applications. This conflict of tasks reduces the efficiency of the Office of the State Engineer and results in delays in decisions on specific water right matters at a time the public is requesting things be handled more expeditiously. Unless there is a truly valid purpose in continuing the committee, the State Engineer believes his time is better spent working on increasing the output of all matters pending in the Office of the State Engineer and questions whether the creation of another interim committee is warranted at this time.

50. LINCOLN COUNTY WATER DISTRICT. **Amend the Lincoln County Water District Act** (S.B. 336–2003 Session) to require election of the Water District Board so that the Lincoln

County Commission would no longer function as the Water District Board. (Warren and Ruby Lister, Elko, April 2006)

COMMENTS: The State Engineer has no comments as to this recommendation.

51. HUGH RICCI. **Adopt a proclamation** from the Committee commending Hugh Ricci for his years of state service and retirement as State Engineer. (Water Resources Committee)

COMMENTS: The State Engineer would support the recommendation.

APPENDIX C

Letter dated June 2, 2006, from State Engineer on Bill Draft Proposals

APPENDIX C

KENNY C. GUINN
Governor

STATE OF NEVADA

ALLEN BIAGGI
Director

HUGH RICCI, P.E.
State Engineer

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DIVISION OF WATER RESOURCES
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MEMORANDUM

Date: June 2, 2006

To: Members of the Legislative Commission's Committee to Study the Use, Management and Allocation of Water Resources
(S.C.R. 26, File No. 100, *Statutes of Nevada 2005*)

Through: Susan Scholley, Chief Principal Research Analyst, Research Division

From: Hugh Ricci, P.E., State Engineer

Subject: Bill Draft Proposals

The following are three (3) bill draft suggestions for your consideration. They address the issue with mother-in-law quarters, priorities for domestic wells and request authority to fine for violations of the water law. The first two bill drafts provide specific statutory amendment language however the third bill draft simply requests authority for penalties. Our office is working on specific language for penalties based on recently adopted language in other states. We hope we will have the opportunity to provide this language to you in the very near future.

In addition to the bill draft language, two of the three drafts would have fiscal impacts to our office. These costs will not be included in our budget for '08-'09.

We look forward to working through any and all language you will be considering for bill drafts. As always, thank you for all your help during this interim-study period.

APPENDIX C

BDR – Mother-In-Law Quarters

Issue:

There are areas in the state where there is more than one residence connected to a domestic well illegally, OR there is a desire to hook-up an additional residence to a domestic well. In areas where the State Engineer has issued an order denying any new quasi-municipal (community well) permits, a person wanting to hook-up an auxiliary dwelling to his domestic well is forced to purchase an existing water right and move it to the domestic well which can be cost prohibitive.

Concept:

The following language are amendments to NRS 534.013 and 534.180 which provides auxiliary dwellings on a domestic well in those areas where local ordinances allow for it and with the condition that a meter be installed on the well to measure usage to ensure the total water pumped does not exceed 2 acre feet.

In addition, domestic use is quantified as 2 acre-feet per year instead of 1,800 gallons per day. This amendment will clear up the issue of allowing only 1,800 gallons of usage per day regardless of the time of year. Obviously, more water is needed in the summer months than in the winter months and ultimately, the total annual use from a domestic well is what is used for planning purposes.

Fiscal Impact:

Yes. One additional staff engineer will be needed to review and monitor these new uses at an annual cost of approximately $70,000 and an initial expenditure of $25,000 to cover a vehicle, computer and office furniture.

NRS 534.013 "Domestic use" defined. "Domestic use" or "domestic purposes" extends to culinary and household purposes directly related to a single-family dwelling, ***unless local planning agency ordinances extends such use to buildings accessory to said single family dwelling***, including, without limitation, the watering of a family garden and lawn and the watering of livestock and any other domestic animals or household pets, if the amount of water drawn does not exceed the ~~threshold daily~~ maximum amount set in NRS 534.180.

NRS 534.180 Applicability of chapter to wells used for domestic purposes; registration and plugging of wells used for domestic purposes.

1. Except as otherwise provided in subsection 2 and as to the furnishing of any information required by the State Engineer, this chapter does not apply in the matter of obtaining permits for the development and use of underground water from a well for domestic purposes where the draught does not exceed ***two (2) acre feet per year.*** ~~daily maximum of 1,800 gallons.~~
2. The State Engineer may designate any groundwater basin or portion thereof as a basin in which the registration of a well is required if the well is drilled for the development and use of underground water for domestic purposes. A driller who drills such a well shall register the information required by the State Engineer

within 10 days after the completion of the well. The State Engineer shall make available forms for the registration of such wells and shall maintain a register of those wells.

3. The State Engineer may require the plugging of such a well which is drilled on or after July 1, 1981, at any time not sooner than 1 year after water can be furnished to the site by:

(a) A political subdivision of this State; or

(b) A public utility whose rates and service are regulated by the Public Utilities Commission of Nevada, but only if the charge for making the connection to the service is less than $200.

4. For those domestic wells supplying water to an accessory dwelling as defined by the local planning agency and pursuant to NRS 534.013, the following conditions apply:

a) Any such approval by a local planning agency shall require a meter that shall measure the total amount of water use from the well and that use shall not exceed two (2) acre feet per year. The local planning agency shall inform the state engineer of the use of a domestic well in this manner on a form supplied by the state engineer. The state engineer will be responsible for monitoring water use from the well and taking any enforcement action for violations of this chapter.

b) No other manner of use will be allowed from a domestic well. The priority for any new use from a well under this section will be the date of the approval by the local planning agency. The priority date for the previous use will be the date in which the well was completed as evidenced by the well log required under NRS 534.170.

BDR - Domestic Well Priority

Issue:

The statutes are silent regarding the priority of domestic wells. The priority of permitted wells is the date that the original application is filed in the office of the State Engineer. Because domestic use does not require the filing of a water rights application, there is no coinciding priority date. The foundation of Nevada's water law is first-in-time, first-in-right, therefore it is critical to have a priority for domestic wells.

Concept:

The following language is an amendment to NRS 534.080 and provides for assigning a priority to domestic wells.

Fiscal Impact:

No.

NRS 534.080 Appropriation of underground water for beneficial use from artesian or definable aquifer: Acquisition of rights under chapter 533 of NRS; orders to desist; dates of priority.

1. A legal right to appropriate underground water for beneficial use from an artesian or definable aquifer subsequent to March 22, 1913, or from percolating water, the course and boundaries of which are incapable of determination, subsequent to March 25, 1939, can only be acquired by complying with the provisions of chapter 533 of NRS pertaining to the appropriation of water.

2. The State Engineer may, upon written notice sent by registered or certified mail, return receipt requested, advise the owner of a well who is using water therefrom without a permit to appropriate such water to cease using such water until he has complied with the laws pertaining to the appropriation of water. If the owner fails to initiate proceedings to secure such permit within 30 days from the date of such notice he shall be guilty of a misdemeanor.

3. **The date of priority:**
   a. **of all appropriations of water from an underground source, pursuant to 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.**
   b. **for domestic wells as defined under NRS 534.013, is the completion date of the well as stated on the well log submitted to the division by the responsible driller.**

BDR - Penalties

Issue:

The existing process for addressing violations of the water law is slow and cumbersome without any meaningful consequence or accountability for violations. Therefore, additional penalty authority is needed to ensure the proper and appropriate use of Nevada's water resources.

Concept:

Provide the state engineer authority to order any person in violation of the provisions under Nevada Revised Statutes (NRS) chapters 533, 534, 535, 536 and Nevada Administrative Code (NAC) chapters 534 and 535 to:

1. Pay an administrative fine not to exceed $10,000 per day for each violation; and
2. Be liable for any expense incurred by the Division of Water Resources in investigating and stopping the violation.

Any appeal of a violation should be done through the courts pursuant to NRS 533.450.

It is envisioned that the details for addressing violations, assessing fines or penalties, etc., would be done through the promulgation of rules and regulations. We welcome the opportunity to provide you with language we have drafted based on recently adopted codes from other states.

Fiscal Impact:

Yes. Two additional staff engineers and one additional Deputy Attorney General will be needed to enforce the new regulations at an annual cost of approximately $250,000 and an initial expenditure of $30,000 to cover a vehicle, computer and office furniture.

What violations should be subject to a fines/penalties?

The following sections within the water law provide for misdemeanors against any violators. The State Engineer is seeking penalty authority within those statutes:

NRS Chapter 533

- Willful waste of water, illegal uses (533.460)
- Interference with headgates (533.465)
- Violations of any of the provisions of 533.010 to 533.475 (533.480)
- Illegal livestock watering (533.505)
- Unlawful diversion and waste of water (533.530)

NRS Chapter 534

- Any person using water after a permit has been withdrawn, denied, cancelled, revoked or forfeited (534.050)
- Waste of water from an artesian well (534.070)
- Owner of a well who is using water without a permit to appropriate such water (534.080)
- Violating any of the provisions of 534.010 to 534.180 shall be guilty of a misdemeanor.

NRS Chapter 535

- Any person beginning the construction of a dam before approval of plans and specs (535.010)
- Whenever any appropriator of water has the lawful right-of-way for the storage, diversion or carriage of water, it shall be unlawful to place or maintain any obstruction that shall interfere with the use of his works or prevent convenient access thereto (535.090)
- Unlawful removal, damage or destruction of piling, dike, dock or lock; unlawful structures. (535.110)

NRS Chapter 536

- Every person who shall willfully and maliciously remove, damage or destroy a ditch or flume lawfully erected for carrying water or draining land. (536.120)

NAC 535

- A person who violates any provision of this chapter.

Additional areas where fines and penalties should apply:

NAC 534

- Well Drilling Infractions
  - Well Plugging
  - Well Construction
  - Licensing/Non-licensing issue
  - Failure to file required paperwork
  - Fraudulent paperwork

APPENDIX D

Proclamation for Hugh Ricci

STATE OF NEVADA

PROCLAMATION

WHEREAS, Hugh Ricci was born in east Ely in 1944 to proud Italian-American parents; and

WHEREAS, Hugh enjoyed all that eastern Nevada had to offer while growing up and acquired a lifelong appreciation of all things Italian; and

WHEREAS, Hugh attended the University of Nevada Reno, graduated with a B.S. in Civil Engineering in 1967, and then served his country in the U.S. Army; and

WHEREAS, Hugh began his employment with the State of Nevada in 1970 as a Civil Engineer with the Nevada Department of Highways and, in 1974, transferred to the Nevada Division of Environmental Protection as an Environmental Engineer in the Air Quality Section; and

WHEREAS, In 1981, Hugh went to work for the Division of Water Resources and served in a variety of positions, ultimately becoming a Deputy State Engineer; and

WHEREAS, In 2000, Hugh was appointed State Engineer and served as State Engineer for six years—surviving three legislative sessions—until his retirement in June 2006; now, therefore, be it

PROCLAIMED, That the Legislative Commission's Committee on the Use, Management, and Allocation of Water Resources extends its gratitude to Hugh Ricci for his lifelong service to the people of Nevada and for his assistance to the Committee during the 2005-2006 interim; and be it further

PROCLAIMED, That the Committee on the Use, Management, and Allocation of Water Resources recognizes Hugh Ricci's service as State Engineer—a difficult job in the driest state in the U.S.—and extends its best wishes to him and his wife Pam, and to his enjoyment of a well-earned retirement of rock hunting and remodeling.

DATED this 1st day of December, 2006.

Dean A. Rhoads

Nevada State Senator Dean Rhoads,
Chairman, Committee on Water Resources

APPENDIX E

Suggested Legislation

The following Bill Draft Requests will be available during the 2007 Legislative Session, or can be accessed after "Introduction" at the following Web site: http://www.leg.state.nv.us/74th/BDRList/.

BDR R-204 Urges Various Actions Concerning Water Resources.

BDR 17-205 Establishes a Statutory Legislative Committee on Water Resources.

BDR 48-206 Authorizes the State Engineer to Impose Administrative Fines for Certain Violations.

BDR 48-207 Makes Various Changes Relating to Funding for Water Resource Planning and Implementation.

BDR 48-208 Makes Various Changes Relating to Water Resources.

IN THE SUPREME COURT OF THE STATE OF NEVADA

CORPORATION OF THE PRESIDING BISHOP OF THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS, on Behalf of CLEVELAND RANCH,

Petitioner,

vs.

THE SEVENTH JUDICIAL DISTRICT COURT of the State of Nevada, in and for the County of White Pine; and THE HONORABLE ROBERT E. ESTES, Senior District Judge,

Respondents,

and

JASON KING, P.E., in his official capacity as the Nevada State Engineer, and the NEVADA DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES, DIVISION OF WATER RESOURCES, and SOUTHERN NEVADA WATER AUTHORITY,

Real Parties in Interest.

Case No. 65424

District Court Case Nos.:
CV-1204050
CV-1204051
CV-1204052
CV-1204053
CV-1204054
CV-1205066
CV-0418012
CV-0419012

APPENDIX TO CORPORATION OF THE PRESIDING BISHOP OF THE CHURCH OF LATTER-DAY SAINTS ON BEHALF OF CLEVELAND RANCH'S RESPONSE TO STATE OF NEVADA'S ANSWER TO PETITION FOR LIMITED WRIT REVIEW

VOLUME III

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5	Nevada State Engineer's Answering Brief	04/15/13	III	359-477
6	*Use, Management, and Allocation of Water Resources* Legislative Counsel Bureau Bulletin No. 07-11	01/2007	III	478-558
7	Summary of Legislation - Nevada Legislature Seventy-Fourth Session (Excerpts)	06/05/07	III	559-562
8	Public Hearing Transcript-Volume 11 (Excerpts)-Prieur testimony	10/10/11	III	563-565
9	Public Hearing Transcript- Volume 12 (Excerpts)-Watrus testimony	10/11/11	III	566-571
10	Public Hearing Transcript- Volume 16 (Excerpts)-Jones testimony	11/16/11	III	572-588

APPENDIX 5

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IN THE SEVENTH JUDICIAL DISTRICT COURT OF THE STATE OF NEVADA

IN AND FOR THE COUNTY OF WHITE PINE

MILLARD COUNTY, UTAH AND JAUB COUNTY, UTAH, et al. Petitioners, vs. JASON KING, P.E., in his official capacity as NEVADA STATE ENGINEER, DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES, DIVISION OF WATER RESOURCES, Respondent, and SOUTHERN NEVADA WATER AUTHORITY, Respondent-Intervenor.	Case No.: CV 1204049 (and consolidated cases) Dept. No.: I

NEVADA STATE ENGINEER'S ANSWERING BRIEF

Respondent, Jason King, P.E., Nevada State Engineer ("State Engineer"), by and through his legal counsel, Attorney General CATHERINE CORTEZ MASTO, and Senior Deputy Attorney General BRYAN L. STOCKTON and CASSANDRA P. JOSEPH, Senior Deputy Attorney General, hereby files his Answering Brief.

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Nevada Office of the Attorney General
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Submitted this 15th day of April 2013.

CATHERINE CORTEZ MASTO
Attorney General

By: 

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POINTS AND AUTHORITIES

I. INTRODUCTION

The State Engineer interprets Nevada water law to require a balance of the need to protect existing rights and maintain the long-term sustainability of limited water resources, while allowing for the maximum beneficial use of the resource for the benefit of the State and its people. *See, Bacher v. State Engineer*, 122 Nev. 1110, 1116, 146 P.3d 793, 797 (2006)("state regulation like that in NRS Chapters 533 and 534 is necessary to strike a sensible balance between the current and future needs of Nevada citizens and the stability of Nevada's environment.").

The State Engineer's careful consideration of Southern Nevada Water Authority's (SNWA) applications to appropriate water from the Spring, Cave, Dry Lake and Delamar Valleys (Valleys) in Eastern Nevada for beneficial use is plainly apparent in Rulings 6164, 6165, 6166, and 6167 (Rulings). Following a six-week long hearing, the State Engineer methodically applied the evidence to the law and found that each criteria was met for appropriation of some, but not all, of the water requested in the applications. Therefore, as required by NRS 533.370, the State Engineer properly approved the applications for appropriation of the amount of water available for appropriation from the Valleys' groundwater basins.

Using the interbasin transfer criteria, the State Engineer found that SNWA is responsibly utilizing the water resources currently available, and that the water from the relatively underdeveloped Valleys is necessary to satisfy the municipal needs in Southern Nevada. In addition, the State Engineer determined that development of the groundwater from the basins would not conflict with existing water rights, was environmentally sound as it relates to the basins, and would not threaten to prove detrimental to the public interest. In making each of these determinations, the State Engineer relied upon extensive evidence that the State Engineer found represented the best available science. NRS 533.09(1)(c).

Further, the State Engineer included significant safeguards as conditions to the permits granted pursuant to the applications in order to predict any unreasonable effects of

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development before those effects occur. First, the State Engineer required development to occur in three stages such that the amount of water pumped is initially limited. Second, the State Engineer required the implementation of comprehensive hydrological and biological monitoring, management and mitigation plans to closely scrutinize any effects of development by comparing those effects to baseline conditions in the Valleys.

None of the Appellants' arguments presents any basis for this Court to reverse the State Engineer's Rulings. This Court must decline Appellants' repeated requests to reweigh the evidence, and instead the Court must give deference to the State Engineer's findings. Because each of the State Engineer's findings is supported by substantial evidence, the Rulings should be upheld by this Court.

II. STATEMENT OF THE ISSUES

1. Do Appellants bear the Burden of Proof on appeal as specified in NRS 533.450(10)?

2. Did the State Engineer approve groundwater mining?

3. Can the State Engineer manage groundwater in Nevada?

4. Did SNWA demonstrate a need to import water?

5. Did SNWA demonstrate its good faith intention, financial ability and reasonable expectation to construct the works?

6. Was the State Engineer's determination of perennial yield in the basins supported by substantial evidence?

7. Was the State Engineer's determination concerning future growth supported by substantial evidence?

8. Was the State Engineer's determination that development of the groundwater was environmentally sound as it relates to the Valleys supported by substantial evidence?

9. Was the State Engineer's determination that development of the groundwater would not threaten to prove detrimental to the public interest supported by substantial evidence?

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10. Was the State Engineer's determination that the monitoring, management and mitigation plans would be effective supported by substantial evidence?

11. Was the State Engineer's determination that the applications would not adversely affect air quality supported by substantial evidence?

12. Was the State Engineer's determination that the applications will not conflict with the Cleveland Ranch water rights supported by substantial evidence?

13. Is capture of all evapotranspiration required by Nevada law?

14. Do the State Engineer's rulings violate notions of due process or constitute a taking?

15. Does the public trust doctrine apply to the approval of a groundwater appropriation?

16. Was the State Engineer's determination that the applications will not affect reserved rights supported by substantial evidence?

17. Did the State Engineer properly admit the stipulations between SNWA and the Department of the Interior into evidence?

18. Is the United States an indispensable party?

19. Did the State Engineer err by failing to specifically consider the Tribes' cultural and spiritual uses of the natural resources as part of the public interest analysis?

III. STATEMENT OF THE CASE

A. Spring Valley

On October 26, 2005, the State Engineer gave notice scheduling a prehearing conference on Applications 54003 through 54021 for January 5, 2006. Prior to the prehearing conference, a group led by Great Basin Water Network (GBWN) requested that the protest period for the SNWA Applications be re-opened. ROA 7. After a second request was filed to re-open the protest period, on July 26, 2006, the State Engineer issued Intermediate Order No. 3 and denied the request, concluding that the time for filing protests was statutory, and that he did not have the statutory authority to re-open the protest period.

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ROA 7. GBWN appealed the order, and it was upheld by the District Court on May 30, 2007. ROA 8. GBWN appealed the order to the Nevada Supreme Court. ROA 8.

While the procedural questions were on appeal, the State Engineer held a hearing in September 2006 to consider the Spring Valley applications. ROA 7. The State Engineer issued Ruling 5726 on April 16, 2007, granting 15 of the 19 Applications and denying the remaining four. ROA 7-8. No substantive appeal was taken from Ruling 5726.

On June 17, 2010, the Nevada Supreme Court issued its final order on the GBNW appeal. ROA 8. The court held that the State Engineer had erred by not considering the Applications within one year of the close of the protest period. ROA 8. The court held that "the proper and most equitable remedy is that the State Engineer must re-notice the applications and reopen the protest period." *Great Basin Water Network v. State Engineer*, 126 Nev. Adv. Op. 20. 234 P.3d 912, 920 (2010).

B. Cave, Dry Lake and Delamar Valleys

In February 2008, the State Engineer held a hearing to consider Applications 53987 and 53988 in Cave Valley, Applications 53989 and 53990 in Dry Lake Valley, and Applications 53991 and 53992 in Delamar Valley. ROA 222, 392, 556. The State Engineer issued Ruling 5875 on July 9, 2008.

A group of Protestants led by Carter-Griffin, Inc. appealed Ruling 5875, and in October 2009, the District Court vacated Ruling 5875 and remanded the matter to the State Engineer. ROA 222, 392, 556. The State Engineer and SNWA appealed that decision to the Nevada Supreme Court. ROA at 222, 392, 556. On September 13, 2010, the Nevada Supreme Court issued an Order Dismissing Appeal holding that the appeal was moot in light of their holding in *Great Basin Water Network v. State Engineer*, 126 Nev. Adv. Op. 20, 234 P.3d 912 (2010).

C. Subsequent Proceedings Related to Spring, Cave, Dry Lake and Delamar Valleys

In January 2011, in response to the Nevada Supreme Court's decision, the State Engineer re-noticed the SNWA Applications and re-opened the protest period. ROA 9. The State Engineer further ordered that successors-in-interest to water rights or domestic wells

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could pursue their predecessors' protests. ROA 9. The State Engineer conducted prehearing proceedings and ordered the exchange of evidence. ROA 9-10. Protests by the federal government, Lincoln County, and others were withdrawn prior to the hearing. ROA 12-13, 226, 396, 559-560, 2682-2728, 6427-6464, 6718-7200. After republication of the Applications, the State Engineer held a hearing lasting six weeks between September 26, 2011 and November 18, 2011. ROA 10.

The State Engineer issued Rulings 6164, 6165, 6166, and 6167 on March 22, 2012. The Rulings were appealed by a large group led by White Pine County (WPC);[1] The Corporation of the Presiding Bishop of the Church of Jesus Christ of Latter-day Saints (CPB); Millard and Juab Counties, Utah; The Confederated Tribes of the Goshute Reservation (CTGR); The Ely Shoshone Tribe, and the Duckwater Shoshone Tribe (collectively Appellants). This consolidated appeal follows.

IV. FACTS

Las Vegas Valley Water District (LVVWD), to which SNWA is the successor in interest, filed applications to appropriate groundwater from the four hydrographic basins under consideration here, along with many other basins, in order to serve municipal and domestic needs in Las Vegas (The "Project").

A. Spring Valley Hydrographic Basin

Applications 54003 through 54021 were filed on October 17, 1989, by LVVWD to appropriate underground water from the Spring Valley Hydrographic Basin for municipal and domestic purposes. ROA 809-846. The State Engineer held a hearing on the Spring Valley Hydrographic Basin applications between September 26, 2011, and November 18, 2011 in conjunction with hearing additional applications filed to appropriate water within the Cave, Dry Lake, and Delamar Valley Hydrographic Basins. ROA 10. The State Engineer found that 61,127 acre-feet annually was available for appropriation in Spring Valley. ROA 216.

In order to predict and assess impacts of the Project, the State Engineer placed conditions on the permits that included requirements for development to proceed in stages

[1] Protestants Great Basin Water Network, which was referred to in the testimony and witness list as GBWN, is now denominated as White Pine County, et al.

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and for implementation of a monitoring, management and mitigation plan throughout the life of the Project. ROA 216.

B. Cave Valley Hydrographic Basin

Applications 53987 and 53988 were filed on October 17, 1989, by the Las Vegas Valley Water District to appropriate underground water from the Cave Valley Hydrographic Basin for municipal and domestic purposes. ROA 2729-2732. The State Engineer held a hearing on the Cave Valley Hydrographic Basin applications between September 26, 2011, and November 18, 2011 in conjunction with the Spring, Dry Lake, and Delamar Valley Hydrographic Basins. ROA 224. The State Engineer found that 5,235 acre-feet annually was available for appropriation in Cave Valley. ROA 386. The State Engineer conditioned the permits upon the requirement that a monitoring, management and mitigation plan be implemented throughout the life of the Project. ROA 387-388.

C. Dry Lake Valley Hydrographic Basin

Applications 53989 and 53990 were filed on October 17, 1989, by the Las Vegas Valley Water District to appropriate underground water from the Dry Lake Valley Hydrographic Basin for municipal and domestic purposes. ROA 2733-2736. The State Engineer held a hearing on the Dry Lake Valley Hydrographic Basin applications between September 26, 2011, and November 18, 2011 in conjunction with the Cave, Spring, and Delamar Valley Hydrographic Basins. ROA 394. The State Engineer found that 11,584 acre-feet annually was available for appropriation in Dry Lake Valley. ROA 551. The State Engineer conditioned the permits upon the requirement that a monitoring, management and mitigation plan be implemented throughout the life of the Project. ROA 551.

D. Delamar Valley Hydrographic Basin

Applications 53991 and 53992 were filed on October 17, 1989, by the Las Vegas Valley Water District to appropriate underground water from the Delamar Valley Hydrographic Basin for municipal and domestic purposes. ROA 2737-2740. The State Engineer held a hearing on the Delamar Valley Hydrographic Basin applications between September 26, 2011, and November 18, 2011 in conjunction with the Cave, Dry Lake, and

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Spring Valley Hydrographic Basins. ROA 558. The State Engineer found that 6,042 acre-feet annually was available for appropriation in Delamar Valley. ROA 713. The State Engineer conditioned the Permits upon the requirement that a monitoring, management and mitigation plan be implemented throughout the life of the Project. ROA 713.

V. STANDARD OF REVIEW

The State Engineer is appointed by and is responsible to the Director of the Nevada Department of Conservation and Natural Resources, and performs duties prescribed by law and by the Director of the Department. NRS 532.020. Those duties include administering the appropriation and management of Nevada's public water, both surface water and groundwater, under NRS Chapters 533 and 534. The State Engineer must be a "licensed professional engineer pursuant to the provisions of Chapter 625 of NRS and . . . have such training in hydraulic and general engineering and such practical skill and experience as shall fit him for the position." NRS 532.030.

Pursuant to NRS 533.450(9), "[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." On appeal, the function of this Court is to review the evidence on which the State Engineer based his decision to ascertain whether the evidence supports the decision, and if so, the Court is bound to sustain the State Engineer's decision. *State Engineer v. Curtis Park*, 101 Nev. 30, 32, 692 P.2d 495, 497 (1985)

Review of a decision of the State Engineer is in the nature of an appeal and is, consequently, limited in nature. NRS 533.450(1) states in pertinent part:

> Any person feeling himself aggrieved by any order or decision of the State Engineer, acting in person or through his assistants or the water commissioner, affecting his interests, when such order or decision relates to the administration of determined rights or is made pursuant to NRS 533.270 to 533.445, inclusive, may have the same reviewed by a proceeding for that purpose, insofar as may be in the nature of an appeal . . . .

The Nevada Supreme Court has interpreted these provisions to mean that a petitioner does not have a right to de novo review or to offer additional evidence at the district court.

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Revert v. Ray, 95 Nev. 782, 786, 603 P.2d 262, 264 (1979) *See also*, *Kent v. Smith*, 62 Nev. 30, 32, 140 P.2d 357, 358 (1943) (a court may construe a prior judgment, but cannot properly consider extrinsic evidence); *State Engineer v. Curtis Park*, 101 Nev. at 32, 692 P.2d at 497 (function of court is to review evidence relied upon and ascertain whether evidence supports order); *State Engineer v. Morris*, 107 Nev. 699, 701, 819 P.2d 203, 205 (1991) (court should not substitute its judgment for that of the State Engineer).

Purely legal issues or questions may be reviewed without deference to an agency determination. However, the agency's conclusions of law that are closely related to its view of the facts are entitled to deference and will not be disturbed if they are supported by substantial evidence. *Town of Eureka v. State Engineer*, 108 Nev. 163, 826 P.2d 948 (1992) Likewise, an agency's view or interpretation of its statutory authority is persuasive, even if not controlling. *State Engineer v. Morris*, 107 Nev. at 701, 819 P.2d at 205 (quoting *State v. State Engineer*, 104 Nev. 709, 713, 766 P.2d 263, 266 (1988)). Any review of the State Engineer's interpretation of his legal authority must be made with the thought that "[a]n agency charged with the duty of administering an act is impliedly clothed with power to construe it as a necessary precedent to administrative action." *Pyramid Lake Paiute Tribe of Indians v. Washoe County*, 112 Nev. 743, 747, 918 P.2d 697, 700 (1996), citing *State v. State Engineer*, 104 Nev. at 713, 766 P.2d at 266 (1988).

VI. ARGUMENT

A. Common Misconceptions

1. Burden of Proof

While it is true that the Applicant has the burden of proof before the State Engineer to show it meets the statutory requirements of the water law, "[t]he decision of the State Engineer is prima facie correct, and the burden of proof is upon the party attacking the same." NRS 533.450 (10). Upon review of the State Engineer's Rulings, the burden of proof is squarely on the Appellants to show that the State Engineer's determination is arbitrary and capricious. As stated in the Standard of Review section above, the State Engineer's factual

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findings are entitled to deference. *State Engineer v. Curtis Park*, 101 Nev. 30, 32, 692 P.2d 495, 497 (1985).

The logic behind this standard is painfully evident in this case. The State Engineer acts as a neutral fact finder and has years of experience. He is required to be a licensed professional engineer. NRS 532.030. His staff includes other engineers, hydrologists and attorneys. The Appellants, most blatantly WPC and CPB, ask this Court to reweigh the evidence and reevaluate the credibility of witnesses and the scientific evidence that was presented to the State Engineer. The State Engineer accepted many of the opinions of the experts presented by the Appellants when they presented credible evidence that represented the best available science. *See,* ROA 70. The State Engineer also accepted the opinions of the experts presented by SNWA when they presented credible evidence that represented the best available science.

Appellants now improperly ask this court to reweigh the evidence. In fact, Appellants ask this court to essentially accept only the evidence presented by them and reject the credible scientific evidence that was accepted by the State Engineer. The Supreme Court has explained a court's function in reviewing a decision of the State Engineer by stating that "neither the district court nor this Court will substitute its judgment for that of the State Engineer: we will not pass upon the credibility of the witnesses nor reweigh the evidence, but limit ourselves to a determination of whether substantial evidence in the record supports the State Engineer's decision." *State Engineer v. Morris*, 107 Nev. at 701, 819 P.2d at 205. The court must reject all the arguments that urge this court to reweigh the evidence and reverse the State Engineer. The Court must determine if there was substantial evidence "which a reasonable mind might accept as adequate to support a conclusion." *Dynamic Transit v. Trans Pac. Ventures*, 128 Nev. Adv. Op. 69, 291 P.3d 114, 118 (Dec. 12, 2012)(citations omitted). The State Engineer's findings herein are supported by substantial evidence which consists of the most credible and best science currently available and must be affirmed.

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2. The State Engineer Did Not Approve Groundwater Mining

Underpinning the arguments of WPC and CPB is the accusation that the State Engineer approved applications that would result in groundwater mining. It is important at the outset to define the concept of groundwater mining. The State Engineer has consistently described his analysis of the concepts relating to groundwater mining, which are found in the Rulings being reviewed:

> The perennial yield of a groundwater reservoir may be defined as the maximum amount of groundwater that can be salvaged each year over the long term without depleting the groundwater reservoir. Perennial yield is ultimately limited to the maximum amount of natural discharge that can be salvaged for beneficial use. The perennial yield cannot be more than the natural recharge to a groundwater basin and in some cases is less. If the perennial yield is exceeded, groundwater levels will decline and steady state conditions will not be achieved, a situation commonly referred to as groundwater mining. Additionally, withdrawals of groundwater in excess of the perennial yield may contribute to adverse conditions such as water quality degradation, storage depletion, diminishing yield of wells, increased pumping costs, and land subsidence.

ROA 56. Under the State Engineer's definition, groundwater mining occurs when water is withdrawn from the basin in excess of perennial yield. This definition has been consistently followed since long before the Nevada Supreme Court reviewed a decision of the State Engineer in *Griffin v. Westergard*, 96 Nev. 627, 615 P. 2d 235 (1980). In *Griffin*, the State Engineer found that, if granted, the applications of Griffin would cause pumping from the West Walker River Hydrographic Basin to exceed the perennial yield in dry years. *Id.* at 630. The additional pumping, in conjunction with pumping of existing rights, would cause the use of groundwater to exceed the perennial yield, which could lead to infiltration of surface water and thus impact the senior surface rights. *Id.* Although the court used the word "impair" to describe the condition, the real import would be that the additional groundwater appropriations would be in conflict with the existing rights as the pumping of groundwater would pull in surface water and reduce the quantity of water available to the senior surface water rights in the Hydrographic Basin. The State Engineer's interpretation of his statutory

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authority is persuasive. *State Engineer v. Morris*, 107 Nev. at 701, 819 P.2d at 205 (*quoting, State v. State Engineer*, 104 Nev. 709, 713, 766 P.2d 263, 266 (1988)).

In this case, the State Engineer granted water rights to SNWA that were within the perennial yield of the basins. Appellants argue that capture of evapotranspiration (ET) is required within a finite period of time, and if ET capture takes longer than their arbitrary time frame, then that constitutes groundwater mining. ET is "evaporation from the soil or via transpiration through plants that draw groundwater through their roots." ROA 58. The perennial yield would therefore be equal to the amount of ET captured by pumping within the time-frame envisioned by the Appellants. It is important to note that there is nothing in Nevada water law that requires capture of ET in the development of the perennial yield of a groundwater basin. In fact, many basins have no ET to capture, and the perennial yield is calculated in other ways. As stated by the Appellants, their new concept of the perennial yield is to conduct "ET capture projects", where innumerable wells are placed in phreatophyte areas, pumping will then lower the water table until the top of the aquifer is below the root zone of the phreatophytes, and evapotranspiration will cease. CPB OB at 10-11. The water table would then reach a steady state in what they consider a reasonable time, and pumping would capture the precise amount of water lost by ET of the adjacent phreatophytes.

Acceptance of this argument will lead to absurd results. If groundwater appropriation was limited by this concept, it would be virtually impossible to develop the full perennial yield of Nevada's basins. Very often, groundwater discharge areas are in the center of the valley near playas where water quality and soil conditions are poor. The water is usually not potable, and crops cannot be grown. Water is usually developed closer to the mountain range near the recharge areas. Placing wells at some distance from the discharge areas results in a significant amount of water removed from transitional storage before ET capture occurs. This is how groundwater has historically been developed.

Additionally, 87% of land in Nevada is owned or controlled by the Federal Government and development of Nevada's resources is limited by this fact. Development of

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Nevada's water resources is often controlled by the location of the private land in a basin rather than by the location of where ET discharge occurs. As discussed above, if one is not pumping near the ET discharge area, it will take longer to capture ET and more water will be removed from transitional storage.

Regardless of the amount of water initially pumped from a well, the initial water always comes from storage and the water level in the well will drop and a cone of depression around the well will be established. ROA 56-57. NRS 534.110(4)("It is a condition of each appropriation of groundwater acquired under this chapter that the right of the appropriator relates to a specific quantity of water and that the right must allow for a reasonable lowering of the static water level at the appropriator's point of diversion."). This is a necessary part of well development to induce a flow of water to the well, without which, no water could be developed from the well. The change in storage in response to pumping is almost always transient as the system adjusts to the pumping. ROA 7.

If the perennial yield is not exceeded, the system will eventually reach a new equilibrium and the changes to storage will stop and pumpage will then again be equal to the increased recharge plus the decreased discharge. ROA 90. Appellants have intentionally ignored these basic and accepted hydrologic principles to confuse the court. Rush and Kazmi, in Reconaissance Series Report 33,[3] estimated that there were 4,200,000 acre-feet stored in the upper 100 feet of the aquifer in Spring Valley. ROA 18788. The aquifer in Spring Valley is hundreds of feet thick, and therefore stores much more than the 4,200,000 acre-feet. The State Engineer considers this water to partially constitute transitional storage. ROA 91, 18825. This transitional storage may be pumped until the basin reaches steady state. NRS 533.371(4) allows the State Engineer to appropriate water from a "proposed source of supply without exceeding the perennial yield or safe yield of that source. . ." As stated above, in basins with ET, the State Engineer often utilizes the estimated average annual groundwater ET to determine perennial yield and that amount of water is available for appropriation and is entitled to deference from the court. "While not controlling, an agency's

[3] http://images.water.nv.gov/images/publications/recon%20reports/rpt33-spring_valley.pdf

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interpretation of a statute is persuasive." *State v. Morros*, 104 Nev. 709, 713, 766 P.2d 263, 266 (1988)(Citing, *Nevada Power Co. v. Public Serv. Comm'n,* 102 Nev. 1, 4, 711 P.2d 867, 869 (1986)).

The Legislature has declared that "all water may be appropriated for beneficial use as provided in this chapter and not otherwise." NRS 533.030(1). The State Engineer must balance the legislative goal of maximizing beneficial use while protecting the resource and senior water rights. ROA 173. To require absolute capture of all ET within a fixed time-frame is unreasonable and would severely limit the water available for beneficial use in Nevada.

CPB, on page 74 of its brief, quotes a passage from State Engineer's Ruling 5726. They attribute this passage to the State Engineer and cannot understand why the exact language does not appear in previous or subsequent State Engineer rulings. However, as should have been clear in reading the first three words of the quoted passage, the State Engineer was summarizing the arguments of the Protestants prior to his analysis of those contentions. ("The Protestants allege . . .") This appears to be just another attempt to confuse the issues. To reiterate, the State Engineer does not allow groundwater mining and groundwater mining is defined as pumping in excess of the perennial yield.

The State Engineer did not approve the appropriation of water in excess of the perennial yield and the Court should reject all the arguments that are based on this misrepresentation. The State Engineer's interpretation of these goals is entitled to deference and the Court should affirm the Rulings.

3. Management of Water in Nevada

CPB and WPC also make recurring arguments that monitoring, management, and mitigation is somehow used by the State Engineer to avoid his responsibility to administer water rights in the state. The State Engineer's duties, purpose and function is to administer the water rights in Nevada. The State Engineer takes these duties seriously and the Division of Water Resources is dedicated to these functions.

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Monitoring, management and mitigation are closely tied to avoiding conflicts with existing water rights. However, the State Engineer has consistently defined conflicts to be a situation where the senior user is not able to make full beneficial use of his water right. There will likely be impacts to the senior water rights as noted by the CPB. ROA 82-112. However, impacts of this kind are common to all large water users in the state and the State Engineer has ruled that mitigation, rather than denial, is the proper way to deal with the impacts as long as the amount of water awarded is within the perennial yield of the hydrographic basin. In most cases, the junior water right holder whose large-scale use impacts the senior water right holder will be given a choice between two options.

One option will be to provide mitigation that allows the senior water right holder to full beneficial use. The mitigation can include drilling new wells, improving current wells, or installing solar or windmill type devices that will produce water with minimal expense and trouble to the senior water right holder. If the State Engineer determines that a certain mitigation measure is inadequate to keep the senior water right holder whole, the State Engineer can order further mitigation measures. The second choice would be to stop pumping. NRS 534.110(6). If the State Engineer finds that conflicts are unavoidable, he must deny the application(s).

CPB attempts to relitigate the case by asking the court to reweigh the evidence and witnesses, however, the determination of the State Engineer is prima facie correct and the burden is on CPB to show that there was not substantial evidence to support the conclusion in Ruling 6164. NRS 533.450(10). CPB admits that the State Engineer had substantial evidence to support the decision, but improperly argues that its experts are better than the Applicant's and that the State Engineer should have accepted their evidence without question.

CPB's water rights are usufructary, and do not create a property right in the corpus of the water. *Desert Irrigation, Ltd. v. State Engineer*, 113 Nev. 1049, 1059, 944 P.2d 835, 842 (1997). CPB's argument that there is evidence to show that its rights on springs and subirrigated pasture will likely be impacted does not mean that the applications that were

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granted in the Spring Valley Hydrographic Basin will conflict with CPB's water rights. If this occurs, SNWA will be required to mitigate the impacts to make the CPB whole. CPB refers to monitoring, management and mitigation as the "mantra" of SNWA. CPB OB at 3. In fact, it is the lifeblood of every community and large water user in Nevada, not just SNWA. Little of the development in this state would have taken place in Nevada if the rule asserted by CPB was the rule of law. The amount of water granted by the State Engineer, combined with the existing rights, including those held by Cleveland Ranch, is less than the perennial yield of the basin and, any impacts that do occur can be mitigated. ROA 151.

The State Engineer is responsible for administering the water law in Nevada and is required to balance the needs of current and future users with the duty to protect existing water rights. ROA 173. The State Engineer's interpretation of the law is reasonable and is entitled to great deference from this court. *See, State v. Morros*, 104 Nev. 709, 713, 766 P.2d 263, 266 (1988).

B. Common Issues

1. The Factual Determination of the State Engineer that Southern Nevada Water Authority Demonstrated a Need to Import Water from the Subject Basins is Supported by Substantial Evidence.

Under the interbasin transfer statute found in NRS 533.370(3)(a), the State Engineer is required to determine "[w]hether the applicant has justified the need to import the water from another basin." WPC indicates that the State Engineer's determination in Rulings 6164, 6165, 6166, and 6167 must be reversed as "they are premised in part on an erroneous determination that SNWA demonstrated the actual genuine need to import water from the four targeted basins." WPC OB at 32. However, as the need for water is a question of fact, review is limited to whether substantial evidence supports the decision of the State Engineer. The State Engineer's determination of need was based on substantial scientific evidence and must be affirmed. NRS 533.450(10); *See also, Dynamic Transit v. Trans Pac. Ventures*, 128 Nev. Adv. Op. 69, 291 P.3d 114, 118 (Dec. 27, 2012) ("Substantial evidence is that which a reasonable mind might accept as adequate to support a conclusion.") (Internal punctuation and citations omitted.))

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Witnesses for SNWA testified that SNWA's currently held water rights will be insufficient to satisfy the future needs of its customers. ROA 31. The water purveyors that make up SNWA serve a population of approximately two million people and SNWA presented evidence that demonstrated that the water is needed during "shortages on the Colorado River, to meet projected demands, and to replace temporary supplies." ROA 31, 45.

The State Engineer found that SNWA has a Water Resource Plan "which forecasts water supply and demand over a 50-year planning period under both normal and shortage conditions on the Colorado River." ROA 31. The State Engineer also found that "current available supplies would be insufficient to meet projected future water demands under normal conditions on the Colorado River and that shortfalls would be even greater under shortage conditions." ROA 38.

a. The Population Projections Accepted by the State Engineer were Supported by Substantial Evidence.

WPC argues that "demand will likely be much lower than SNWA has projected . . . ." WPC OB at 32. However, such speculation is not a substitute for the substantial evidence upon which the State Engineer based his determination of need, and WPC cannot carry its burden with speculation. *See*, NRS 533.450(10). WPC also argues the State Engineer should have relied on different population projections and should have adopted demand estimates from other cities. WPC OB at 33-34. However, the Supreme Court has explained a court's function in reviewing a decision of the State Engineer by stating that "neither the district court nor this Court will substitute its judgment for that of the State Engineer: we will not pass upon the credibility of the witnesses nor reweigh the evidence, but limit ourselves to a determination of whether substantial evidence in the record supports the State Engineer's decision." *State Engineer v. Morris*, 107 Nev. at 701, 819 P.2d at 205. The arguments that other evidence was also presented are irrelevant to the review by this Court. WPC must show that the evidence upon which the State Engineer relied was not of a substantial nature.

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The State Engineer found that the "population forecasts prepared by the Center for Business and Economic Research at the University of Nevada, Las Vegas were the best available evidence of population trends in Southern Nevada." ROA 42. "The demand forecast in the Applicant's Water Resource Plan incorporates the conservation goal established in 2009 to achieve 199 [gallons per person, per day] GPCD by 2035." ROA 43. The population forecast and the demand forecast provide substantial evidence to support the need to import water to Southern Nevada. The State Engineer's decision was supported by substantial evidence and must be affirmed.

b. The State Engineer's Factual Determination that SNWA has an Effective Conservation Program is Supported by Substantial Evidence.

WPC makes similar arguments concerning their estimation of conservation measures taken by SNWA to this point, including turf removal and rate structure. WPC OB at 35-36. WPC asserts that if stricter conservation requirements were in place, the SNWA would not need the water applied for under these applications. SNWA provided evidence that the turf removal program spent "$16 million per year for turfgrass, and that they had significantly limited the amount of turfgrass allowed in any new development. ROA 168. The State Engineer found that the water purveyors have already achieved significant reductions in demand through conservation programs. ROA 171. ("Between 1991 and 2009, the [Gallons Per Capita per Day] in Southern Nevada decreased from 344 to 240 due largely to intensive conservation efforts.") The State Engineer's factual findings that these and the other efforts of SNWA to establish an effective conservation program are supported by substantial evidence and must be affirmed.

c. The State Engineer's Factual Determination that Water Shortages from Lake Mead will affect the Need for Water in Southern Nevada is Supported by Substantial Evidence.

Shortage conditions in Lake Mead have been frequently in the news. ROA 22372. Nevada is allowed to appropriate just 300,000 acre-feet annually (afa) of the 7.5 million afa allocated to the lower basin states on the Colorado River and this water accounts for 90% of SNWA's water supply. ROA 32, 32666-32667. During droughts, which reduce the flow of the Colorado River, Nevada may be required to reduce the amount of water taken from the

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Colorado River. ROA 36, 15485-15489. The water from the permits issued herein will be used to support SNWA's water supply in times of shortage on the Colorado River. ROA 37.

The State Engineer found that SNWA has a Water Resource Plan "which forecasts water supply and demand over a 50-year planning period under both normal and shortage conditions on the Colorado River." ROA 37-38, 32713. The State Engineer also found that "current available supplies would be insufficient to meet projected future water demands under normal conditions on the Colorado River and that shortfalls would be even greater under shortage conditions." The State Engineer's factual findings that Colorado River water shortages may adversely affect SNWA's water supply are supported by substantial evidence and must be affirmed. ROA 38.

d. The State Engineer is not Required to Determine Alternatives to the Importation of Water.

WPC also argues that alternatives such as desalination would provide more cost effective means to obtain water.[4] WPC OB at 37-38. These assertions are made without support and should be ignored by the court. *State Indus. Ins. System v. Buckley*, 100 Nev. 376, 382, 682 P.2d 1387, 1390 (1984) ("[T]his Court has been supplied with two pages of conclusory arguments, lacking substantive citation to relevant authority, and failing to address the pivotal issues in the case. Under these circumstances, we decline to consider

[4] The State Engineer heard extensive testimony concerning the difficulties associated with desalination. Pat Mulroy, SNWA General Manager testified concerning problems with desalination:

You're talking about some of the most expensive real estate in the United States sitting on the California coast. The California coast is entirely developed. You have communities that don't want desalters in their communities. And if they're willing to have a desalter built, it will only be for their own demand.

The Carlsbad desalter is 10 years in permitting, and it's still in court with the surfers. Environmental groups, some of which who have filed protests on this project, not maybe in this process but in the EIS process, are not in favor of desalters. There's no way you can hold desalting up as something that has no environmental footprint. It has an environmental footprint. The brine discharge from that desalter, you will hear from environmental groups that it causes brine pockets and destroys the ecosystem in certain areas where that brine gets discharged into the ocean. It's not a panacea, and it is not embraced as the easy, convenient solution. So between land values and the environmental footprint of desalters, there are consequences that come in the wake of these desalting projects.

ROA 139-140

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its assignments of error."). Although not required of him, the State Engineer reviewed "evidence and testimony . . . that other strategies for developing alternative water sources have been explored and vetted by the SNWA, but not one alternative has been found to be more viable than in-state water resources at this time." ROA 30. In addition, the comparison of alternatives to the project was not included in the requirements for interbasin transfers. NRS 533.370(3); *See also, Pyramid Lake Paiute Tribe of Indians v. Washoe County*, 112 Nev. 743, 749, 918 P.2d 697, 700 (1996) (Finding that the "State Engineer [is not vested] with the authority to reevaluate the political and economic decisions made by local government."). The State Engineer is not required to make a value judgment as to which strategy would best solve the water needs of Nevada's communities and his authority is limited to administering the water rights in the State. NRS 532.110.

2. The State Engineer's Factual Determinations that SNWA has the Good Faith Intention, Financial Ability and Reasonable Expectation to Construct the Works and Place the Water to Beneficial Use are Supported by Substantial Evidence

a. Good Faith Intention

SNWA bears the burden to prove its "intention in good faith to construct any work necessary to apply the water to the intended beneficial use with reasonable diligence, and financial ability and reasonable expectation actually to construct the work and apply the water to the intended beneficial use with reasonable diligence." NRS 533.370(1)(c). The State Engineer found that "[t]he purpose of these requirements is to protect against water speculation." ROA 45. WPC argues that the evidence presented by its witness should be given overriding weight compared to the evidence presented by SNWA. WPC OB at 38-43.

The findings of the State Engineer are significant:

> The support in Southern Nevada for the development of the Applications is also evidence of the Applicant's intention. In 2004, an Integrated Advisory Committee comprised of 29 stakeholder representatives recommended that the Applicant pursue development of the Applications. The Big Bend Water District, the City of Boulder City, the City of Henderson, the City of Las Vegas, the City of North Las Vegas, the Clark County Water Reclamation District, and the LVVWD have all passed resolutions supporting development of the Applications. These entities represent the interests of nearly 2 million people in Southern Nevada. The Applicant's board of directors has directed staff to pursue these

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Applications. These recommendations, approvals and directions are evidence that the Applicant intends to construct the works necessary and put water from the Applications to beneficial use.

ROA 45-46. Thus, the State Engineer's finding is not based solely on the already substantial evidence presented by SNWA, but the fact that the seven retail water and/or wastewater purveyors that make up the SNWA are participating in the project and depending on the applications to serve their customers. SNWA has twice been before the State Engineer and was involved in at least three appeals concerning the four Valleys at issue herein. All these efforts demonstrate a good faith intention to go forward with the project and the speculation of WPC cannot overcome the substantial evidence presented to the State Engineer and the findings of the State Engineer must be affirmed. NRS 533.4500(10).

b. Financial Ability

The State Engineer made extensive factual findings concerning SNWA's financial ability:

- There is no evidence that the Project will require technologies or construction methods that are unattainable and the Protestants did not present any evidence that the Project would not be technically feasible. The State Engineer finds that construction of the Project has a feasible conceptual plan of development. ROA 47.

- The Applicant's engineering department estimates that the capital costs for the Project will be approximately $3.224 billion. Including contingency (15%) and inflation (4%), the engineering department estimates that the cost to construct the Project would be approximately $6.45 billion. ROA 48.

- [T]he Applicant's current cost estimate is the best available evidence regarding the cost of the Project. ROA 48.

- [SNWA's financial experts] Mr. Bonow and Mr. Hobbs concluded that the Applicant has never had a barrier to accessing the capital markets and that it has done so on agreeable terms, meaning a cost of capital (i.e., the interest rate on the bonds) that is low compared to the marketplace. ROA 49.

- Mr. Bonow and Mr. Hobbs expressed an opinion that debt supported by the Applicant's revenues is attractive to the capital markets because of five main factors: (1) the Applicant is an essential service provider, which means that its revenues are reliable because customers place a high priority on receiving, and paying for, water service; (2) the Applicant has independent rate setting authority which means it does not have to go through multiple levels of state or federal approval to adjust its rates as necessary; (3) the Applicant has ample headroom to increase rates because current rate levels are modest, which gives investors comfort that the Applicant can raise rates as necessary; 4) the Applicant has a high quality credit rating due to its past financing history and current status as a

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credit risk; and (5) the Applicant is contractually obligated to raise rates in certain circumstances, which gives investors comfort that they will receive full and timely payment. ROA 50.

- Even though many of these assumptions depress revenue projections, the funding plan still demonstrates that the Applicant would be able to finance the Project. ROA 53.

- Under the assumptions discussed [in the ruling]: (1) the principal amount of the bonds issued for the Project would be estimated at approximately $7.283 billion; (2) the interest costs of the Project would be estimated at approximately $8.18 billion; and (3) the total cost of the Project would be estimated at approximately $15.463 billion. ROA 53.

WPC speculates that "it is unlikely that SNWA will actually have the ability to finance and operate this project." WPC OB at 43. However, this continued speculation does not overcome the presumption that "[t]he decision of the State Engineer is prima facie correct, and the burden of proof is upon the party attacking the same." NRS 533.450(10). WPC put on no credible evidence as to the actual cost of the project or the ability of SNWA to finance it. The factual assertion that Ms. Leurig disagrees with factual findings of the State Engineer is of no consequence and the findings of the State Engineer must be affirmed. *State Engineer v. Morris*, 107 Nev. at 701, 819 P.2d at 205.

c. Reasonable Expectation to Construct Works and Apply Water to Beneficial Use.

The State Engineer is required to determine whether an applicant has the "[i]ntention in good faith to construct any work necessary to apply the water to the intended beneficial use with reasonable diligence." NRS 533.370(1)(c)((1)). The State Engineer found that considerable financial resources have already been dedicated to the Project. SNWA General Manager Pat Mulroy testified that SNWA has the good faith intent to develop the water awarded in these applications. ROA 32505, 32506. SNWA has paid for some of the most comprehensive studies, analyses and expert reports concerning the basins and has significantly advanced the science available to the State Engineer. ROA 46, 15501-15619, 15620-15771, 32609-32610, 32643. SNWA's work on establishing the environmental baseline data has already been extensive. The State Engineer found that these efforts support the good faith intention to construct the Project. ROA 46, 32543.

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The State Engineer found that the "timeline for construction demonstrates reasonable diligence given the unique nature and scope of the diversion and delivery infrastructure." ROA 46. The decision was also supported by evidence that SNWA "could begin putting the water to beneficial use by 2020 depending on the existence of shortage conditions on the Colorado River." ROA 46. The State Engineer found that SNWA "provided proof satisfactory of its intention in good faith to construct the works necessary and apply the water to beneficial use with reasonable diligence." ROA 46. These findings are based on substantial evidence and must be affirmed. NRS 533.450(10).

3. The State Engineer's Factual Determination Concerning the Perennial Yield of the Hydrographic Basins is Supported by Substantial Evidence.

When considering an application to appropriate water, the State Engineer must determine whether there is unappropriated water in the source. NRS 533.370(2). The State Engineer must rely on the best available science, which is often in the form of hydrologic studies to determine the perennial yield of a groundwater basin. NRS 533.024(1)(c). Groundwater is recharged "over time from precipitation and groundwater flow into the basin." ROA 57. The recharge is balanced by discharge from the basin. Discharge occurs when "groundwater is withdrawn and consumed by plants or by groundwater that flows out of the basin to an adjacent down-gradient basin." ROA 56. The State Engineer has found that "limiting groundwater development to a basin's perennial yield ensures sustainable development of the groundwater resource." ROA 56-57.

a. Spring Valley

Spring Valley covers approximately 1,700 square miles and is located in Eastern Nevada. Reconnaissance Report 33 at 1.[5] ROA 18788. The bulk of the valley is in White Pine County with a small southern portion that extends into Lincoln County. In the Spring Valley Hydrographic Basin, most water is discharged by Evapotranspiration (ET), which, as discussed above, occurs through "evaporation from the soil or via transpiration through plants that draw groundwater through their roots." ROA 57. Herein, "discharge areas" will be used to describe those areas where bare soil and phreatophytic plants evapotranspire

[5] http://images.water.nv.gov/images/publications/recon%20reports/rpt33-spring_valley.pdf

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more water than is recharged by precipitation over the long term. Other areas, such as the mountains surrounding the valley and streams constitute, recharge areas.

The State Engineer received evidence to determine the amount of ET from the discharge areas in Spring Valley. Some of the ET will come from precipitation that falls directly on the discharge areas, not from groundwater, thus, the State Engineer deducted that amount of precipitation falling on the discharge area to determine the amount of ET that comes from groundwater. The total groundwater ET is the perennial yield of the basin. ROA 73-75.

The State Engineer received extensive scientific evidence to determine the perennial yield. His finding represents a well-reasoned decision that is based on substantial evidence and must be affirmed. NRS 533.450(10).

i. Spring Valley Evapotranspiration

State Engineer's Ruling 6164 makes an exhaustive review of the scientific evidence presented by the parties. This brief does not attempt to examine every detail of that ruling, as it speaks for itself, but it will try to highlight the substantial evidence that the State Engineer relied upon to support the decision.

The parties relied on extensive evidence, prior studies, and modeling to present their respective cases. The United States Geological Survey has published a number of reports that were relied upon by both the parties and the State Engineer. These include "Reconnaissance Series Reports,[6] the Basin and Range Carbonate Aquifer System Study (BARCASS) that was mandated by Congress, the Great Basin Regional Aquifer System Analysis (RASA), and sections of the Great Basin Carbonate and Alluvial Aquifer System study (GBCAAS), which is a recently published update to RASA." ROA 57, 32995.

The State Engineer uses "[g]roundwater ET . . . because it can be more accurately measured than groundwater recharge or subsurface flow." ROA 58, 36221. The discharge area of Spring Valley was determined "using mapping by previous investigators...." ROA 58. The State Engineer approved the analysis of SNWA that "determined that the total

[6] http://images.water.nv.gov/images/publications/recon%20reports/rpt33-spring_valley.pdf

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groundwater-ET extent boundary in Spring Valley is 172,605 acres, which is very similar to the area determined by prior investigations." ROA 59, 17454.

SNWA presented evidence gathered using "state-of–the-art Eddy Covariance Towers in Spring Valley, Snake Valley and White River Valley, and five years of satellite data to characterize vegetation health and density." ROA 58. The locations of the towers was "independently evaluated and approved by Dr. Travis Huxman of the University of Arizona." ROA 61. WPC's expert did not dispute the findings concerning ET. ROA 64, 36872.

Dr. Lynn Fenstermaker "was qualified by the State Engineer as an expert in ET estimates using remote sensing." ROA 60. Dr. Fenstermaker used normalized difference vegetation indices (NDVI) to determine the plant composition of the discharge area. ROA 60. "Dr. Fenstermaker calibrated, corrected, and normalized the [satellite image] scenes using standard techniques and then calculated NDVI grids for each image" and "averaged the scenes for each year to obtain average growing-season NDVI images." ROA 63. "Dr. Fenstermaker and her colleagues then calculated the footprint-weighted growing season average NDVI values for each Eddy Covariance Tower." ROA 62. "Based on this expert opinion and the evidence submitted, the State Engineer finds that the accuracy assessment is scientifically sound and represents an improvement over past studies, and validates the accuracy of [SNWA's] ET estimates." ROA 64.

SNWA "estimated an average total ET of 174,500 afa in the Main groundwater discharge area in Spring Valley for the period of record 2006 to 2010." ROA 64. In his summary, the State Engineer noted that these findings were essentially uncontested:

> Dr. Fenstermaker testified that these were very good estimates and that the regression equation will provide a more accurate estimate of annual ET in the region than those developed in prior studies. Protestants' witness Dr. Myers testified that the Applicant's total-ET estimates are probably as accurate as they can be. The State Engineer finds that the Applicant provided a scientifically sound estimate of total ET in Spring Valley.

ROA 64.

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Precipitation estimates "used the Parameter-elevation Regressions on Independent Slopes Model (PRISM) 4-km precipitation grids to estimate the amount of precipitation over the groundwater-ET area for the period of record from 2006 to 2010." ROA 65. Dr. Myers testified that PRISM is "probably the best tool available to distribute precipitation. . . ." ROA 65, 36968. To ensure the accuracy of the estimate, SNWA then "compared the PRISM estimates to actual valley-floor measurements of precipitation at several UNLV, Desert Research Institute, SNWA and USGS precipitation measurement stations located in Spring Valley and White River Valley." ROA 65.

The State Engineer found there was error in some of the measuring devices and adjusted the precipitation to reflect the data error. ROA 66-69. The State Engineer also found that in years when precipitation exceeds the ET in certain parts of the discharge area, that the excess precipitation should be considered held over to the next year, when it would then be available to the plants and discharged by ET. ROA 70-71. Dr. Meyers, the expert witness for WPC, essentially agreed with the State Engineer in this regard and the decision is supported by substantial evidence. ROA 36869.

The State Engineer used the adjusted findings to account for holdover precipitation, and other factors, to find that the "data supports an annual groundwater-ET estimate in Spring Valley of 84,100 acre-feet." ROA 73.

ii. Interbasin Flows

The underground flow of water from one basin to another is another component of a basin's water budget. The State Engineer partially discounted the assertions of both SNWA and Dr. Myers, but accepted the research of Dr. Hurlow, witness for Millard and Juab Counties, which showed that interbasin flow from Spring Valley to Hamlin Valley ranged between 4,000 and 12,000 acre-feet annually. ROA 77, 36025. The State Engineer next found considerable inconsistencies in Dr. Meyer's estimate when compared to the geology of the mountain ranges and relied on SNWA's model estimate of 4,400 acre-feet annually of interbasin flow from Lake and Steptoe Valleys into Spring Valley. ROA 84. The State Engineer next examined flow from Northern Spring Valley to Snake Valley. ROA 86-87. The

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State Engineer found that the groundwater gradient and the general geology did not support any flow in this direction. ROA 87-88. The State Engineer next examined Spring Valley to Tippet Valley flow. The State Engineer found that the geologic evidence did not support any flow in this direction. ROA 89.

iii. Perennial Yield

The analyses of ET and interbasin flow were then used to determine the amount of annual recharge from precipitation to the basin. The State Engineer summarized his findings:

> Groundwater recharge in Spring Valley is not directly measured. It can be estimated by the groundwater balance of the basin. As discussed above in the groundwater ET section, groundwater ET is estimated to be 84,100 afa. Inflow from Steptoe Valley is highly uncertain, and probably is between zero and 4,400 afa. Outflow to Hamlin Valley is believed to be 4,000 to 12,000 afa. Therefore, groundwater recharge in the basin reasonably ranges from 84,000 to 96,000 afa.

ROA 90. The finding falls within the ranges found in previous studies noted in the Ruling and are supported by substantial scientific evidence. ROA 89.

The State Engineer reserved interbasin flows from his calculation of perennial yield and set the perennial yield equal to the average groundwater ET of 84,000 acre-feet annually. ROA 90. Subsurface inflow and outflow to adjacent basins are not included in the perennial yield of Spring Valley and are therefore available for appropriation in those adjacent basins. This number represents the distillation of the best available science and the professional judgment of the State Engineer.

iv. Groundwater Mining

WPC and CPB repeatedly accuse the State Engineer of having approved groundwater mining in Spring Valley. The State Engineer has determined from both scientific evidence and experience that groundwater mining occurs when water is pumped in excess of the perennial yield over time. ROA 56. As the water granted in these applications is less than the perennial yield, groundwater mining will not occur in the Spring Valley Hydrographic Basin.

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WPC and CPB base this claim on the amount of drawdown that will occur over time in Spring Valley and on the length of time that a basin takes to reach equilibrium. The State Engineer ruled that there is no set time limit to reach equilibrium in the basin. ROA 90. Drawdown of the aquifer due to groundwater pumping is unavoidable. Nevada law contemplates drawdown. "It is a condition of each appropriation of groundwater acquired under this chapter that the right of the appropriator relates to a specific quantity of water and that the right must allow for a reasonable lowering of the static water level at the appropriator's point of diversion." NRS 534.110(4). The drawdown spreads from the point of diversion as the lag between pumping and recharge from precipitation are not always on the same schedule. ROA 134-135. The State Engineer's factual determination that groundwater mining will not occur under the permits as granted is prima facie correct and entitled to deference from this Court. NRS 533.450(10).

v. Water Available for Appropriation

The State Engineer made exhaustive findings concerning existing water rights, which no party has challenged. He found that of the 84,000 acre-feet perennial yield, 18,873 acre-feet annually were already committed within the basin and found that 4,000 acre-feet annually should be reserved for future uses. ROA 214-215. The State Engineer awarded the remaining 61,127 acre-feet annually to SNWA as water available for appropriation. ROA 215. These findings are supported by substantial evidence in the record and must be affirmed. NRS 533.450(10).

b. Cave Valley Perennial Yield

Cave Valley, which is part of the White River Flow System, has very little groundwater ET and the State Engineer utilized recharge estimates to determine its perennial yield. Recharge was estimated by SNWA using a mathematical solver. ROA 268. The method requires all of the recharge within the White River Flow System to be equal to all of the discharge. The recharge for each of the basins within the White River Flow System was then computed based on the relative amounts of precipitation in each basin. ROA 268. The State Engineer disagreed with some of SNWA's estimates for flow into and out of the flow

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system, made corrections to the solver, and reran the program to compute recharge for all of the basins. ROA 269.

SNWA's calculation of groundwater recharge in Cave Valley equaled 13,700 afa. The State Engineer's corrected "calculation of recharge in Cave Valley was 12,900 afa." ROA 291.

Cave Valley was found to have 1,300 acre-feet annually of ET. ROA 294. The State Engineer also found that the evidence did not support significant interbasin flow into Cave Valley. ROA 294. The State Engineer reviewed extensive geological and hydrological evidence submitted by the parties concerning interbasin flow out of Cave Valley. Dr. Myers, for WPC, "estimated that all of the recharge in Cave Valley . . . discharges . . . through Shingle Pass to White River Valley." ROA 295. SNWA presented evidence that "3,800 afa, was their estimated contribution from the watershed in Cave Valley, which discharges to White River Valley as interbasin flow." ROA 297. The State Engineer reviewed the extensive evidence and models and found that he could not accept either contention, but found that it was necessary to "reserve 7,300 afa of Cave Valley groundwater for the purpose of protecting [the Flag and Butterfield Springs] flows in White River Valley." ROA 298.

The State Engineer determined that that the perennial yield of Cave Valley was 5,600 acre-feet by subtracting the interbasin flow to White River Valley of 7,300 acre-feet annually from recharge of 12,900 acre-feet annually. ROA 298. These findings are supported by substantial evidence and the State Engineer must be affirmed. NRS 533.450(10).

c. Dry Lake Valley Perennial Yield

The same methods were used to estimate groundwater recharge in Dry Lake Valley. SNWA's estimate of recharge was 16,200 acre-feet. ROA 461. The State Engineer's corrected estimate was 15,000 acre-feet. ROA 461.

Dry Lake Valley has "little or no measurable groundwater ET," therefore the State Engineer calculated no value for ET. ROA 463. The State Engineer also found that the evidence did not support significant interbasin flow into Dry Lake Valley. ROA 463. The

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State Engineer reviewed extensive geological and hydrological evidence submitted by the parties. This evidence demonstrated that "most of the groundwater in Dry Lake Valley discharges via interbasin outflow to Delamar Valley, rather than to adjacent valleys to the east or west." ROA 466.

The State Engineer noted that Delamar Valley "has few existing groundwater rights and whose perennial yield will not rely on inflow from Dry Lake Valley." ROA 466. Since "no impacts to any existing rights are likely for hundreds of years, the perennial yield was found to equal the "estimated recharge of 15,000 acre-feet." ROA 466-467.

d. Delamar Valley Perennial Yield

The same methods were used to estimate groundwater recharge in Delamar Valley. SNWA's estimate of recharge was 6,600 acre-feet. ROA 625. The State Engineer's corrected estimate was 6,100 acre-feet. ROA 625.

Delamar Valley has little or no measurable groundwater ET," therefore the State Engineer calculated no value for ET. ROA 627. The State Engineer also found that, as noted above, the evidence demonstrates that Delamar Valley receives significant interbasin flow from Dry Lake Valley. However, as all the recharge in Dry Lake Valley is available for appropriation there, the State Engineer did not add this interbasin flow from Dry Lake Valley to the perennial yield of Delamar Valley. ROA 627-628. Basin outflow from Delamar Valley goes to Coyote Spring Valley and to the southern part of Pahranagat Valley. The State Engineer found that existing rights in Pahranagat and Coyote Spring Valleys would not be impacted by development of the recharge in Delamar Valley, and set the perennial yield equal to the in-basin recharge of 6,100 acre-feet. ROA 630.

e. Issues Common to Cave, Dry Lake and Delamar Valleys.

WPC and GBWN make arguments that there is no water to appropriate in Cave, Dry Lake and Delamar Valleys because there is no ET to capture and the recharge in those valleys is already accounted for by outflow to down-gradient basins where it is completely committed. WPC OB at 102. In essence, they are arguing that the perennial yield of those basins is zero; there is no groundwater to appropriate now or in the future, and no

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development can ever occur there. Their arguments are similar to their earlier "one river" argument, which was rejected by the State Engineer where they relate the White River Flow System to a river, and if water is appropriated upstream, it will not be available downstream. WPC's argument that there is no ET to capture and therefore the perennial yield is zero is nonsensical and has no basis in Nevada water law. WPC OB at 102. The State Engineer determines the perennial yield of a basin based on factors pertaining to the unique nature of each basin. Setting the perennial yield as equal to groundwater ET in a basin is one method, and the State Engineer will use this method where applicable. In the White River Flow System, a number of basins have no groundwater ET. Groundwater recharge flows in the subsurface to down-gradient basins. The perennial yield of basins that have no groundwater ET is based on recharge. To suggest that no groundwater could be developed in a basin if it does not capture ET in that basin is counter to the goal of maximizing beneficial use of water. *See, Desert Irrigation, Ltd. v. State Engineer*, 113 Nev. 1049, 1059, 944 P.2d 835, 842 (1997)("The concept of beneficial use is singularly the most important public policy underlying the water laws of Nevada and many of the western states.")

Many basins in the carbonate terrains and in some of Nevada's volcanic terrains have no groundwater ET. If WPC had their way, there would be absolutely no groundwater development in any of these basins.

In the White River Flow System, groundwater flow does not stop at basin boundaries. Groundwater flows through the mountains from basin to basin. There are three main discharge areas, some of which are hundreds of miles away, all of which have major spring systems where groundwater comes to the surface. These major springs are in White River Valley, Pahranagat Valley, and the Muddy River Springs Area. Most of the groundwater recharge in Cave, Dry Lake and Delamar Valley flows to these regional springs. These springs are fully committed, thus the WPC argument is that all the water is appropriated. This all makes for a seemingly compelling and overly simple argument. However, groundwater in Cave, Dry Lake and Delamar Valleys can be developed for hundreds of years without measurably diminishing the spring outflows. *See, Bacher v. State Engineer*,

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122 Nev. 1110, 1116, 146 P.3d 793, 797 (2006)("state regulation like that in NRS Chapters 533 and 534 is necessary to strike a sensible balance between the current and future needs of Nevada citizens and the stability of Nevada's environment.").

As clearly described in the Rulings, if all the water applied for was pumped continuously for 200 years, spring flow would decrease by 17% at the White River Valley Springs adjacent to Cave Valley, and by about 1% at Pahranagat Valley and Muddy River Springs. ROA 639. However, not all of the applications were granted. To protect the water supply to the springs in White River Valley, 7,300 acre-feet annually of the Cave Valley recharge was reserved for these springs. ROA 298. SNWA was granted only 5,235 acre-feet annually of the 11,583 acre-feet that was applied for in Cave Valley. ROA 298. The 7,300 acre-feet annually that was reserved exceeds the 17% of flow loss predicted by the model.

Springs in Pahranagat Valley and the Muddy River Springs Area, which are more remote from the pumping, are predicted to show even less effect. These spring complexes are predicted to have a 1% decrease in flow after 200 years, which may not even be measureable.

WPC's argument that there is no water to appropriate in these basins is counter to long established policy of maximizing the limited water resources in the state. Their argument is severely flawed when one considers the benefit of developing this water. Because there will clearly be adequate water for mitigation should it be necessary in several hundred years, there will be no conflict with existing rights.

WPC's argument that these appropriations conflict with the intent of State Engineer's Order No. 1169 is similarly misplaced. WPC OB at 104-105. Order No. 1169 requires test pumping to determine if there is sufficient water for new appropriations in the vicinity of the Muddy River Springs. The concern was that additional pumping close to the springs would conflict with existing rights or significantly reduce spring flows critical to the habitat of the Moapa Dace, an endangered species. The critical element there is timing and the magnitude of impacts. Pumping in the area of the Muddy River Springs could have an

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immediate effect on the springs. Some argued that pumping would decrease spring flow on a 1:1 basis. Clearly, the conditions in the Muddy River Springs Area are much different than in Dry Lake and Delamar Valleys, and imposing an Order 1169-like pumping test would not work.

4. The State Engineer's Factual Determination that the Applications as Granted will not Unduly Limit Future Growth is Supported by Substantial Evidence.

Pursuant to NRS 533.370(3)(d), the State Engineer considered "[w]hether the proposed action is an appropriate long-term use which will not unduly limit the future growth and development in the basin from which the water is exported. . . ." As part of this analysis, the State Engineer is required to consider the current and future need for water in the basins of export. Although there is no specific requirement that unappropriated water be left in the basin to support potential uses that have little likelihood of materializing, the State Engineer decided to leave unappropriated water to ensure that the interbasin transfer "does not unduly limit future growth and development. . . ." ROA 209, 379, 543-544, 706.

The State Engineer received testimony from SNWA experts Richard Holmes, Dr. Carl Linvill, John Candelaria, Dr. Dennis Peseau and George Carter. ROA 701-704. Appellant WPC presented the testimony of Dr. Maureen Kilkenny. ROA 704. WPC calls the testimony "uncontroverted", however, the State Engineer found Dr. Kilkenny's testimony concerning what WPC describes as the "specter that has been cast over the potential viability of any new enterprise involving the four basins" (WPC OB at 92) as speculative and not based on any specific evidence. ROA 208.

> Dr. Kilkenny rests her conclusions upon a fundamental misunderstanding or disregard of Nevada water law and the prior appropriation doctrine. This is clear from her report and testimony, as she assumed the loss of all water in both White Pine and Lincoln Counties as a result of pumping under the Applications.

ROA 371-372. "Dr. Kilkenny's testimony revealed numerous errors and misstatements in her report and her report and testimony has been given little weight by the State Engineer." The State Engineer's determination as to the credibility of Dr. Kilkenny as a witness is entitled to deference from this Court. *State Engineer v. Morris*, 107 Nev. at 701, 819 P.2d at 205 (The

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Supreme Court "will not pass upon the credibility of the witnesses nor reweigh the evidence, but limit ourselves to a determination of whether substantial evidence in the record supports the State Engineer's decision.")

WPC does not identify any specific use for the water in Spring Valley, but instead its argument consists solely of broad generalizations of harm. WPC baldly asserts that its evidence was "substantial." WPC OB at 92.

The testimony of Richard Holmes showed that historical patterns of use play a part in the determination of water needs for future growth. ROA 196. "Nevada was the fastest growing state in the country for each of the last five decades, yet the population in Spring Valley remained virtually unchanged." ROA 196-192. The population of Cave, Dry Lake and Delamar Valleys showed similar trends with estimated populations of 2, 3, and 0-3 persons "during this period of extreme growth within the state." ROA 369, 533-534, 696.

All four of the Valleys at issue lack access to the types of infrastructure that would support large scale growth such as "utilities, sewer, electricity and natural gas, as well the absence of basic services such as medical services and police and fire protection." ROA 696-697. In addition, witnesses from White Pine and Lincoln Counties failed to identify any plan for growth in the basins. ROA 199. "White Pine County's land use plans to show that White Pine County does not have any plans for development which would require significant water resources in Cave Valley." ROA 372. "Lincoln County's Master Plan showed that Lincoln County does not have any plans for development within" Cave, Dry Lake or Delamar Valleys. ROA 372, 536, 699.

The State Engineer reviewed evidence of the potential for development of alternative energy sources and found that only wind power, which requires little water, was competitive in Spring Valley. ROA 202-203. The evidence showed that of the Cave, Dry Lake and Delamar Valleys, Delamar Valley had the best potential for development of solar power, but that it is "improbable that future development will occur that would require additional water resources and that no water should be reserved for future renewable energy development

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within Delamar Valley." ROA 701-702. Likewise, the State Engineer reserved no water specifically for power generation in Cave or Dry Lake Valleys. ROA 375, 538-539.

The State Engineer also found that the establishment of new agricultural operations was not economically reasonable for Spring Valley, and that the CPB had not presented any current plans to expand the Cleveland Ranch. ROA 204. Cave Valley was not likely to have significant agricultural development as "97% of the land in Cave Valley is owned by the federal government." ROA 369, 378, 379. In Dry Lake Valley, "the small irregular shapes of the existing private parcels, and the slope of the few parcels. . . [do not support] the likelihood of expansion of agriculture within Dry Lake Valley which would require additional water resources." ROA 539. There was no testimony or evidence "of intent to expand cattle operations which would result in a need for additional water resources within the (Delamar Valley Hydrographic Basin)." ROA 703-705. The State Engineer noted that "existing water rights are protected under the law and approving the Applications does not undermine any of the rights or their priority." ROA 207. "The Cave Valley Conservation Easement is a grant from Cave Valley Ranch property owners to the Applicant." ROA 369-370. "The Easement confines the use of the property to protect its natural resources and habitat, which includes restricting real estate development, commercial and industrial uses, and certain other activities including on-going mutually agreed upon land uses." ROA 16738-16754. Both Nevada's water law and the conservation easement protect existing water rights and the applications will not conflict with the existing water rights. NRS 533.030, 533.085.

None of the Appellants presented evidence as to how much water should remain in the basins to ensure that reasonable future growth would not be limited. Nonetheless, the State Engineer reserved 4,000 acre-feet for the Spring Valley, and 50 acre-feet each for the Cave, Dry Lake and Delamar Valleys. ROA 380, 208-209, 543-544, 706. The amount of water reserved for future use has not been challenged by any of the parties, and is further substantial evidence that the applications, as granted, will not unduly limit growth. Without any credible evidence to contradict the findings of the State Engineer concerning future

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growth in the basins of origin, the State Engineer's finding regarding the economic impacts is supported be substantial evidence and must be affirmed. NRS 533.450(10).

5. The State Engineer's Factual Finding that the SNWA Applications are Environmentally Sound was Supported by Substantial Evidence.

The State Engineer must determine whether the proposed action is environmentally sound as it relates to the basin from which the water is exported. NRS 533.370(3)(c). The State Engineer noted that while he "carries a heavy burden of ensuring that any approval here is environmentally sound, it is also demanded that he be creative and flexible to maximize the beneficial use of the State's water." ROA 173. The State Engineer tailored his approach for meeting the requirements of this statutory criterion to each of the valleys to determine that the proposed action was environmentally sound for the basin of origin.

The State Engineer received and considered extensive evidence concerning the effects on the environment from the use of the water under the proposed applications. First, the SNWA presented evidence of environmental baseline investigations in the four basins at issue and in adjacent basins. ROA 175-176. SNWA studied a broad array of biotic communities within the Spring, [Cave, Dry Lake and Delamar Valleys]." ROA 175. The State Engineer reviewed the evidence and found that the studies "provide a good representation of the key groundwater-influenced habitats and areas of focus in and around the Project basins." ROA 176.

Second, the State Engineer received and considered evidence that addressed other permitting requirements that have been approved with reference to the Project. ROA 177-178. This included information that in addition to the statutory criteria that the State Engineer considered regarding the applications at issue herein, SNWA was required to comply with the National Environmental Policy Act (NEPA), the Endangered Species Act (ESA), and the Clean Water Act (CWA). ROA 177. "These permitting processes impose strict environmental controls on the Project that ensure it will be environmentally sound." ROA 177. WPC presented testimony and evidence through Dr. James Deacon, however, the State Engineer found that the testimony was of little relevance, since it concerned "historical water

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development practices that preceded the ESA." ROA 177-178. The State Engineer's review of the evidence and determination are supported by substantial evidence and must be affirmed.

a. Spring Valley

To assure the proposed use of the water was environmentally sound, in Spring Valley, the State Engineer relied, in part, on NRS 533.3705(1), which gives him the authority to "limit the initial use of water to a quantity that is less than the total amount approved for the application." ROA 174. This allowed the State Engineer to order that pumping proceed in stages as a cautionary principle in order to collect more data about the effects pumping may have that cannot be acquired in any other manner. ROA 216-217.

CPB argues that the State Engineer may not utilize the NRS 533.3705 as it was enacted after the date the applications were filed. CPB OB 46. It is curious that Cleveland Ranch would fight against a statute that protects existing rights. The argument misstates the concept of retroactive application of statutes. A statute is retroactive when it operates on decisions that have happened prior to its enactment.

> Generally, as recognized by the U.S. Supreme Court, courts must take a "commonsense, functional" approach in determining if a new statute operates retroactively because it imposes new legal consequences on events completed before its enactment. But just because a statute draws upon past facts does not mean that it operates "retrospectively." Instead, "[a] statute has retroactive effect when it 'takes away or impairs vested rights acquired under existing laws, or creates a new obligation, imposes a new duty, or attaches a new disability, in respect to transactions or considerations already past. That is, even though a statute operates only from the time of its enactment, it is retroactive if it impairs vested rights and past transactions.

Public Employees' Benefits Program v. Las Vegas Metropolitan Police Dept. 124 Nev. 138, 155, 179 P.3d 542, 553 - 554 (2008)(Citations omitted) NRS 533.3705(1) has prospective application when the State Engineer applies it to the case before him. *See also, Valdez v. Employers Ins. Co. of Nevada*, 123 Nev. 170, 179-180, 162 P.3d 148, 154 (2007) The addition of NRS 533.3705 applied to future conduct of the State Engineer with regard to water right applications and put all water applicants on notice that the initial use of water

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under a subsequently granted water right permit may be limited.

CPB's logic would not allow the State Engineer to apply the interbasin transfer criteria found in NRS 533.370(3) to these applications as those provisions of the water law were also enacted after the applications at issue were filed. *See*, Act of May 24, 1999, Ch. 236, 1999 Nev. Stat. 1046. If that is the case, there is no requirement that the State Engineer even consider whether the proposed action is environmentally sound for the basin from which the water is to be exported. CPB cannot have it both ways and attempt to manipulate the provisions of the water law that will apply only if they are to CPB's advantage.

The State Engineer also took notice of the Stipulation for Withdrawal of Protests with the Federal Protestants. ROA 103, 105. While not a party to that agreement, the State Engineer is aware that it is another provision that provides for additional considerations of whether the use of the water will be environmentally sound for the basin of origin. ROA 180-181. The stipulation calls for the establishment of a Biological Work Group (BWG) comprised of many governmental stakeholders. ROA 179. The BWG has the responsibility to develop a Biological Monitoring Plan (BMP) to develop "conceptual models and the identification of indicators and ecological attributes to be monitored throughout Spring Valley and adjacent basins that will allow for the thorough assessment of the health and integrity of the full range of groundwater-influenced resources in Spring Valley and adjacent basins." ROA 179-180. The BMP also includes "[d]etailed management and mitigation approaches will be included in the BMP when enough data and information has been gathered to support their development." ROA 180.

"The State Engineer approved the Spring Valley BMP" and found that the "reports provide valuable information to the State Engineer, which will inform his continued regulatory control over the Project." ROA 181. Based on these factual findings, the State Engineer found

> that incorporation of the BMP in the permit terms for the Applications, and the State Engineer's continued regulatory control over pumping under the Applications, will ensure proper monitoring and oversight of the Project and its environmental soundness as it relates to groundwater-influenced resources.

ROA 181.

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The BMP also calls for an adaptive management framework, which requires the stakeholders to cooperate in "setting goals and priorities, developing monitoring and conservation strategies, taking needed action, measuring results, and refining the plan." ROA 181, 20651-20652. "The State Engineer [found that] the adaptive management approach incorporated in the BMP is an accepted scientific approach that is appropriate and advisable for managing a long-term Project such as this one." ROA 182.

"The BMP lays out a process for developing triggers for action in the event an unreasonable adverse impact to a resource is anticipated." ROA 20738-20739. WPC argues that the triggers and thresholds must be determined in advance. The State Engineer found that "[f]actors such as natural variation in the environmental resources must be understood before any standards or triggers are set." ROA 182. The State Engineer held that the BMP "demonstrates the Applicant's determination to proceed in a scientifically informed, environmentally sound manner." ROA 183.

WPC and CPB maintain their objections that "protections provided by the BMP are inadequate because the Stipulation between SNWA and the Federal agencies lacks adequate enforcement mechanisms." ROA 34914-34915. "The State Engineer always retains the authority to monitor water rights and any impact to them and the dispute resolution process in the Stipulation has no impact on that authority." ROA 183, 34918. Essentially, Appellants ask this court to find that the State Engineer will not perform his statutory duty in administering water rights. NRS 47.250 provides a presumption that "official duty has been regularly performed." This presumption provides an adequate basis for a presumption that public officers will perform their duties and this court should so hold.

The State Engineer reviewed "a qualitative and a quantitative analysis to predict whether environmental areas of interest were susceptible to impacts from pumping pursuant to the Applications." ROA 184. The qualitative analysis determined resources that "could be impacted by groundwater withdrawal." ROA 184. The quantitative analysis identified areas with "50-foot or greater drawdown in depth to groundwater or a 15% reduction in spring flow." ROA 184-185. The State Engineer evaluated the effects analysis to areas of expected

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impact and the biological resources that might be affected. The State Engineer found that the analysis "adequately described the potential environmental effects of the Project in a manner that allows the State Engineer to make an informed environmental soundness determination." ROA 187.

The State Engineer found that "substantial evidence [supports the finding] that plant communities will receive adequate water to avoid unreasonable adverse effects." ROA 187. ["The] goal for the management of plant succession that may occur is the maintenance of healthy and functioning ecosystems." ROA 184. "If there is a transition, it would be a gradual transition in the species composition of shrub communities, which still support terrestrial wildlife, bird and bat populations, and big game so that the ecosystem continues to be functioning and healthy." ROA 184. The State Engineer made extensive and specific findings concerning whether the environmental impacts will be reasonable and will be environmentally sound in the Spring Valley Hydrographic Basin. ROA 184-190. These findings are based on substantial evidence and must be affirmed.

Finally, if impacts do occur, the State Engineer examined the ability of SNWA to monitor, manage and mitigate impacts. ROA 191, 35219-35220. The State Engineer acknowledged SNWA's voluntary commitments to assist with the preservation and recovery of fish and other species. ROA 191. The State Engineer also took note that "SNWA has purchased extensive properties in Spring Valley that include land, surface water and groundwater rights, and grazing allotments ("Northern Resources"), which give numerous options for implementing management and mitigation actions that will protect the environment."[7] ROA 191. Ultimately, the State Engineer found that the applications, as granted, will be environmentally sound as they relate to Spring Valley. ROA 193.

b. Cave, Dry Lake and Delamar Valleys

The State Engineer made a similar rigorous review of the evidence in the Cave, Dry Lake and Delamar Valleys. The State Engineer again took notice of the federal environmental processes that are in place to protect the environment of the valleys. He

[7] Exhibit No. SNWA_363, p. 6-5; Transcript, Vol.12 pp. 2790:23–2791:3 (Marshall).

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noted that "NEPA requires a full consideration of environmental impacts resulting from the Project." ROA 356, 35183. "The ESA imposes strict substantive protections, in the form of reasonable and prudent alternatives, that include minimization and mitigation measures that prevent jeopardy to listed species or their critical habitat." ROA 356, 2755-2756. The State Engineer did not, as suggested by WPC, abdicate his responsibility and statutory authority over water resources. The State Engineer found that "the oversight provided by federal and state agencies will supplement the State Engineer's ability to ensure the environmental soundness of the Project." ROA 178.

The State Engineer again took notice of the Stipulation for Withdrawal of Protests with the Federal Protestants and the management plan. The stipulation concerning Dry Lake, Delamar and Cave Valleys calls for the establishment of a Biological Resources Team (BRT) comprised again of governmental stakeholders. The BRT also has the responsibility to develop a Biological Monitoring Plan (BMP) to develop "conceptual models and the identification of indicators and ecological attributes to be monitored throughout DDC [Dry Lake, Delamar and Cave] Valleys and adjacent basins that will allow for the thorough assessment of the health and integrity of the full range of groundwater-influenced resources in DDC Valleys and adjacent basins." ROA 358, 21022. The BMP also provides that "[d]etailed management and mitigation approaches will be included in the BMP when enough data and information has been gathered to support their development." ROA 358.

The State Engineer approved the DDC Valleys BMP and found that the "reports provide valuable information to the State Engineer, which will inform his continued regulatory control over the Project." ROA 359. Based on these factual finding, the State Engineer found

> that incorporation of the BMP in the permit terms for the Applications and the State Engineer's continued regulatory control over the project, will ensure proper monitoring and oversight of the Project and its environmental soundness as it relates to groundwater-influenced resources.

ROA 360.

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The DDC BMP also calls for an adaptive management framework, which requires the stakeholders to cooperate in "setting goals and priorities, developing monitoring and conservation strategies, taking needed action, measuring results, and refining the plan." ROA 360, 21040. "The State Engineer [found that] the adaptive management approach incorporated in the BMP is an accepted scientific approach that is appropriate and advisable for managing a long-term Project such as this one." ROA 361.

"The BMP lays out a process for developing triggers for action in the event an unreasonable adverse impact to a resource is anticipated." ROA 361, 20152, 21137. WPC argues that the triggers and thresholds must be determined in advance. WPC OB at 68. The State Engineer found that "Selecting specific standards before a full baseline is developed would be premature." ROA 361, 35103, 35634. The State Engineer held that the BMP "demonstrates the Applicant's determination to proceed in a scientifically informed, environmentally sound manner." ROA 362.

The State Engineer reviewed "a qualitative and a quantitative analysis to predict whether environmental areas of interest were susceptible to impacts from pumping pursuant to the Applications." ROA 363, 35216. The qualitative analysis determined resources that "could be impacted by groundwater withdrawal." ROA 363, 35216. The quantitative analysis identified areas with "50-foot or greater drawdown in depth to groundwater or a 15% reduction in spring flow." ROA 363, 35216. The State Engineer evaluated the effects analysis concerning the areas of expected impact and the biological resources that might be affected. ROA 364, 365. The State Engineer found that the analysis "adequately described the potential environmental effects of the Project in a manner that allows the State Engineer to make an informed environmental soundness determination." ROA 365.

Finally, if impacts do occur, the State Engineer examined the ability of SNWA to monitor, manage and mitigate impacts that do occur. SNWA's stated goals, which are supported by the extensive efforts already in place and discussed above, are "first avoidance, then minimization, then mitigation of impacts, avoiding as many conflicts as possible as the Project is developed." ROA 365-366. The State Engineer acknowledged

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SNWA's voluntary commitments to assist with the preservation and recovery of fish and other species. ROA 366.

The State Engineer took note of the "Cave Valley Ranch Conservation Easement totaling approximately 1,480 acres, which encompasses part of the Parker Station Spring Complex and the headwaters of Cave Spring." ROA 366. The State Engineer found that the easement would "conserve and protect the habitat values contained within the easement." ROA 366. Ultimately, the State Engineer found that "any impacts to hydrologically related resources in the DDC Valleys and adjacent basins will be reasonable, and the basins will remain environmentally viable." ROA 366.

6. Substantial Evidence Supports that the Monitoring, Management and Mitigation Plans Will Be Effective

WPC and CPB argue that the hydrological and biological monitoring, management and mitigation Plans for Spring Valley are insufficient because they allegedly contain limited existing baseline information and no specifics on the proposed monitoring, management or mitigation criteria. WPC OB at 77-78; CPB OB at 31-35. WPC also argues the Plans for Cave, Dry Lake and Delamar Valleys suffer the same deficiencies. WPC OB at 77-78. WPC and CPB summarily argue that no information exists to support whether the proposed Plans have any reasonable likelihood of being effective. *Id.* WPC and CPB ignore overwhelming evidence relied on by the State Engineer in finding that the Plans will be effective in preventing impermissible impacts in the Areas of Interest identified in the respective Plans. The State Engineer found that the Plans, in conjunction with staged development, would allow impacts to be predicted and avoided before they occur, and then minimized and mitigated if necessary. *See e.g.,* ROA 106-120, 164, 181, 359-360, 524, 687. The State Engineer required implementation of the hydrological and biological Plans as conditions to the Permits. *Id.; see also,* ROA 217, 387-388, 551, 713-714.

The State Engineer found that the comprehensive hydrological and biological monitoring, management and mitigation plans will, among other goals, manage the development of groundwater without causing injury to federal and non-federal water rights or resources within the Areas of Interest. ROA 106-120, 179-193, 301-313, 469-480, 631-643.

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The Plans establish a step-by-step process for evaluating the potential effects of the Project on the hydrological and biological resources in the Areas of Interest, with abundant checks and balances built in through the establishment of technical and management teams consisting of interested parties. *Id.* WPC's and CPB's criticisms that the Plans are not specific enough are belied by the comprehensive manner in which they address the natural resources as issue. Because decisions regarding monitoring, management and mitigation must be made on a case-by-case and site-specific basis, the Plans incorporate flexibility with respect to appropriate measures. Appellant's expert, Dr. Deacon, agreed that when it comes to deciding the best course of action for management of the environment, including rehabilitation of the environment, it is "site specific and condition specific, depending on what you're doing and how you're doing it." ROA 36624. Thus, Dr. Deacon's testimony supported that a flexible approach to adaptive management was not only appropriate, but the most likely approach to achieve success. ROA 36626-36628. Appellants' experts all agreed that monitoring and appropriate water management can be effective at achieving ecological sustainability. ROA 36455, 37742, 38725. Here, the evidence supports the State Engineer's findings that both the biological and hydrological Plans will be effective in preventing harm to existing rights.

a. Biological Plans

The Plans include the development of a Biological Work Group (BWG), or in the case of Cave, Dry Lake and Delamar Valleys a Biological Resources Team (BRT), which includes representatives from the U.S. Bureau of Indian Affairs, U.S. Bureau of Land Management, U.S. National Park Service, U.S. Fish and Wildlife Service, Nevada Department of Wildlife, Utah Division of Wildlife Resources, SNWA as well as the State Engineer. ROA 179, 358, 523, 685-686, 020625, 020636, 211011, 21022. The BWG's responsibilities include, among others, overseeing implementation of the monitoring Plan, "identify[ing] indicators than can best predict Water-dependent Ecosystem Effects," "develop[ing] criteria and mak[ing] recommendations to the Executive Committee on when a course of action shall be taken to avoid Water-dependent Ecosystem Effects and on the success of such actions," and

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"oversee[ing] implementation of management and mitigation actions as approved by the Executive Committee." ROA 20809. Similar responsibilities apply to the BRT. ROA 21133.

As the Plans state, the BWG and BRT, in a cooperative effort with an Executive Committee, will work to accomplish the goals of predicting and avoiding effects on the water-dependent Ecosystems. ROA 20635-20636, 21022-21033. The monitoring portion of the biological Plan sets forth specifics about, among other issues, methodology, targeted species, monitoring locations and objectives, key ecological indicators, monitoring approach, predictive models, data management and plan implementation and schedule. ROA 20629-20632, 21014-21017. The extensive monitoring will provide enormous amounts of information regarding the Areas of Interest. The State Engineer relied on the extensive testimony of Mr. Marshall regarding this monitoring data for the broad array of biotic communities within the Valleys, including aquatic ecosystems, amphibians, birds, mammals, reptiles, fish, invertebrates, vegetation, cactus and yucca, weeds and phreatophytic vegetation. ROA 174, 358-361, 524-525, 687-688, *see also,* ROA 35117-35143, 35148-35158, 25165-35167, 035172, 20459-20469, 204278-204285, 21022-21200. In light of this vast evidence, WPC's assertion regarding the lack of baseline information is meritless.

The State Engineer found that the Plans require the development of detailed approaches for monitoring, management and mitigation. ROA 106-120, 301-313, 469-480, 631-643, 34225. The State Engineer further found that "the monitoring network is scientifically sound and designed in such a manner to provide monitoring coverage from a basin-wide scale to a site-specific scale, from groundwater to surface water, and from valley floor to the mountain block." ROA 119, 313, 477, 687. The State Engineer also found the adaptive management approach in the Plans is a scientifically sound approach, and appropriate for this Project. ROA 182, 361, 525-526, 688. Further, the State Engineer found that the Plans lay out a process for developing triggers for action in the event an unreasonable adverse effect is anticipated. ROA 182, 361, 526, 688-689.

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b. Hydrological Plans

Similar to the BWG and BRT of the biological Plans, a Technical Review Panel (TRP) was created under the hydrological Plan the TRP reports to the Executive Committee (EC) to assist in its oversight of implementation of the Plans. ROA 13347, 13303-13304. The TRP includes representatives from SNWA and each of the individual federal agencies that are parties to the stipulation, including the U.S. Bureau of Indian Affairs, U.S. Bureau of Land Management, U.S. National Park Service, and U.S. Fish and Wildlife Service, as well as the State Engineer. *Id.* The Plans focus on "establishing a network to collect hydrologic data for the purposes of defining baseline conditions prior to the SNWA withdrawals and detecting the effect of these withdrawals as pumping occurs." ROA 13353, 13809. Like the biological Plans, the hydrological Plans include details regarding implementation of the Plans, including locations of new and existing wells, production testing, spring and stream monitoring, precipitation stations, water chemistry and existing water rights monitoring, data collection methodology and frequency of reporting. ROA 13335, 13291. Pursuant to the Plans' requirements, extensive data collection has already occurred regarding the hydrology in the relevant basins, including measurements for groundwater levels, precipitation and water chemistry. ROA 103, 106, 119-120, 302, 305, 313, 470, 472, 480, 633, 635, 643. The State Engineer found that "[t]he data collected from the plan will allow the State Engineer to make real-time assessments for the spread of drawdown within the basin as well as make predictions, using data collected under the monitoring plan, as to the location and magnitude of drawdown in the future under different pumping regimes." ROA 103, 301, 469, 632.

The Plan also requires monitoring sites at specific locations of concern within the Valleys. ROA 111-116, 305-306, 473-474, 636-637. For example, in Spring Valley, specific monitoring sites are located at Cleveland Ranch, Turnley Spring, Shoshone Ponds, Northern Spring Valley and between Spring Valley and Hamlin and Snake Valleys and at Big Springs. ROA 111-116.

Other than bald assertions predicting failure, WPC and CPB fail to present any reliable evidence that the Plans will not be effective. They rely on Dr. Bredehoeft, who

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testified that predicting spring response fifty miles away from where pumping occurred will cause delay in noticing any adverse effects of the pumping before it is too late. ROA 37881, 37825-37827. However, Dr. Bredehoeft failed to recognize the benefits of monitoring wells to prevent such delay. When pressed, he stated that he did not know whether providing monitoring wells between the pumping and the spring would allow quicker discovery and reaction to a drawdown before an undesirable effect occurred. ROA 37882. The purpose of the monitoring wells required as part of the Plan are to do exactly that—predict effects of the withdrawals before any adverse effects occur. ROA 13349-13351.

In addition, if any unreasonable adverse effects to the Areas of Interest are predicted, then measures must be taken to prevent or mitigate. The Plan outlines measures that include cessation of pumping, modifying the pumping regime, changing the location of pumping, drilling new wells, lowering a pump, or providing alternative sources of water. ROA 118, 312, 479, 642. Further, as the State Engineer noted in his Rulings, he has authority under Nevada law to order additional mitigation measures as appropriate. ROA 118, 312, 479, 642; NRS 534.110(5)(6)(8).

Thus, the evidence showed that it was impossible to fully anticipate specific mitigation measures at this time, and that a case-by-case analysis on a site-specific basis was scientifically the preferred approach. ROA 34495-34496; 37735-037736. Because the evidence supports that the Plans will effectively use the best science available to predict and avoid adverse effects of the Project, the State Engineer's finding that the Plans are protective of the natural resources in the Areas of Interest is supported by substantial evidence. Based on this extensive evidence, there is no question that substantial evidence supports the State Engineer's finding that the Plans, in conjunction with staged development, will effectively protect existing rights as well as the natural resources in the Areas of Interest.

Further, NRS 534.110(5) permits the State Engineer to issue a permit with express conditions. Here, the State Engineer expressly conditioned the Permits on the implementation of monitoring, management and mitigation Plans in order to help ensure that there will be no conflicts with existing rights or unreasonable environmental impacts. ROA

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34809-34812. WPC's citation to federal law and law from neighboring states for the proposition that the State Engineer relied on "legally insufficient" monitoring, management and mitigation plans is misplaced. The cases cited by WPC are wholly inapposite because they simply do not interpret or apply Nevada water law, but rather review whether parties complied with NEPA or Oregon state law. *See,* WPC OB at 78-79, citing *Western Land Exchange Project v. BIA*, 315 F.Supp.2d 1068, 1095-96 (D. Nev. 2004) (reviewing whether or not BLM complied with NEPA regarding effects on the Desert Tortoise); *Oregon Natural Desert Ass'n v. Singleton*, 47 F.Supp. 2d 1182, 1193 (D. Or. 1998) (reviewing an application for water under Oregon water law).

Finally, WPC argues that White Pine and Lincoln counties must be involved in the management of the Plan pursuant to NRS 533.368(4). WPC OB at 81. However, NRS 533.368(4) requires consultation with the counties where additional studies are required before a final determination. Here, the State Engineer has already made a final determination on the Applications, thus 533.368(4) does not apply.

7. The Use of Water Under State Engineer's 6164 Ruling Does Not Threaten to Prove Detrimental to the Public Interest

CPB argues that the State Engineer's Ruling 6164 failed to consider whether the Project would threaten to prove detrimental to the public interest. CPB OB at 68-81. CPB confuses the public trust doctrine with the public interest analysis and attempts to expand the public trust doctrine well beyond that applied by Nevada Courts. The State Engineer addresses the public trust doctrine in detail in VI. D. 2. a., infra, as part of its response to the Brief by the Confederated Tribes of the Goshute Reservation. In addition, CPB's arguments regarding the public interest fail to recognize the State Engineer's findings of fact grounded in substantial evidence. None of Appellants' arguments regarding public interest provide any basis for this Court to reverse the State Engineer's Rulings.

Because "public interest" is not defined by the legislature, the State Engineer has been tasked with setting forth principles to analyze public interest. *See, Pyramid Lake Paiute Tribe of Indians v. Washoe County*, 112 Nev. 743, 746-747, 918 P.2d 697, 700 (Nev.

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1996) (accepting the principles identified by the State Engineer in that case for public interest analysis under NRS 533.370). In this case, the State Engineer identified fifteen policy considerations relevant to the public interest analysis applicable, including not only those considerations previously ratified by the Courts, but also adding to the list. ROA 152-164. The State Engineer then analyzed eight criteria relevant to those considerations, including beneficial use, protection of existing rights, importance of water planning, protection of springs for wildlife and livestock, government-to-government relations, the use of best available science, maximizing conservation through water pricing and benefits of cooperation with federal agencies. ROA 158-164. For each of these factors, the State Engineer analyzed the legal standards found in the water law, the evidence presented and then made findings that under each factor that the use of water would not threaten to prove detrimental to the public interest. For example, the State Engineer found that putting the water to beneficial use in Southern Nevada where it is needed for municipal uses would not threaten to prove detrimental to the public interest. ROA 158-159,163. He also found that "the staged development is to protect existing rights, springs and streams, which are sources upon which wildlife exists." ROA 160, 163-164, 174. He further found that staged development ensures use of the "best science" and protects existing rights, domestic wells, springs, streams and wetlands for the wildlife such that the use of the water does not threaten to prove detrimental to the public interest. ROA 163-164. Among other considerations, the State Engineer found that the federal permitting processes, such as a programmatic agreement under the National Historic Preservation Act and other federal obligations vis-à-vis the Tribes, are not within the State Engineer's jurisdiction and therefore do not affect his determination under Nevada water law. ROA 160-162. Finally, the State Engineer emphasized the efficient and non-wasteful use of Nevada's limited water supply, and found that the cautious use of the water of Spring Valley for the population of Southern Nevada did not threaten to prove detrimental to the public interest. ROA 163-164.

CPB argues that the State Engineer erred because he did not consider "groundwater mining" as part of this analysis. CPB OB at 75. However, this argument lacks merit because

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groundwater mining is not expressly included in the public interest factors approved by the Court in *Pyramid Lake Paiute Tribe of Indians v. Washoe County*, 112 Nev. 743, 746-747, 918 P.2d 697, 700 (1996) therefore, the State Engineer was not legally obligated to include that factor as part of his analysis under NRS 533.370(2). Moreover, the State Engineer thoroughly addressed the issue of groundwater mining in his Ruling. In any case, because the State Engineer limited the amount of water for development to the unappropriated perennial yield (ROA 90, 102), CPB's argument that the use of the water for the Project threatens to prove detrimental to the public interest fails as a matter of law. *See, Pyramid Lake Paiute Tribe of Indians v. Ricci*, 245 P.3d 1145, 1149 (2010) (no threat to the public interest exists where pumping is limited to unappropriated perennial yield).

Finally, CPB argues that State Engineer's Ruling should be reversed because he failed to "resolve issues necessary to its determination." CPB OB at 75-79. However, CPB's argument is based on its false assertion that the State Engineer miscalculated the amount of unappropriated water in Spring Valley (*see* VI. 3. B. a., *supra*). The State Engineer properly addressed each and every issue necessary to calculate the amount of unappropriated water in Spring Valley; therefore no issues remain unresolved as asserted by CPB.

Based on a comprehensive analysis by the State Engineer as to whether the use of the water threatens to prove detrimental to the public interest, wherein he considers several factors as they apply to the evidence, there is no question that his finding that the actions permitted under Ruling 6164 do not threaten to prove detrimental to the public interest is well supported by substantial evidence and must be affirmed.

8. Substantial Evidence Supports the State Engineer's Finding in Ruling 6164 that the Proposed Development Would Not Adversely Affect Air Quality

WPC's assertion that the State Engineer ignored the impacts of the proposed action on air quality (WPC OB at 95-97) is contradicted by the State Engineer's thorough analysis of the evidence in Ruling 6164. ROA 193-194. The State Engineer weighed the evidence of impacts on air quality despite the fact that air quality considerations provide no "basis for denying water rights applications" under Nevada water law. ROA 193. Indeed, despite

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WPC's assertion otherwise, air quality impacts are not required to be considered as part of either the public interest analysis under NRS 533.370(2), or the environmentally sound analysis under NRS 533.370(3)(c). *See, Pyramid Lake Paiute Tribe of Indians v. Washoe County*, 112 Nev. 743, 746-747, 918 P.2d 697, 700 (Nev. 1996) (principles identified by the State Engineer for public interest analysis under NRS 533.370 do not include air quality impacts); NRS 533.370(3)(c) (no specification of factors as part of analysis). Nevertheless, the State Engineer relied on substantial evidence to find that air quality would not be negatively impacted as a result of the Project. ROA 193-194.

SNWA expert, Dr. McLendon, testified regarding the effects of development of groundwater on the vegetation in Spring Valley. ROA 34112-34117; *see also,* ROA 9830-9896, ROA 22580-22588. He distinguished the playas in Spring Valley from those in Owens Valley, where he had extensive experience managing ecological effects of water development and where dust emissions were found to be potentially problematic. ROA 34112. Dr. McLendon opined that unlike in Owens Valley, the playas in Spring Valley were dry playas, and that because they have harder surfaces they would not produce dust unless disturbed. ROA 34115-34116; *see,* ROA 193. Appellant's expert, Mr. Landers, not only failed to dispute Dr. McLendon's testimony regarding the difference between the playas, but he even agreed that a change in depth to water in Spring Valley may actually decrease, rather than increase, the propensity to blowing dust. ROA 022589-22600, 34116-34119, 38817-38818. Based on this evidence, the State Engineer properly found that "substantial evidence showed that the project will not create a dust emissions problem." ROA 193. This Court cannot substitute its judgment for that of the State Engineer and cannot pass upon witness credibility or reweigh the evidence. *See, Bacher v. State Eng'r*, 122 Nev. 1110, 1120, 146 P.3d 793, 800 (2006).

C. Other Issues

In addition to the common issues addressed above, CPB argues some issues specific to Spring Valley that lack merit and require addressing, and both WPC and CPB assert due process arguments that fail.

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1. The State Engineer's Factual Determination that the Applications, as Granted, will not Conflict with the senior rights at Cleveland Ranch is Supported by Substantial Evidence.

"The CPB protested Applications 54009 - 54018 and 54020 - 54021, which are located in the vicinity of Cleveland and Rogers Ranches in northern Spring Valley, Nevada." ROA 137. CPB asserted that development of the Applications will conflict with its existing water rights. The State Engineer examined the evidence of Drs. Norman Jones and Alan Mayo concerning impacts on the CPB water rights. ROA 138-139. "The pumping schedule was as provided by the Applicant: 35,000 afa of pumping from year 2028 to 2038, 64,544 afa from 2028 to 2042, and 91,222 afa from 2042 to 2242," which represented the full amount requested by SNWA. ROA 137.

The State Engineer examined all the evidence, including "analyses of the CPB indicate a drawdown of approximately 160 feet after 200 years of pumping all wells, and approximately 80 feet of drawdown after 200 years of pumping all wells except the four on the Cleve Creek fan, what they call their 'Minus4' scenario." ROA 138. The State Engineer denied four applications that are omitted from the Minus4 calculations as "CPB and their expert witnesses and testimony have provided substantial evidence that Applications 54016, 54017, 54018 and 54021, on the Cleve Creek alluvial fan and up-gradient of numerous CPB water rights will impact those rights to the extent that mitigation is not possible or practical." ROA 161.

The CPB Minus4 model runs show "approximately 80 feet of drawdown after 200 years of pumping all wells except the four on the Cleve Creek fan." ROA 139. The State Engineer examined the vested claims and rights to springs and wells associated with the Ranches and found they were close to claims for Federal reserved water rights which are subject to monitoring under the Stipulation for Withdrawal of Protests between the Applicant and the Federal Agencies. The Federal Agencies are confident that the Management Plan currently in place will adequately protect those Federal claims and by extension, those of CPB. ROA 139-140.

The State Engineer also found that the Management Plan currently in place will adequately protect both Federal claims and CPB vested claims, and the "monitoring

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[currently in place] will allow for early warning of potential impacts to these water rights." ROA 139-140. The State Engineer, as is his duty, will "protect these existing rights, and will require mitigation if warranted." ROA 139-140.

The State Engineer next examined water rights "located north and east of the Cleve Creek alluvial fan." ROA 140. CPB argues that even without the four denied applications, all of the CPB owned springs will go dry due to proposed pumping, and that virtually all will go dry after just a few years. CPB OB at 19-20. This claim is misleading and also shows the problem with using a regional model to simulate local scale effects. As clearly shown in the Jones and Mayo report, of the 32 springs shown, 27 were simulated as completely dry before any pumping even occurs. ROA 32159. That is, the regional model is not accurate enough at this local scale, a fact repeatedly stressed by SNWA. CPB chose to ignore this reality, used the model even though it is not suited for this purpose, and made the erroneous claim that proposed pumping will dry up these springs. For the remaining 5 springs that CPB claims will go dry within 15 years, the BLM model was also erroneously used to make this finding. Even though CPB eventually recognizes the error of using the BLM model, they make the claim that the springs will go dry eventually, they just do not know when. CPB OB at 20. However, this is where the Management Plan and staged development are utilized to prevent conflicts with existing rights. If SNWA pumping is shown to impact CPB rights, and the monitoring component of the Management Plan will undeniably detect these effects if they were to occur, then management and mitigation options will be employed to prevent conflict. ROA 140.

The State Engineer thoroughly examined all the modeling work by both CPB and SNWA and found that "because the remaining 15 applications will be developed in a staged manner, the Management Plan will detect effects before any impacts could occur, and management options will be utilized to prevent impacts." ROA 142. These findings are supported by substantial evidence and must be affirmed.

CPB attempts to relitigate the case by asking the court to reweigh the evidence and witnesses, however, the determination of the State Engineer is prima facie correct and the

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burden is on CPB to show that there was no evidence the State Engineer could rely on to come to the conclusion in Ruling 6164. NRS 533.450(10). CPB admits that the State Engineer had substantial evidence to support the decision, but improperly argues that its experts are better and that the State Engineer should have accepted their evidence without question.

To its credit, CPB argues that if the State Engineer approved only the seven wells that were not protested by the CPB, the impacts on Cleveland Ranch would be minimal. CPB OB at 30. However, even these minimal impacts could require mitigation if they infringe on the senior water rights to ensure Cleveland Ranch has the beneficial use of its water. Whether the mitigation is for small impacts or large impacts, if the senior beneficial use is satisfied, no conflict exists. ROA 137.

"[T]he State Engineer [agreed] in part with the CPB's position that the monitoring and mitigation plan will be ineffective in protecting their water rights from pumping all 19 applications." ROA 141. The State Engineer approved only 15 of the 19 wells. ROA 142. The State Engineer also agreed in part that approving the entire 91,222 afa would conflict with the senior rights at Cleveland Ranch and only approved a total of 61,127 afa from the 15 approved wells. ROA 216. In addition, to ensure that there will be no conflict, the State Engineer ordered that pumping by SNWA would have to proceed in stages to develop the proper data to ensure that conflicts are avoided. ROA 216.

The State Engineer took the concerns of the CPB seriously and approved the Permits for less water than was applied for, pumped from fewer wells than requested and ordered that the water must be developed in stages to ensure that a conflict with Cleveland Ranch's or anyone else's water rights will not occur. These findings are supported by substantial evidence and must be affirmed.

2. Actual Capture of Evapotranspiration Cannot be used to Determine Water Available for Appropriation.

As acknowledged by the Appellants, the idea behind the capture of ET is that pumping will lower the water table until the top of the aquifer is below the root zone of the

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phreatophytes and evapotranspiration will cease. The basin will then reach a steady state wherein pumping and recharge are equal over time. CPB argues that an applicant cannot appropriate water that is currently being transpired by phreatophytes since the plants will continue to use the water until the water table is lowered and thus, the basin will be overpumped. CPB OB at 26-28.

CPB takes the stance that the location of the applications are such that capture of ET will simply take too long for their liking. Their witness testified that there were too few wells and that the project was not an ET salvage project at all, but a groundwater mining project CPB OB at 25. In fact, it is neither. It is unclear where CPB got the impression that groundwater development in Nevada is required to be an ET salvage project, which is certainly not contained in statutory law. Their argument centers around the magnitude of drawdown and the length of time it takes to capture ET by the current configuration of application wells.

While there is no statute that specifically prevents groundwater mining, the policy of the State Engineer for over 100 years has been to disallow groundwater mining, and that remains the policy today. The State Engineer's defines groundwater mining as pumping that exceeds the perennial yield over time such that the system never reaches a new equilibrium. ROA 56. The pumping of groundwater always involves the depletion of water from transitional storage. This is NOT considered groundwater mining. If this were not allowed, it would be virtually impossible to develop any groundwater in Nevada. The water rights found on the Cleveland Ranch to pump water from its well would not be allowed, as it captures ET from phreatophytes at a glacial pace. All current pumping by the CPB would be considered groundwater mining under their own definition and if the CPB's argument is accepted then its own water rights were issued in violation of the law.

The arguments defy basic hydrologic principles and are illogical. Groundwater budgets are generally calculated under pre-development conditions where the groundwater system is in long-term equilibrium; that is the amount of water recharged to the system is approximately equal to the amount of water discharging from the system. Humans often

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change the pre-development system by withdrawing (pumping) water for use. ROA 56. Pumping must be supplied from (1) increased recharge, (2) decreased discharge, (3) removal of water from storage, or some combination of these three. ROA 24618. "These ideas can be expressed in the formula: "Pumpage = Increased Recharge + Water removed from storage + Decreased discharge." ROA 24618.

Regardless of the amount of water initially pumped from a well, that initial water always comes from transitional storage and the water level in the well will drop and a cone of depression around the well will develop. NRS 534.110 (4)("It is a condition of each appropriation of groundwater acquired under this chapter that the right of the appropriator relates to a specific quantity of water and that the right must allow for a reasonable lowering of the static water level at the appropriator's point of diversion."). The long time periods required to reach equilibrium are partially attributable to the large amount of transitional storage water that is present in Spring Valley and the size of the valley. ROA 90.

The fact that equilibrium will not be reached for a significant amount of time is borne out in practice by the fact that many other basins have their perennial yield computed in the same manner, but that no basin has yet reached the state where ET has ceased. CPB argues again at 64-67 that the SNWA was required to prove that it would capture all ET within some period of time. This requirement is not found in the water law, is not the standard and again would have required denial of Cleveland Ranch's wells as they will not capture the ET equivalent of what they pump for a long time to come.

In addition, CPB quotes from Judge Robison's opinion from 2009 on the appeal of Ruling 5875. The State Engineer filed an appeal of this ruling for exactly this reason as it turned Nevada's water law on its head and would require the denial of every water right application in any basin with significant ET anywhere in the state. The appeal was dismissed as moot as a result of the ruling in *Great Basin Water Network v. State Engineer*, 126 Nev. Adv. Op. 20, 234, P.3d, 912 (2012). The Supreme Court did not rule on these issues and the prior district court ruling may not be cited a precedent. Sup. Ct. Rule 123.

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As stated above, in basins where most of the groundwater is lost by evapotranspiration, the State Engineer utilizes that discharge to determine perennial yield. The State Engineer does not tie the appropriation to the immediate capture of all ET, as that is impossible. "While not controlling, an agency's interpretation of a statute is persuasive." *State v. Morros*, 104 Nev. 709, 713, 766 P.2d 263, 266 (1988)(Citing, *Nevada Power Co. v. Public Serv. Comm'n*, 102 Nev. 1, 4, 711 P.2d 867, 869 (1986)). The Legislature has declared that "all water may be appropriated for beneficial use as provided in this chapter and not otherwise." NRS 533.030(1)(c). The logic presented by CPB would defeat the legislative intent and must be rejected.

3. Uncertainty Arguments

The CPB essentially argues that if there is any uncertainty as to the effect of groundwater pumping, the State Engineer must deny the applications. A great deal of the best available scientific evidence was presented for the State Engineer's consideration. CPB argues that the safe and staged development ordered by the State Engineer is an admission of uncertainty. The State Engineer does not agree. Staged development is a prudent approach to developing water resources while protecting existing rights and the State Engineer should not be faulted for being cautious.

The CPB curiously argues that self-reporting of data is impermissible. CPB OB at 38.-39. The State Engineer relies on many groundwater users, and virtually all municipal right holders and many mines around the state, to self-report the amount of water being used. NRS 534.110(3). The State Engineer does not have the staff to monitor every water user all the time. The self-reporting by SNWA is authorized by statute, and the unsupported assertion by CPB that this is impermissible is false.

If there is a question as to the truthfulness of the data, the State Engineer investigates and determines if the water user is in violation of the permit. *See,* NRS 533.481. Self-reporting by water users is a valid tool that the State Engineer uses to extend the responsibilities of his office and this Court should defer to the State Engineer on the best use of his staff to accomplish his statutory duties.

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CPB also argues that Ruling 6164 "creates a decades-long process where evidence will continue to be gathered and crucial decisions will continue to be made without notice to interested parties." CPB OB at 42. First, it must be noted that the records of the Division of Water Resources are public records that CPB may review at any time during regular business hours. Second, the process of managing these water rights does not end in decades, but continues for as long as the State Engineer is responsible for administering water rights in Nevada. In essence, the argument is that the State Engineer cannot manage water rights throughout the state without the consent of every water user in the basin for every decision he makes. This argument is nonsense and due process is not so broad and inflexible. Where a power is conferred by statute, everything necessary to carry out the power and make it effectual and complete will be implied. *Checker Inc. v. Public Service Commission,* 84 Nev. 629-630, 446 P.2d. 981, 985 (1968). If CPB finds its water rights are being impacted or "deprived," CPB will be entitled to due process in order to stop the conflicts to its water rights at that time. As long as Cleveland Ranch has the full beneficial use of its water, it is not entitled to second-guess management decisions by the State Engineer.

4. The Time Limits in NRS 533.380(1) Appear on the Permit

CPB argues on pp. 67-68 that the State Engineer failed to place the time limits specified in that chapter at the time of the ruling. This argument is frivolous and demonstrates CPB's lack of understanding of the water law. NRS 533.380(1) provides that "in an endorsement approval upon any application, the State Engineer shall" place the appropriate time limits. The endorsement referred to in that section is the State Engineer's granting and issuing of the permit. *See*, Exhibit 1, Permit 54009. For simple approvals, the State Engineer would type the approval and permits terms on the second page of the application. Thus, the original application with the State Engineer's endorsement would serve as the permit. In this case, the permits were issued as a separate document, but the endorsement clearly appears on the permits and the State Engineer has fully satisfied the requirements of NRS 533.380(1). The State Engineer's practice of placing time limits on

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Permits is appropriate and within the discretion of the State Engineer. *See, Checker* 84 Nev. at 630.

5. The State Engineer does not and did not approve Groundwater Mining

CPB cites a number of cases that stand for the unsurprising proposition that the State Engineer will deny an application which requests an appropriation of groundwater in excess of the perennial yield CPB OB at 68-72. The State Engineer found that the perennial yield of Spring Valley is 84,000 acre-feet annually. ROA 90. The State Engineer granted only the remaining perennial yield to SNWA in ruling 6164. ROA 214-215. This factual determination by the State Engineer is prima facie correct and the court may not substitute CPB's estimation of the perennial yield if the State Engineer's determination is based on evidence a reasonable mind can rely upon to make that finding. *Pyramid Lake Paiute Tribe of Indians v. Ricci*, 126 Nev. Adv. Op. 48, 245 P.3d 1145, 1148 (2010).

In this case, the State Engineer resolved this question of fact through consideration of a tremendous amount of scientific evidence. The State Engineer did not fully accept the estimates of either side, but used the best science available to come to the conclusion that 84,000 acre-feet annually is the perennial yield of Spring Valley. The State Engineer's finding is supported by substantial evidence and must be affirmed.

6. Due Process

The United States Supreme Court, in the context of a First Amendment employment claim held that courts must take note of "the common-sense realization that government offices could not function if every employment decision became a constitutional matter." *Connick v. Myers*, 461 US 138, 143 (1983). This Court should employ a similar standard in reviewing the due process claims made herein and find that the State Engineer could not function if every water right management decision made raises constitutional issues.

CPB and WPC make vague and conclusory arguments that the State Engineer's use of staged development in Spring Valley will deprive them of due process. *In Logan v. Zimmerman Brush Co.*, 455 U.S. 422 (1982), the court noted that they were "faced with what has become a familiar two-part inquiry: we must determine whether Logan was deprived of a

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protected interest, and, if so, what process was his due." *Id.* at 428. The decision to move to the next tier of a staged development plan would be based on a showing that the initial pumping under the permits have not conflicted with existing rights and that increased pumping will not likely be in conflict. Thus, the State Engineer will only make a decision for increased pumping if the property interests of the water right holders in Spring Valley have been preserved. If CPB's property interests are conflicted, they are entitled to appeal that decision. NRS 533.450(1).

The Nevada Supreme Court has held that:

> the legal process due in an administrative forum "is flexible and calls for such procedural protections as the particular situation demands." *Burleigh v. State Bar of Nevada*, 98 Nev. 140, 145, 643 P.2d 1201, 1204 (1982). To determine whether a given procedure appropriately safeguards an individual's due process guarantees, a reviewing court must weigh: (1) the private interest affected by the official action; (2) the risk of an erroneous deprivation of that private interest through the procedures used and the probable value, if any, of additional or substitute procedural safeguards; and (3) the government's interest, including the function involved and the fiscal and administrative burdens that the additional or substitute procedural requirements would entail. *State, Dep't Mtr. Vehicles v. Vezeris*, 102 Nev. 232, 236, 720 P.2d 1208, 1211-12 (citing *Mathews v. Eldridge*, 424 U.S. 319, 335, 96 S.Ct. 893, 903, 47 L.Ed.2d 18 (1976); *Burleigh*, 98 Nev. at 145, 643 P.2d at 1204 (citing *Mathews*).

Minton v. Board of Medical Examiners, 110 Nev. 1060, 1082, 881 P.2d 1339, 1354 (1994). In order to be deprived of due process, Appellants must show that they will be deprived of a protected private interest. They have not made this showing. The administrative procedures of NRS 533.450(1) are adequate to safeguard the property interest of CPB. The interest of the state in having beneficial use of its extremely limited water supply is immense. *Batcher* 122 Nev. at 116. Water is just as necessary for life in Southern Nevada as it is in Spring Valley. These additional due process burdens would affect every water right holder in the state, and most of who do not have the financial resources to bear such heavy burdens.

If the State Engineer determines that increasing diversions above the first tier is not appropriate, and the CPB and WPC Appellants have the full beneficial use of their water rights, no property interest has been affected and there is no process due. The very purpose of the staged development is to reduce the risk associated with conflicts to existing rights by

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determining the response of the aquifer to the increased pumping stress and to increase the amount of data collected for scientific analysis of the aquifer's condition. Finally, the State Engineer's only alternative would be to grant or deny the full amount of the water permits before it is known how the appropriations will affect the aquifer, as suggested by CPB.

In *Board of Regents of State Colleges v. Roth*, 408 U.S. 564, 577 (1972), the United States Supreme Court held that: "[t]o have a property interest in a benefit, a person clearly must have more than an abstract need or desire for it. He must have more than a unilateral expectation of it. He must, instead, have a legitimate claim of entitlement to it." Thus, the abstract desire to oversee every management decision statutorily assigned to the State Engineer cannot legitimately be considered a due process right. There is little doubt that water is available for appropriation in Spring Valley, as the CPB acknowledges. CPB OB at 30. There is, however, no credible evidence to support the contention that no water is available as argued by WPC. There can be no due process right to prevent others from using available water as authorized and supported by Nevada water law. NRS 533.030(1).

WPC makes a vague argument that the "Spring Valley Pipeline Applications, do not actually reflect . . . the true location of actual intended points of diversion." WPC OB at 101. In addition, the CPB makes the false assertion that "50 to 100 shallow wells" were somehow approved in Ruling 6164. CPB OB at 41. The application form used by the Division of Water Resources (Division) requires a description of the proposed point of diversion by survey description and the description must match the illustrated point of diversion on the supporting map. NRS 533.335(5). When a well is drilled, it must be within 300 feet and within the same quarter— quarter section of land as described in the original application or an additional change application is required. NAC 534.300. If a change application is filed, WPC and CPB are entitled to protest the change at that time. NRS 533.365. Ruling 6164 only approved the wells as identified in Applications 54003 through 54015, 54019 and 54020. If additional wells are required, they will be the subject of future applications and the court should not take jurisdiction over matters that have not yet been considered by the State Engineer.

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CPB seriously mischaracterizes the facts involved in *U.S. v. Alpine Land & Reservoir Co.*, 2012 WL 4442804 (September 24, 2012). In that case, the United States Fish and Wildlife Service filed Change Applications 73418, 73419, 73420, 73421, 73422 and 73423 to change the place and manner of use of Carson River water. According the applications, the point of diversion of the water rights was to be at the Buckland Ditch, which is upstream of Lahontan Reservoir in Segment 7(e) under the decree for the Carson River. The Change Applications sought to use an "administrative point of diversion" at Buckland Ditch, but actually, the new water would be diverted at Sagoupse Dam with the place of use on lands within the boundary of the Stillwater National Wildlife Refuge which is downstream of Lahontan Reservoir and in Segment 8. The State Engineer rightfully denied this change application as there is no such thing as an administrative point of diversion. The situation is much different from the situation SNWA may find itself in once production wells are drilled and tested.

The appellants cannot claim a due process right to oversee the management of the state's groundwater by the State Engineer. A party must be deprived of a property interest to be entitled to due process and no deprivation has occurred. The speculative nature of these claims demands they be dismissed and the State Engineer's Ruling be affirmed.

7. Takings Claims

The takings claim of the CPB under the Fifth Amendment to the United States Constitution is likewise flawed. The United State Supreme Court has defined the parameters of takings claims in two categories:

> Although our regulatory takings jurisprudence cannot be characterized as unified, these three inquiries (reflected in *Loretto*, *Lucas*, and *Penn Central*) share a common touchstone. Each aims to identify regulatory actions that are functionally equivalent to the classic taking in which government directly appropriates private property or ousts the owner from his domain. Accordingly, each of these tests focuses directly upon the severity of the burden that government imposes upon private property rights.

Lingle v. Chevron U.S.A. Inc. 544 U.S. 528, 539-540 (2005)(Citations omitted). The State Engineer enforces Nevada's water law such that when a junior water right holders use of water conflicts with a senior right, he must mitigate the conflict to make the senior right whole

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at the expense of the junior water right holder. If CPB's wells need re-drilling as a result of SNWA's pumping, SNWA, not CPB, will be required to pay for the mitigation.

Again, this case is not unique. The Lone Tree Mine in Pumpernickel Valley was dewatering to keep the mine operational. Exhibit 2. The State Engineer was informed that Sulphur Spring, 7.7 miles from the mine, had gone dry. The State Engineer investigated and determined that the mine's dewatering was in conflict with water rights on the spring. The State Engineer ordered Lone Tree Mine to mitigate the impact to ensure that the senior right on the spring could be satisfied. The Lone Tree Mine paid to drill a small well and pump completely at its own expense. Exhibit 2.

A regulatory taking will only be found in "regulations that completely deprive an owner of "all economically beneficial us[e]" of her property." *Id.* at 538 (*Citing, Lucas v. South Carolina Coastal Council*, 505 U.S. 1003, 1019 (1992). Since CPB will have the full beneficial use of its water rights under Nevada's water law, it cannot maintain an action for a taking, as no property right will be taken. *See, Palazzolo v. Rhode Island*, 533 U.S. 606, 631 (2001) ("A regulation permitting a landowner to build a substantial residence on an 18-acre parcel does not leave the property 'economically idle.'") The United States Supreme Court recognized that "Government hardly could go on if to some extent values incident to property could not be diminished without paying for every such change in the general law," *Lingle*, 544 U.S. at 537-538 (*Quoting, Pennsylvania Coal Co. v. Mahon*, 260 U.S. 393, 413 (1922)).

The overriding goal of Nevada's water law is that the waters of the State should be put to beneficial use and to the extent possible not left idle. *Desert Irrigation, Ltd. v. State Engineer*, 113 Nev. 1049, 1059, 944 P.2d 835, 842 (1997)("The concept of beneficial use is singularly the most important public policy underlying the water laws of Nevada and many of the western states." * * * "Indeed, even those holding certificated, vested, or perfected water rights do not own or acquire title to water. They merely enjoy the right to beneficial use."). The State Engineer's interpretation of the water code balances the need to protect existing rights and the long-term sustainability of the resources while allowing for the maximum use of the resource for the benefit of the State and its people. *See, Bacher v. State Engineer*,

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122 Nev. 1110, 1116, 146 P.3d 793, 797 (2006)("state regulation like that in NRS Chapters 533 and 534 is necessary to strike a sensible balance between the current and future needs of Nevada citizens and the stability of Nevada's environment."). CPB has the right to the full beneficial use of its water, not to stop others from using water.

Cleveland Ranch will retain all its water rights and priorities. Any shortage of water, will fall not on the Cleveland Ranch, but on SNWA. The Ranch, with its full water rights, will retain all its value and the regulatory takings claims made by the CPB must be rejected.

8. Water Must Be Put to Beneficial Use.

CPB argues that the State Engineer's Ruling is deficient as it does not specify what is to be done with the water pumped during the staged pumping phase ordered in Ruling 6164. It should not be necessary for the State Engineer to spell out every provision of Nevada law in his ruling. Plain and simple, the water must be put to the beneficial use that was applied for, which in this case is municipal use. Nevada Revised Statute 533.030 provides that "subject to existing rights, and except as otherwise provided in this section, all may be appropriated for beneficial use as provided in this chapter and not otherwise." NRS 533.035 provides that "[b]eneficial use shall be the basis, the measure and the limit of the right to the use of water." SNWA must put the water to beneficial use for municipal purposes, within the approved place of use, or it must file a change application with the State Engineer.

D. The State Engineer's Response to the Confederated Tribes of the Goshute Reservation's Brief and Common Arguments by the Tribes

1. Introduction

The Confederated Tribes of the Goshute Reservation and the Duckwater Shoshone and Ely Shoshone Tribes (collectively referred to in this Section as "the Tribes") assert similar arguments with respect to the State Engineer's Ruling 6164, namely 1) that the Ruling fails for legal error because it violates the public trust doctrine, and 2) that it fails for lack of evidence supporting that the Great Basin Area's ("Area") natural resources are adequately protected. The thrust of the Tribes' arguments are centered on their cultural and spiritual uses of the natural resources in the Area. The Tribes' cultural and spiritual uses of the environment are unquestionably important, and the Tribes' assertion that those uses

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were ignored when the State Engineer granted the Applications is simply incorrect. Substantial evidence supports that the Project is environmentally sound and does not threaten to prove detrimental to the public interest. Further, the staged development of the Project, in conjunction with the extensive hydrologic and biologic monitoring, management and mitigation Plans ("the Plans"), which are incorporated into the Permits as conditions, will further protect the natural resources in the Area, including those that concern not only the Tribes, but all of the interested parties.

In urging the Court that the State Engineer failed in his fiduciary duties to protect the natural resources of the Area, the Tribes attempt to extend the public trust doctrine far beyond that established by Nevada law, and in a way that contradicts the origins of the doctrine itself. For that reason, this Court should reject the Tribes' assertions that the State Engineer committed legal error.

Further, the Tribes insist that the State Engineer is legally required to review their specific cultural and spiritual uses of natural resources as part of the public interest determination required of the State Engineer under NRS 533.370(2). While there is no legal authority to support the Tribes' position, the fact is that the State Engineer made findings regarding the protection of the very natural resources upon which the Tribes rely for their cultural and spiritual uses. Moreover, the State Engineer's finding that the proposed actions do not threaten to prove detrimental to the public interest, based on a host of factors in addition to the environmental factors, is well supported by the evidence and not susceptible to reversal. The State Engineer properly found that the requirements of NRS 533.370(2)(3) had been met, and because the Tribes failed to present any specific evidence to dispute those findings, they must stand.

Finally, substantial evidence supports that the monitoring, management and mitigation Plans will be effective in protecting the resources of the Area. The overwhelming evidence shows that the comprehensive and detailed Plans provide significant tools to predict and avoid any adverse effects before they occur, and to appropriately mitigate any adverse

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effects if necessary. Accordingly, the State Engineer committed no reversible error and this Court should affirm Ruling 6164.

2. Legal Arguments

a. The State Engineer's Ruling 6164 Does Not Violate the Public Trust Doctrine

The Tribes argue that the State Engineer committed legal error by improperly ignoring the public trust doctrine in Ruling 6164, and that the Ruling should be overturned because the actions permitted by the Ruling will harm the natural resources of the Area that they assert are held in public trust. Goshute OB at 2, 15-24; Shoshone OB at 22-24[8]. The Tribes' arguments fail both legally and factually. In arguing that the public trust doctrine applies to a host of resources within the state, including not only groundwater and surface waters, but also other natural resources such as springs, wetlands, grasslands, meadows, Swamp Cedars, native plants, wildlife and centuries of habitation, the Tribes attempt to extend the public trust doctrine well beyond its application. The public trust doctrine does not apply to groundwater, or any other property that was not navigable waters, or beneath navigable waters, at the time of Nevada's statehood. For this reason, the Tribes' assertions that legal error occurred because the State Engineer did not consider these resources as part of the public trust are erroneous. In addition, because substantial evidence supports that Ruling 6164 protects the natural resources of the Area, the factual findings by the State Engineer that the public interest is not threatened and that the proposed action is environmentally sound must stand. Thus, there is no legal basis for the Court to reject the State Engineer's Ruling 6164.

i. The Public Trust Doctrine Does Not Apply to Any Resources That Were Not Navigable Waters or Land Beneath Navigable Waters at the Time of Statehood

In asserting that the public trust doctrine applies to virtually every resource within the Great Basin, the Tribes attempt to extend the public trust doctrine well beyond that adopted by the Supreme Court in *Lawrence v. Clark County*, 254 P.3d 606, 127 Nev. Adv. Op. 32 (Nev. 2011), or that applied by any other Court in Nevada. The Tribes' proposed application of the public trust doctrine is inconsistent with the origins and principles of the doctrine, as

[8] In their brief, the Shoshone Tribes expressly adopt all of the arguments contained in the Goshute Tribes' Brief. *See*,Shoshone OB at p. 16.

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well as the water law statutes as they have been applied in Nevada for the past hundred years. In short, the Courts have properly only ever applied the public trust doctrine to land beneath navigable waters—not groundwater or any other resource—because the origins of the public trust doctrine dictate such application.

In *Lawrence*, the Court adopted the public trust doctrine and addressed whether the doctrine applies to land in Fort Mohave Valley near Laughlin in Clark County Nevada. The *Lawrence* Court held that if the land was beneath the surface of navigable waters at the time Nevada became a state, then it is part of the public trust. *Lawrence*, 254 P.3d at 609-611. The Court remanded the case back to the district court with instructions "to evaluate whether the disputed land was beneath a navigable waterway at the time of Nevada's statehood and how it became dry." *Id.* at 617.

Although the Goshute Tribe repeatedly cites to *Lawrence* for the proposition that the public trust doctrine applies to all waters of the state and resources beyond, the citations are misleading because they are to portions of *Lawrence* that discuss a minority concurring opinion in another case, *Mineral County v. State, Department of Conservation*, 117 Nev. 235, 20 P.3d 800 (2001). *See,* Goshute OB at 19-20 (citing to *Lawrence's* reference to Justice Rose's concurring opinion in *Mineral*). The *Lawrence* Court included in its opinion, quotations of Justice Rose's minority concurring opinion in *Mineral*, only as part of providing background on the discussion of the public trust doctrine, not as controlling case law. *Lawrence*, 254 P.3d at 611. Therefore, it is important to recognize that the public trust doctrine has never been applied to the appropriation of water in Nevada, including groundwater. *See, State Engineer v. Cowles Bros., Inc.*, 86 Nev. 872, 874, 478 P.2d 159, 160 (1970) (applying the public trust doctrine to property located in the dry Winnemucca Lake bed); *State v. Bunkowski,* 88 Nev. 623, 503 P.2d 1231, 1233 (1972) (reviewing a decision regarding land beneath the Carson River and reiterating that "[i]t is settled law in this country that, by virtue of a state's admission into the United States, lands underlying navigable waters within [the] State belong to the State in its sovereign capacity.") (citations omitted) (quotations omitted); *Mineral County v. State, Department of Conservation,* 117

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Nev. 235, 20 P.3d 800 (2001) (denying a writ of mandamus regarding the Walker River on procedural grounds).

Nor should the doctrine apply to anything but navigable waters or the land beneath them, because the origins of the public trust doctrine rest in the principle that "title to the navigable waters and the lands underneath them" was granted from the United States to the individual states at the time of statehood to be held in trust. *See, Lawrence*, 254 P.3d at 609, quoting *Illinois Central Railroad v. Illinois,* 146 U.S. 387, 434, 13 S.Ct. 110, 36 L.Ed. 1018 (1892). Because groundwater was not navigable at the time of statehood, the public trust doctrine does not apply. *See also, State Engineer v. Cowles Bros., Inc.*, 86 Nev. 872, 874, 478 P.2d 159, 160 (1970) ("A body of water is navigable if it is used or is usable in its ordinary condition as a highway of commerce over which trade and travel are or may be conducted in the customary modes of trade and travel on water.") (citations omitted). As such, the State Engineer could not have committed legal error with respect to the public trust doctrine as it applies to groundwater or other resources that are not navigable waters or beneath navigable waters.

Importantly, NRS 534.020(1) instructs that groundwater is "subject to appropriation for beneficial use." *Id.* Thus, while Nevada's statutes identify that the waters of the state belong to the public (*see,* NRS 533.020(1) and NRS 533.025), that precept is different from the common law public trust doctrine and must be viewed in conjunction with the entire statutory scheme. Under NRS 533.370(1)(2), the State Engineer "shall" approve an application for beneficial use of water so long as certain fees and other criteria are met, unless there is no unappropriated water, the proposed use conflicts with existing rights or domestic wells, or the proposed use threatens to prove detrimental to the public interest. *Id.* Further, for an interbasin transfer, the State Engineer must find that the proposed action is environmentally sound for the basin of origin from which the water is exported. NRS 533.370(3)(c). Thus, the analyses under these statutes are distinct from the analysis under the public trust doctrine.

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In this case, the Tribes argue that the public trust was violated because the natural resources such as springs, wetlands, grasslands, meadows, Swamp Cedars, native plants and wildlife will be harmed. Goshute OB at 16-24; Shoshone OB at 15, 22-24. The Tribes confuse the public trust doctrine with the statutory scheme that appropriately sets the framework for protection of the environment. As addressed in detail below, the State Engineer's factual findings that the use of water in the Project does not threaten to prove detrimental to the public interest and is environmentally sound are supported by substantial evidence. In short, the Tribes' assertions regarding the public trust doctrine are misplaced.

ii. The State Engineer's Ruling Protects the Area's Natural Resources

Substantial evidence supports that the State Engineer's Ruling is protective of all of the natural resources of the Great Basin, including resources, if any, properly subject to the public trust doctrine, namely navigable waters and land beneath navigable waters at the time of statehood. In light of the overwhelming evidence of safeguards for the environment, the Tribes' assertion that the State Engineer's Ruling does not consider the adverse impacts on the natural resources, including springs, wetlands, grasslands, meadows, Swamp Cedars, native plants, wildlife, and centuries of habitation, is specious. Goshute OB at 22-23, 41-49; Shoshone OB at 22-24.

First, State Engineer's Ruling 6164 was based on substantial evidence that the use of water in the Project presented no conflicts with existing rights, was environmentally sound and did not threaten to prove detrimental to the public interest. ROA 106-120, 160-164. Second, the State Engineer's Ruling limits development of water through staged development. Thus, while the total development that may be allowed under the Permits in Spring Valley is 61,127 afa, during the first stage of development, the Permits only allow 38,000 afa to be extracted, followed by further development in two additional stages only if adverse effects are not identified, or can be prevented or mitigated. ROA 216. The staged development will allow the State Engineer to evaluate the effects of development of a limited amount of water before allowing further development, in order to confirm that further development will not cause conflict with existing rights or threaten the environment in the

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basin of origin. ROA 160, 163, 174. Consequently, substantial evidence supports that the staged development provides additional safeguards for the protection of the environment, including springs, streams, grasslands and the wildlife that inhabits those resources. *Id.* In sum, the staged development ordered by the State Engineer will allow the State Engineer and the technical teams implementing the Plans to identify any potential for adverse effects, and, if appropriate, permits the State Engineer to order a reduction or cessation of pumping before those effects occur. ROA 13381.

Third, in conjunction with staged development, State Engineer's Ruling 6164 requires baseline data collection and robust hydrologic and biological monitoring, management and mitigation Plans. Substantial evidence supports that these Plans will greatly assist in the preservation of the natural resources within the Area of Interest. ROA 13303-13353, 20525-21022. The Plans improve the State Engineer's ability to ensure protection of Nevada's natural resources by gaining valuable information about the hydrology, hydrogeology and biology of the Area of Interest, such that the State Engineer can use the best science for future decisions about additional stages of water development. *See e.g.*, ROA 106-120, 164. Moreover, the Plans specifically require monitoring, management and mitigation such that no injury may occur to federal and non-federal water rights and no unreasonable adverse effects may occur to the federal and non-federal resources within the Area of Interest. ROA 13347, 20635. Teams of experts will work collaboratively to assess the potential effects of development on the natural resources, and to manage development such that harm to those resources is avoided or, if necessary, mitigated. Indeed, monitoring has already occurred pursuant to the Plan since 2007, and plan-specific data collected has been provided to the State Engineer and the Department of Interior since that time. ROA 13343-13345. In addition, yearly reports since 2008 have presented specific data collected between 2007 and 2011, building upon data from the area dating as far back as 1914. ROA 13345, 13548-13665, 13666-13774, 13775-13898.

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Accordingly, substantial evidence supports that State Engineer's Ruling 6164 is protective of the natural resources, including navigable waters and the land beneath them at the time of statehood as property of the public trust.

b. The State Engineer's Finding That the Proposed Development Does Not Threaten to Prove Detrimental to the Public Interest Is Supported By Substantial Evidence, and Ruling 6164 Considered the Resources the Tribes Use for Their Cultural and Spiritual Purposes

The State Engineer made significant findings to support his ruling that the use of water in the Project did not threaten to prove detrimental to the public interest. In addition, because the Plans and the staged development provide substantial safeguards to protect the natural resources in the Area, including those natural resources that the Tribes assert are at the heart of their cultural and spiritual practices, the Tribes' assertion that the law requires the State Engineer to review their specific uses is not only incorrect, but also immaterial. The State Engineer heard substantial testimony regarding the Tribes' uses of the natural resources, and included in his analysis the protection of those resources for not only Tribal use, but all groups' uses.

i. The State Engineer's Finding That the Public Interest is Not Threatened Is Supported by Substantial Evidence

The State Engineer considered significant factors that support the finding that the proposed action does not threaten to prove detrimental to the public interest. ROA 156-157. Specifically, the State Engineer identified fifteen policy considerations that were incorporated into eight factors that he analyzed to find that the proposed action did not threaten to prove detrimental to the public interest. The factors include tenets of water law such as beneficial use, protection of existing rights, importance of water planning, protection of springs for wildlife and livestock, government-to-government relations, the use of best available science, maximizing conservation through water pricing and benefits of cooperation with federal agencies. ROA 158-164. For each of these factors, the State Engineer analyzed the legal standards found in the water law, the evidence presented and then made findings that under each factor that the use of water would not threaten to prove detrimental to the public

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interest. For example, the State Engineer found that putting the water to beneficial use in Southern Nevada where it is needed for municipal uses would not threaten to prove detrimental to the public interest. ROA 158-159. 163. He also found that staged development ensures use of the "best science" and protects existing rights, domestic wells, springs, streams and wetlands for the wildlife such that the use of the water does not threaten to prove detrimental to the public interest. ROA 163-164. Among other considerations, the State Engineer found that the federal permitting processes, such as a programmatic agreement with the National Historic Preservation Act and other federal obligations vis-à-vis the Tribes, are not within the State Engineer's jurisdiction and therefore do not affect his determination under Nevada water law. ROA 160-162. Finally, the State Engineer emphasized the efficient and non-wasteful use of Nevada's limited water supply, and found that the cautious use of the water of Spring Valley for the population of Southern Nevada did not threaten to prove detrimental to the public interest. ROA 163-164.

Based on the comprehensive public interest analysis by the State Engineer, wherein he considered several factors as they apply to the evidence, there is no question that substantial evidence supports his finding that the proposed actions permitted under Ruling 6164 do not threaten to prove detrimental to the public interest.

ii. The State Engineer's Ruing Considered the Natural Resources that the Tribes Depend on For Their Cultural and Spiritual Uses

The Tribes assert that the State Engineer erred because he did not consider the Tribes' cultural and spiritual uses in his Ruling. Goshute OB at 41-49; Shoshone OB at 13-15, 24. This is both factually and legally incorrect. First, nothing in Nevada water law explicitly requires consideration of any group or individual cultural or spiritual uses of water in determining whether or not to grant an application, and the Tribes point to no authority for that proposition. Instead, the Tribes assert that their cultural and spiritual uses must be considered as part of the public interest analysis under NRS 533.370(2). *See,* Goshute OB at 41-49; Shoshone OB at 13-15, 24. This is also unsupported in the law.

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(a) Although Consideration of the Tribes' Specific Cultural and Spiritual Uses of the Natural Resources are Not Required Under the Public Interest Analysis, the State Engineer Nevertheless Considered Them When He Considered the Natural Resources Upon Which Those Uses Are Based

Because "public interest" is not defined by the legislature, the State Engineer has been tasked with setting forth principles to analyze public interest. None of the policy considerations identified by the State Engineer as part of the public interest analysis, and previously accepted by the Supreme Court of Nevada, specifically includes consideration of any group or individual cultural or spiritual considerations. *See*, *Pyramid Lake Paiute Tribe of Indians v. Washoe County*, 112 Nev. 743, 746-747, 918 P.2d 697, 700 (Nev. 1996) (accepting the principles identified by the State Engineer in that case for public interest analysis under NRS 533.370). The Tribes cite to no authority—and the State Engineer is aware of no authority—that supports that cultural or spiritual considerations must be analyzed as a separate factor of the public interest analysis under NRS 533.370(2), or as part of any other Nevada water law statute or regulation. Accordingly, the Tribes' arguments that the State Engineer legally erred fail.

Moreover, the State Engineer's thorough analysis of the considerations for determining the public interest in this case, including not only those considerations previously ratified by the Courts, but also adding to the list, is supported by substantial evidence. *See,* ROA 152-164. And while the State Engineer did not specifically include as part of those considerations cultural and spiritual uses by the Tribes, he nevertheless considered the environmental impacts of the Ruling, which in turn speak directly to the uses claimed by the Tribes. *Id.* For example, the State Engineer found that "the staged development is to protect existing rights, springs and streams, which are sources upon which wildlife exists." ROA 160, 163, 174. He also found that the use of staged development will help protect the springs, streams, wetlands and fisheries of the Great Basin. *Id.* at 164. *State Engineer v. Morris*, 107 Nev. at 701, 819 P.2d at 205 (an agency's view or interpretation of its statutory authority is persuasive, even if not controlling) (citations omitted). The State Engineer further

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found that the adaptive management approach incorporated in the Plans is "an accepted scientific approach that is appropriate and advisable for managing a long-term Project such as this one." ROA 182. Because the springs, streams and wildlife are the very natural resources the Tribes want to protect for their cultural and spiritual uses, the State Engineer's Ruling considered the Tribes' interests.

(b) The State Engineer Further Considered the Natural Resources Upon Which the Tribes' Cultural and Spiritual Uses Rely in His Environmentally Sound Analysis

In addition, the State Engineer considered the Tribes' cultural and spiritual uses of the natural resources as part of the environmental soundness analysis relating to the interbasin transfer requirements under NRS 533.370(3).

To be clear, the State Engineer considered the Tribes' uses of the natural resources, along with other parties' uses of the natural resources, in finding substantial evidence of environmental soundness. This finding was bolstered by the requirements for "staged development, along with careful monitoring, management and mitigation, if needed." ROA 174. The State Engineer relied on testimony from three expert witnesses presented by the Applicant, including Mr. Zane Marshall, Ms. Lisa Luptowitz and Dr. Terry McLendon, as well as three expert witnesses from Appellants, including Dr. James Deacon, Dr. Duncan Patten and Dr. Robert Harrington, to support his finding of environmental soundness. ROA 175. Mr. Marshall testified extensively regarding the monitoring data for the broad array of biotic communities within Spring Valley, including aquatic ecosystems, amphibians, birds, mammals, reptiles, fish, invertebrates, vegetation, cactus and yucca, weeds and phreatophytic vegetation, as well as the projected impacts on the environmental resources in Spring Valley and the tools to avoid, minimize or mitigate those impacts. ROA 35117-35143, 35148-35158, 25165-35167, 035172, 20459-20469, 204278-204285, 174. These communities of biologic species include those that the Tribes complain will be harmed by the Project.

Ms. Luptowitz testified about the federal, state and local environmental permitting for the Project, such as NEPA and ESA, stressing that those processes take a strenuous look at the environmental impacts of the Project. ROA 35182-35183, 35202-35204. While the State

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Engineer recognized that those processes do not replace his own environmental soundness analysis, he recognized that they "supplement the State Engineer's ability to ensure environmental soundness of the Project." ROA 178.

Finally, Dr. McLendon testified regarding the potential effects the changes of depth to water may have on vegetation in Spring Valley. ROA 34025-34051; *see also,*9830-9896. Specifically, he testified that it was fundamental that different types of vegetation and different species of vegetation have different water requirements, which means that they will respond differently to changes in depth to water. ROA 34037. He confirmed that understanding those relationships is imperative to a valid management plan, and that the data collected from monitoring will assist in the management. *Id.*

None of the Appellants' expert witnesses disputed the Applicant's biological evidence. ROA 36603-36606, 36456-36457. As Mr. Marshall explained, at best, Dr. Deacon raised concerns regarding the extinction of species in the past due to water development. ROA 35243-35244. However, those concerns arose in the context of historical water development practices that preceded the ESA, and those practices are not applied to this Project. *Id.* Further, Dr. Deacon agreed that his predictions, based on the modeling of Dr. Myers, was a generalized understanding that would require testing through a monitoring plan. ROA 36615. Thus, the State Engineer properly relied on the substantial evidence supporting that the export of water from the basin of origin was environmentally sound. ROA 176-193.

Moreover, the Tribes fail to assert with any particularity what aspects of their cultural uses will be harmed as a result of the State Engineer's Ruling. ROA 143. For example, Chairwoman Sanchez and Chairman Marques, who testified on behalf of the Tribes, explained that the Tribal members heavily use the resources outside of the physical boundaries of the Tribes' Reservations, but within the affected Areas, including the land, water and wildlife. ROA 38103-38114, 38203, 38193-199.[9] But nowhere do the Tribal

[9] While substantial evidence supports that the resources will remain intact, particularly with the Plans and the staged development, it is important to note that even if the Permits affected the Shoshone hunting or fishing, the Tribe no longer holds aboriginal hunting and fishing rights. *Whiterock v. State*, 112 Nev. 775, 781, 918 P.2d 1309, 1313 (Nev. 1996), citing *Western Shoshone Nat. Council v. Molini,* 951 F.2d 200, 203 (9th Cir.1991), *cert. denied,* 506 U.S. 822, 113 S.Ct. 74, 121 L.Ed.2d 39 (1992) ("There is no treaty which grants the Shoshone hunting and fishing rights. We therefore hold that Shoshone aboriginal hunting and fishing rights

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members present evidence that their cultural or spiritual uses will be disturbed by the Project. At best, the evidence supports that the Tribes fear that the resources they use for cultural and spiritual purposes will be affected, but no evidence supports that those affects will actually occur, or that if they do occur, how the effects prevent or interfere with the Tribes' practices. *See, Pyramid Lake Paiute Tribe of Indians v. Washoe County*, 112 Nev. 743, 752, 918 P.2d 697, 702 (Nev. 1996) (finding that public interest was not compromised where some species of plants would replace another). Although the Tribes argue that the State Engineer shifted the burden of proof to them by requiring them to prove that the natural resources would be harmed, the State Engineer did not shift the burden. Rather, the State Engineer weighed the evidence and found that it weighed in favor of meeting the requirements for environmental soundness and public interest under NRS 533.270(2)(3). The Tribes failed to dispute the credible evidence supporting this finding with any reliable evidence and instead relied on generalities and speculation. This Court cannot reweigh the evidence and therefore the State Engineers' finding should stand.

The Plans were incorporated into the Permits and implemented in order to prevent any injury to federal and non-federal water rights and any unreasonable adverse effects to federal and non-federal resources within the Areas of Interest. The evidence supports that the Plans will effectively accomplish this goal, thereby protecting the resources the Tribes rely on for their cultural and spiritual practices.

c. The State Engineer's Finding that the Plans Will Effectively Protect the Natural Resources in the Area of Interest Is Supported By Substantial Evidence

Although the Tribes assert that the monitoring, management and mitigation Plans incorporated as conditions to the Permits fail to adequately address environmental concerns because they "lack meaningful criteria" (Goshute OB at 29-33; Shoshone OB at 22-23), overwhelming evidence supports that the Plans will effectively preserve the environment for all uses, including Tribal uses. Even Appellant's's expert could not say conclusively whether or not the Plans would fail, only that management plans incorporating adaptive management,

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were taken when "full title extinguishment" occurred.").

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such as the Plans at issue, often require the testing of many hypothesis before finding one that works. ROA 36627-36628.

The hydrological and biological monitoring, management and mitigation Plans are robust plans that will, among other goals, manage the development of groundwater without causing injury to federal water rights or unreasonable adverse effects to the federal resources within the Area of Interest. ROA 13333-13386, 20625-21009. The Plans establish a step-by-step process for evaluating the potential effects of the Project on the hydrological and biological resources in the Area of Interest, with abundant checks and balances built in through the establishment of technical and management teams consisting of interested parties. *Id.* The Tribes' criticisms that the Plans are not specific enough, is belied by the sheer volume of the Plans, as well as the comprehensive manner in which they address the natural resources as issue. Because decisions regarding monitoring, management and mitigation must be made on a case-by-case and site-specific basis, the Plans incorporate flexibility with respect to appropriate measures. Appellant's expert agreed that when it comes to deciding the best course of action for management of the environment, including rehabilitation of the environment, it is "site specific and condition specific, depending on what you're doing and how you're doing it." ROA 36624 (Deacon).

i. Biological Plan

The biological Plan includes the development of a Biological Work Group (BWG), which includes representatives from the U.S. Bureau of Indian Affairs, U.S. Bureau of Land Management, U.S. National Park Service, U.S. Fish and Wildlife Service, Nevada Department of Wildlife, Utah Division of Wildlife Resources, SNWA, as well as the State Engineer. ROA 20625, ROA 20636. The BWG's responsibilities include, among others, overseeing implementation of the monitoring Plan, "identify[ing] indicators than can best predict Water-dependent Ecosystem Effects," "develop[ing] criteria and mak[ing] recommendations to the Executive Committee on when a course of action shall be taken to avoid Water-dependent Ecosystem Effects and on the success of such actions,"

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"oversee[ing] implementation of management and mitigation actions as approved by the Executive Committee." ROA 20809.

As the Plan states, the BWG, in a cooperative effort with an Executive Committee, will work to accomplish the goals of predicting and avoiding effects on the water-dependent Ecosystems. The Plan begins with extensive monitoring that will provide enormous amounts of information regarding the Area of Interest, and indeed already has done so. ROA 13333-13386, 35117-35143, 35148-35158, 25165-35167, 035172, 20459-20469, 204278-204285, 34025-34051; *see also,* 9830-9896. The monitoring to date has been conducted pursuant to the Monitoring Plan dated February 2009 approved by the State Engineer. ROA 20625-20768. Despite the Tribes' objection that the Plan does not provide specifics, the Plan does exactly that, as a quick review of the Table of Contents of the Monitoring portion of the Plan will confirm. ROA 20629-20632. The Monitoring portion of the Plan sets forth specifics about, among other issues, methodology, targeted species, monitoring locations and objectives, key ecological indicators, monitoring approach, predictive models, data management and plan implementation and schedule. ROA 20629-20632.

In particular, the Tribes argue that the person tasked with determining whether or not adverse effects exist is not identified. Goshute OB at 30. However, in this case, like with any cooperative effort, it is not an individual making decisions about implementation of monitoring, management and mitigation if necessary, but rather the well-qualified technical teams in cooperation with the Executive Committee. ROA 20809, 20735. Importantly, the State Engineer will be updated through reporting and will retain all authority over management of water resources and will ensure that pumping does not conflict with existing rights. ROA 13348. The Plan instructs that the BWG will recommend to the Executive Committee its views based on specific facts that come to light from the monitoring of the Area. *Id.* The Tribes' complaint that the Plan is deficient rings hollow in light of the detailed processes for implementation included. Indeed, the Tribes true complaint appears to be that they do not have a representative on the technical team or Executive Committee. Goshute OB at 32. However, because the Tribes have maintained that the Plans will not be

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effective—rather than that they wish to be a part of them—it is difficult to understand why the Tribes would be interested in serving on such a team.

ii. Hydrological Plan

Similar to the BWG in the biological Plan, a Technical Review Panel (TRP) was created under the hydrological Plan which reports to the Executive Committee (EC) to assist in its oversight of implementation of the Plan. ROA 13347. The TRP includes representatives from SNWA and each of the individual federal agencies that are parties to the stipulation, including the U.S. Bureau of Indian Affairs, U.S. Bureau of Land Management, U.S. National Park Service, and U.S. Fish and Wildlife Service. *Id.* The Plan focuses on "establishing a network to collect hydrologic data for the purposes of defining baseline conditions prior to the SNWA withdrawals and detecting the effect of these withdrawals as pumping occurs." ROA 13353. Like the biological Plan, the hydrological Plan includes details regarding implementation of the Plan, including locations of new and existing wells, production testing, spring and stream monitoring, precipitation stations, water chemistry and existing water rights monitoring, data collection methodology and frequency of reporting. ROA 13335.

The State Engineer found that "[t]he data collected from the plan will allow the State Engineer to make real-time assessments for the spread of drawdown within the basin as well as make predictions, using data collected under the monitoring plan, as to the location and magnitude of drawdown in the future under different pumping regimes." ROA 103. Other than bald assertions predicting failure, the Tribes fail to present any reliable evidence that Plans will not be effective. They rely on Dr. Bredehoeft, who testified that predicting spring response fifty miles away from where pumping occurred will cause delay in noticing any adverse effects of the pumping before it is too late. ROA 37881, 37825-37827. However, Dr. Bredehoeft failed to recognize the benefits of monitoring wells to prevent such delay. When pressed, he stated that he did not know whether providing monitoring wells between the pumping and the spring would allow quicker discovery and reaction to a drawdown before an undesirable effect occurred. ROA 37882. The purpose of the monitoring wells

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required as part of the Plan are to do exactly that—predict effects of the withdrawals before any adverse effects occur. ROA 13349-13351.

Finally, if any unreasonable adverse effects to the Area of Interest are predicted, then measures must be taken to mitigate, including cessation of pumping if necessary. ROA 13381. Further, the State Engineer confirmed that he has authority under Nevada law to order mitigation measures for the Project independent of whether or not a description of mitigation measures is included in the Plan. ROA 118. Thus, while the evidence showed that it was impossible to fully anticipate specific mitigation measures at this time, a case-by-case analysis on a site-specific basis was scientifically the preferred approach. ROA 34495-34496, 37735-37736. Because the evidence supports that the Plans will effectively use the best science available to predict and avoid adverse effects of the Project, the State Engineer's finding that the Plans are protective of the natural resources in the Area of Interest is supported by substantial evidence.

d. Substantial Evidence Supports that Tippett and Deep Creek Valleys will Not be Affected by Development, Therefore any Reserved Rights of the Goshute Tribes Are Not Threatened

The Goshute Tribes contend that interbasin groundwater flow between northern Spring Valley and Tippett Valley, adjacent to where the Goshute Tribes' Reservation is located in Deep Creek Valley, is such that their Reservation lands in Deep Creek Valley will be adversely impacted after "several hundred years." Goshute OB at 34-35. The Goshute Tribes' claims are not supported by the evidence. In fact, the Goshute Tribes cite in their Brief the key testimony and figures that disprove their claim that substantial evidence supported the interbasin flow between Spring Valley and Tippett Valley. *Id.* The clear weight of the evidence—indeed, the only reliable evidence—supported that if any flow between Spring Valley and Tippett Valley existed, it was "minor" or "minimal."[10] ROA 88-89; 33908, 32978-32886,17486-17487, 10101, 17627, 17683.

[10] The Goshute Tribes cite to a portion of Ruling 6164 discussing interbasin flow between Spring Valley into Hamlin Valley and then to Snake Valley to argue that the State Engineer's determination regarding flow between Spring Valley and Tippett Valley was based on "significant uncertainty." Goshute OB at 34. However, information regarding interbasin flow between Spring Valley and Snake Valley is wholly irrelevant to the

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i. The Evidence Does Not Support That the Goshute Tribes' Reservation Will Be Impacted Because the Evidence Showed That Minor Flow Occurred Between Spring Valley and Tippett Valley

The State Engineer relied on a report from SNWA hydrology experts Mr. Burns and Ms. Drici to find that, for the western boundary of Spring Valley, "the geologic analysis concluded [that] the geologic framework in Tippet Valley is basin fill that may be, in part, underlain by caldera complexes, *that would limit or prevent outflow*." ROA 88; *see also,* ROA 32978-32886, 17486-17487, 10101, 17627, 17683. The State Engineer further found that the hydrologic evidence did not support flow from Spring Valley to Tippett Valley. ROA 88. Instead, the evidence showed that the basin-fill wells located to the south of the flow section in Spring Valley indicated a prevailing hydraulic gradient to the south in the direction of the groundwater-discharge areas in Spring Valley. ROA 88, 17683.

The State Engineer further found that the conflicting analysis of Appellant's expert, Dr. Myers, was unreliable. ROA 88-89. Dr. Myers adopted the BARCASS interbasin outflow estimate of 2,000 acre-feet from Spring Valley to Tippett Valley, but neither Dr. Myers' groundwater budget for Spring Valley nor his contour maps support this outflow estimate. ROA 88. Even Dr. Myers conceded that his contour maps that showed a hydraulic gradient from Spring Valley to Tippett Valley were incorrect because they mistakenly included misplotted wells and excluded other wells. ROA 88, 24291, 22728, 36839. Dr. Myers conceded that if the wells had been accurately plotted, the analysis would show that no hydraulic gradient exists. ROA 88, 36839-26841. The State Engineer found that no evidence supported that outflow from Spring Valley to Tippett Valley exists. ROA 89.

Because the evidence does not support the interbasin flow between Spring Valley and Tippett Valley, the Goshute Tribes' claim that its Reservation lands within Deep Creek Valley will be adversely impacted lacks merit. Accordingly, the State Engineer's Ruling cannot be reversed on this basis.

Goshute Tribes' argument regarding flow between Spring Valley and Tippett Valley. Therefore, the Goshute Tribes' quote regarding uncertainty is misplaced and misleading. In fact, there is little to no uncertainty about the flow—or lack of relevant flow in this case—between Spring Valley and Tippett Valley. ROA 88-89.

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ii. Ruling 6164 Does Not Conflict With Any Reserved Water Rights of the Goshute Tribes

Relying on the alleged outflow of water from Spring Valley to Tippett Valley, the Goshute Tribes assert that the State Engineer's Ruling conflicts with their water rights reserved by the federal government for the benefit of the Tribes for use on their Reservations ("reserved water rights"). Goshute OB at 36-41. This argument fails because any reserved water rights for the benefit of the Goshute Tribes is for water used on their Reservations, and no evidence supports that those Reservations will be affected by the actions permitted under Ruling 6164. As addressed above, the evidence failed to support that any relevant interbasin flow exists between Spring Valley and Tippett Valley or Dry Creek Valley as alleged by the Goshute Tribes. ROA 142-143.

"This Court has long held that when the Federal Government withdraws its land from the public domain and reserves it for a federal purpose, the Government, by implication, reserves appurtenant water then unappropriated to the extent needed to accomplish the purpose of the reservation." *Cappaert v. U. S.*, 426 U.S. 128, 138, 96 S.Ct. 2062, 2069 (Nev. 1976); *see also, Pyramid Lake Paiute Tribe of Indians v. Ricci*, 245 P.3d 1145, 1146-1147 (Nev. 2010), citing *Winters v. United States,* 207 U.S. 564, 577, 28 S.Ct. 207, 52 L.Ed. 340 (1908). Therefore, any reserved water rights for the benefit of the Goshute Tribes must be to water *appurtenant* to the Reservation. The Goshute Tribes rely on the Supreme Court's ruling in *Winters v. United States* and the Ninth Circuit's ruling in *United States v. Ahtanum Irrigation District*, 236 F.2d 321 (9th Cir. 1956) for the proposition that the Goshute Tribes need not show that surface and groundwater within the boundaries of the Reservations will be depleted in order to show a conflict with existing rights. However, those cases do not support this proposition. First, the Courts in those cases examined reserved rights in rivers and streams, not groundwater. *Winters*, 207 U.S. at 565; *U.S. v. Ahtanum Irr. Dist.*, 236 F.2d at 325. Second, and more importantly, in those cases, the waters which served the uses on the reservations ran through or bordered the reservations and were therefore *appurtenant* to the reservation lands. *Id.* Therefore, the State Engineer properly

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analyzed whether conflicts with the Tribes' reserved rights existed based on whether their Reservation lands would be impacted. ROA 143.

The State Engineer noted that the Goshute Tribes' reserved water rights have not been formally adjudicated. ROA 143. However, the State Engineer conservatively assumed that the Goshute Tribes had reserved water rights for their Reservations and determined that pumping pursuant to the Applications will not impact those rights. *Id.* The Goshute Tribes' Reservations are not within the hydrological basin of Spring Valley. ROA 142-143, 4208. The State Engineer found that no credible evidence supports that the withdrawal of water from Spring Valley will affect the Goshute Tribes' reserved rights. ROA 143.

The Tribes' expert, Dr. Myers, agreed that his model indicated that any impacts to the Goshute Tribes' reservation lands from pumping pursuant to the Applications, which were estimated to be more than two-hundred years away for Tippett Valley and more than ten-thousand years away for Deep Creek Valley, amounted to "minimal, if any." ROA 143, 38382-28284. The State Engineer's finding that "no credible evidence was presented of conflicts with reserved water rights of the Tribal Protestants" was based on substantial evidence. ROA 143.

3. CONCLUSION

The Tribes' assertions that their cultural and spiritual uses of the natural resources are threatened by the State Engineer's Ruling are not supported by the evidence. The State Engineer considered the natural resources upon which the Tribes rely for those uses, and committed no legal error when he analyzed impacts to natural resources in his public interest and environmental soundness analyses. Further, the State Engineer's finding that the monitoring, management and mitigation Plans will be effective to protect the environment, and that the actions permitted under the Ruling will not conflict with the Goshute Tribes' reserved rights are supported by substantial evidence. As such, this Court should affirm the State Engineer's Ruling 6164.

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E. State Engineer's Response to the Shoshone Tribes' Remaining Issues

1. Introduction

The Ely and Duckwater Shoshone Tribes (collectively the "Shoshone Tribes") assert that the federal government breached its obligations to the Shoshone Tribes when it entered into Stipulations with SNWA agreeing to withdraw its Protests to the Applications in exchange for implementation of monitoring, management and mitigation Plans. For this reason, and a host of other reasons based on the terms of the Stipulations themselves, the Shoshone Tribes argue that the State Engineer erred when he admitted the Stipulations as evidence at the hearing regarding the SNWA Applications ("Hearing").

However, the question of whether or not the federal government fulfilled its responsibilities to the Shoshone Tribes under certain Executive Orders or other federal law is not appropriately before this Court. The State Engineer recognized that he lacked jurisdiction to rule on those federal issues between the Tribes and the federal government, and declined to make any findings on those matters as part of his Rulings. This Court likewise lacks jurisdiction to review those issues. In addition, no evidence supports that the Stipulations are not valid and enforceable contracts upon which the State Engineer was entitled to rely. By agreement between the parties to the Stipulations, the Stipulations were properly admitted as evidence in the Hearing.

Finally, because the Shoshone Tribes do not hold any rights—reserved or otherwise—to the groundwater at issue in this case, the federal government was not an indispensable party and the Shoshone Tribes' due process rights were not violated. The Permits allow SNWA to withdraw water from the hydrographic basins of Spring, Cave, Dry Lake and Delamar Valleys, but the Shoshone Tribes' Reservations lie outside those basins. While the federal government did not participate in the proceedings, the Shoshone Tribes certainly did through extensive lay and expert testimony, cross-examination of witnesses and exhibits. Accordingly, the State Engineer did not err in holding an administrative hearing regarding the appropriation of Nevada's water without the federal government present. None

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of the Shoshone Tribes' arguments provide a basis for this Court to overrule the State Engineer's Rulings, and the Court should affirm the Rulings.

2. Factual Background Specific to the Shoshone Tribes' Issues

In Stipulations between SNWA and the Department of Interior on behalf of the U.S. Bureau of Indian Affairs, the U.S. Bureau of Land Management, the U.S. National Park Service, and the U.S. Fish and Wildlife Service (collectively "DOI"), DOI agreed to withdraw Protests to the SNWA Applications in exchange for the implementation of agreed upon monitoring, management and mitigation Plans. ROA 6427-6464,2682-2728. The Stipulations state:

> The parties agree that a copy of this Stipulation **shall** be submitted to the State Engineer at the commencement of the administrative proceedings scheduled to begin on February 4, 2008. At that time, the Parties shall request on the record at the beginning of the scheduled proceeding that the State Engineer include this Stipulation and Exhibit A as part of the permit terms and conditions in the event that he grants any of the SNWA Applications in total or in part.

ROA 2690, 6435; *see also,* 006427. The Stipulations further provide:

> **Except as expressly provided herein**, the Parties agree that the Stipulation shall not be offered as evidence or treated as an admission regarding any matter herein and may not be used in proceedings on any other application or protest whatsoever, except that the stipulation may be used in any future proceeding to interpret and/or enforce its terms.

ROA 2693, 6438.

3. Legal Analysis

a. The Stipulations Between SNWA and DOI Were Properly Admitted as Evidence At the Hearings

The Tribes object to the Stipulations being admitted as evidence in the Hearing for a variety of reasons. Shoshone OB at 16-18, 22. The Shoshone Tribes argue that admission of the Stipulations as evidence at the Hearing violated the terms of the Stipulations, and that the Stipulations are not enforceable because the federal government failed to conduct government-to-government consultations with the Shoshone Tribes before entering into the Stipulations. *Id.*

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As a threshold matter, the Shoshone Tribes lack standing to assert a breach of the Stipulations on behalf of either party to the Stipulations. *See, e.g., L and H Builders Supply v. Boyd Co.*, 93 Nev. 610, 612-613, 571 P.2d 1167, 1168 (Nev. 1977) ("An action shall be prosecuted in the name of the party who, by the substantive law, has the right to be enforced."). Notably, neither DOI nor SNWA have asserted a breach or other violation of the Stipulations' terms. Further, because the Stipulations are "relevant to the subject matter of the proceeding," the State Engineer properly admitted them as evidence. *See,* NAC 533.260. However, even assuming the Shoshone Tribes had standing to assert these arguments, they fail for other reasons, as does the argument regarding lack of enforceability of the Stipulations.

i. The Express Terms of the Stipulations Require That They Be Admitted as Evidence

In arguing that the State Engineer erred when he admitted the Stipulations as evidence, the Shoshone Tribes ignore key terms of the Stipulations that specifically state that the Stipulations and Exhibits shall be admitted into evidence at the Hearings. The parties agreed that:

> [A] copy of this Stipulation **shall** be submitted to the State Engineer at the commencement of the administrative proceedings scheduled to begin on February 4, 2008. At that time, the Parties shall request on the record at the beginning of the scheduled proceeding that the State Engineer include this Stipulation and Exhibit A as part of the permit terms and conditions in the event that he grants any of the SNWA Applications in total or in part.

ROA 2690, 6435; *see also,* 6427. The intent of the parties is clear from the language—that the Stipulations must be admitted at the Hearing. *Id.* The Shoshone Tribes also ignore key language preceding the portion of the Stipulations they cite in their Brief, which is emphasized below:

> **Except as expressly provided herein**, the Parties agree that the Stipulation shall not be offered as evidence or treated as an admission regarding any matter herein and may not be used in proceedings on any other application or protest whatsoever, except that the stipulation may be used in any future proceeding to interpret and/or enforce its terms.

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ROA 2693, ROA 6438 (emphasis added). Because admission of the Stipulations is expressly provided for in the Stipulations, as discussed above, the exclusionary language above does not apply and the Stipulations and Exhibits thereto were properly admitted as evidence at the Hearing.

ii. The Stipulations Are Valid and Enforceable

The Tribes also claim that, by their own terms, the Stipulations are of no force and effect, because when the Supreme Court remanded the State Engineer's first ruling issuing the Permits, the Permits were "necessarily" cancelled. Shoshone OB at 18. The Shoshone Tribes' assumptions that the Permits were cancelled are incorrect. The Order remanding stated that the "the proper and most equitable remedy is that the State Engineer must re-notice the applications and re-open the protest period." *Great Basin Water Network v. Taylor*, 126 Nev. Adv. Op. 20, 234 P.3d 912, 913 (2010). The Court never ordered cancellation of the Permits and nothing in the record supports that the Permits were cancelled.

iii. The State Engineer Lacks Jurisdiction to Determine Whether or Not the Federal Government Complied With Consultation Requirements

The Shoshone Tribes object to admission of the Stipulations on the basis that they violate Executive Order 12898; Executive Order 13175 and Presidential Memorandum dated November 5, 2009, because the federal government, through DOI, entered into the Stipulations without any consultation with the Tribes[11]. Shoshone OB at 18. However, this is not the proper forum for this dispute. If federal government breached its duties to the Tribes by entering into the Stipulations, then the Tribes may file an appropriate action in federal court against the federal government for violation for those federal laws. The State Engineer lacks jurisdiction to adjudicate an issue of federal law as part of an administrative proceeding on water law. *See*, Ruling 6164 at 161-162 ("the State Engineer finds he does not have jurisdiction to review the actions of the BLM or BIA in complying with [federal law] and

[11] The Goshute Tribes make a similar argument, but not in the context of an evidentiary objection. *See*, Goshute OB at 29-30.

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declines to rule on that issue"). Similarly, this Court lacks jurisdiction to review the federal issue on a petition for review of the State Engineer's Rulings.

b. The Federal Government Was Not an Indispensable Party to the Hearing, and the Shoshone Tribes' Due Process Rights Were Not Violated By Holding the Hearing Without the Federal Government Present

The Tribes' argue that the federal government was an indispensable party to the proceeding, and that their due process rights were violated because they "did not have a full opportunity to be heard given the complete absence of the United States government" at the Hearing. Shoshone OB at 19-22. These arguments lack merit for several reasons.

Preliminarily, Nevada Rules of Civil Procedure do not apply to administrative proceedings. An administrative body such as the State Engineer's Office lacks authority to compel a party to appear. *Compare* NRCP 19 ("A person *who is subject to service of process* and whose joinder will not deprive the court of jurisdiction over the subject matter of the action shall be joined as a party in the action . . . .") to NAC 533.330 ("If a hearing is held and a party fails to appear at the time and place set for the hearing without prior notification to the State Engineer, the State Engineer will hear the evidence of the witnesses who have appeared and will proceed to consider the matter and dispose of it on the basis of the evidence presented."). As such, the State Engineer cannot halt a proceeding for failure of a party to appear, especially where the party has withdrawn its Protest to the actions being adjudicated as part of the proceedings, like the federal government in this proceeding. *See,* NAC 533.330.

Further, even if the NRCP did apply, the federal government is not an indispensable party to the action because the federal government was not required to represent the Shoshone Tribes' interests at the Hearing, as discussed more fully below.

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i. The Rulings Do Not Conflict With Any Reserved Water Rights or Aboriginal Rights of the Shoshone Tribes

The Shoshone Tribes assert that the federal government was an indispensable party because the State Engineer's Rulings conflict with their water rights reserved by the federal government for the benefit of the Tribes for use on their Reservations ("reserved water rights"). Shoshone OB at 20. This argument lacks merit because any reserved water rights for the benefit of the Shoshone Tribes are for water appurtenant to their Reservations, and neither of the Shoshone Tribes Reservations are located in the basins at issue in the State Engineer's Rulings. *See also,* Response to Goshute OB, Section VI. D. 2. D. ii., *supra.* Further, no evidence supports that the Reservations will be affected by the actions permitted in the Rulings.

"This Court has long held that when the Federal Government withdraws its land from the public domain and reserves it for a federal purpose, the Government, by implication, reserves appurtenant water then unappropriated to the extent needed to accomplish the purpose of the reservation." *Cappaert v. U. S.*, 426 U.S. 128, 138, 96 S.Ct. 2062, 2069 (Nev. 1976); *see also, Pyramid Lake Paiute Tribe of Indians v. Ricci*, 245 P.3d 1145, 1146-1147 (Nev. 2010), citing *Winters v. United States,* 207 U.S. 564, 577, 28 S.Ct. 207, 52 L.Ed. 340 (1908). Therefore, any reserved water rights for the benefit of the Shoshone Tribes must be to water *appurtenant* to the Reservations.

The State Engineer noted that the Shoshone Tribes' reserved water rights have not been formally adjudicated. ROA 143. However, the State Engineer conservatively assumed that the Shoshone Tribes had reserved water rights for their Reservations and determined that pumping pursuant to the Applications will not impact those rights. *Id.*

In their Brief, the Shoshone Tribes concede that their Reservations are not within the hydrological basins of the Spring, Cave, Dry Lake or Delamar Valleys. Shoshone OB at 8; ROA 38209. Chairwoman Sanchez from the Shoshone Tribes testified that the Tribes' concern was not for the impact on the Reservation basin, but rather the impact on the Spring Valley basin. ROA 38211-38212. The Shoshone Tribes presented no evidence that the

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withdrawal of water from any of the Valleys will affect their reserved rights in the basins where their Reservations lie. *Id.*; ROA 142-143, 38382-28284.

Further, the Shoshone Tribes hold no aboriginal hunting or fishing rights within the basins at issue. *See, Whiterock v. State*, 112 Nev. 775, 781, 918 P.2d 1309, 1313 (Nev. 1996), citing *Western Shoshone Nat. Council v. Molini,* 951 F.2d 200, 203 (9th Cir.1991), *cert. denied,* 506 U.S. 822, 113 S.Ct. 74, 121 L.Ed.2d 39 (1992) ("There is no treaty which grants the Shoshone hunting and fishing rights. We therefore hold that Shoshone aboriginal hunting and fishing rights were taken when "full title extinguishment" occurred.").

While the Federal Government has been held to be an indispensable party in condemnation cases of federal lands that had been allotted to Indians, in those cases, it was clear that the rights at issue were allotted for Indians. *State of Minnesota v. United States*, 305 U.S. 382, 386-387 (1939). That is simply not the case here. Chairwoman Sanchez testified that the Shoshone Tribes receive water for irrigation on their Reservation by virtue of the Big Warm Spring decree, and Chairman Marques testified that city water service provides water for the Tribes' use for drinking and other uses on their Reservations. ROA 38206-38210, 38246-38247. Accordingly, the Tribes' interest in the water at issue is for their cultural and spiritual uses. As addressed above, these important uses were considered as part of the State Engineer's determination that the use of the water would not threaten to prove detrimental to the public interest under NRS 533.370(2), and that the export of water from the basin of origin was environmentally sound under NRS 533.370(3)(c).

Finally, the Shoshone Tribes assert that the federal government undertook to represent the Tribal interests in filing their Protests and in entering into the Stipulations, and therefore the federal government was a necessary party to the Hearing. Shoshone OB at 20-21. However, nothing on the face of the Protests or the Stipulations attributes the federal government's involvement for the purpose of fulfilling a trust responsibility to the Tribes. ROA 2682-2728, 6427-6464. Further, the Stipulations provide that they "shall not bind or seek to bind or prejudice any other parties or protestants, including any Indian Tribe." ROA 2687, 6433; *see also,* ROA 2684, 6431 (other protestants to the Applications are not "in any

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way bound or prejudiced by this Stipulation."). Therefore, the Tribes preserved all rights to continue to represent themselves in the proceedings, which they did. *Id.*

ii. The Shoshone Tribes' Due Process Rights Were Not Violated

As the State Engineer properly found, the Shoshone Tribes' due process rights were met because the Shoshone Tribes were provided a full and fair opportunity to present their case. *See,* Ruling 6164 at 161. The Shoshone Tribes filed Protests, presented testimony during both the public comment session and through direct examination by their attorney, as well as presented expert testimony by two expert witnesses and cross-examined the Applicant's witnesses. ROA 32549-32556, 38174-38176. Given the Shoshone Tribes' substantial participation in the Hearing, their argument that they were not fully and fairly represented at the Hearing is disingenuous.

4. Conclusion

The Shoshone Tribes' procedural arguments lack merit and therefore do not provide this Court with any legal basis to reverse the State Engineer's Rulings. As such, the Court should affirm the Rulings.

F. State Engineer's Response to Millard and Juab Counties, Utah

1. Introduction

Millard and Juab Counties fail to explain how their proposed monitoring, as explained by their expert, is different from that included in the monitoring Plan for Spring Valley (the "Plan"). As part of the Plan, the State Engineer ordered SNWA to place monitoring wells in Spring, Hamlin and Snake Valleys, as well as report data obtained from the Utah Geologic Survey (UGS) wells located in Snake Valley—just as the Counties' expert had recommended. Therefore, the State Engineer's Ruling should be affirmed.

2. Legal Argument

Millard and Juab counties assert that they are aggrieved by Ruling 6164 "because (1) the Ruling ignores the uncontroverted recommendations of Dr. Hurlow regarding the extent of monitoring, measuring and mitigation measures necessary to prevent or minimize impacts upon the groundwater levels of Snake Valley (including the Millard and Juab County portion

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of Snake Valley) and (2) the Ruling failed to incorporate the protections and provision of the September 8, 2006 Spring Valley Stipulated Agreement between SNWA and the Dept of Interior agencies." Millard and Juab Counties' OB at 7-8. However, everything that the Counties' expert recommended should be incorporated into the Plan, is *already in the Plan*. Likewise, the provisions of the Stipulation were captured and incorporated into the Plan. Thus, the State Engineer is baffled by the Counties' objections as described in their Brief.

The Counties incorrectly write that "Ruling 6164 is silent as to any type of monitoring and mitigation of impacts in Snake Valley." Counties' OB at 7. The Plan includes the very monitoring, management and mitigation measures that the Counties are demanding. With respect to monitoring, the Plan states:

> An objective of the Monitoring Plan is *to effectively characterize the hydraulic gradient between Spring, Hamlin, and Snake Valleys.* This area was identified by the establishment of the Interbasin Groundwater Monitoring Zone. The Zone boundaries are presented on Figure 3.

ROA 13354. Figure 3 below shows the boundaries of the Interbasin Groundwater Monitoring Zone, and clearly includes Spring, Hamlin and Snake Valleys.

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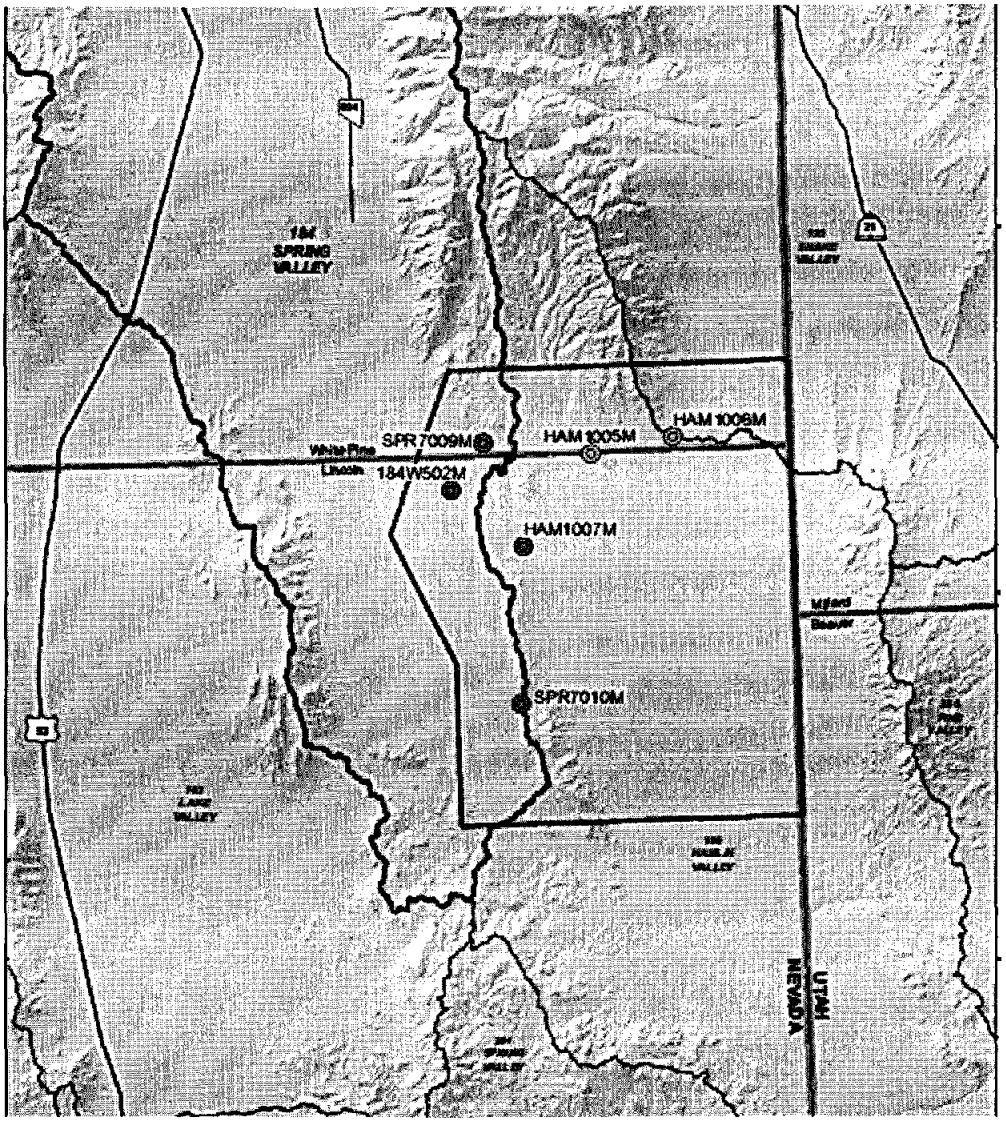

ROA 13357, Figure 3. Moreover, the Plan states:

> SNWA, in consultation with the NSE and TRP, is required to construct and equip four monitor wells in the carbonate-rock aquifer and *two monitor wells in the basin-fill aquifer within the Zone*. The agreed upon locations for the six SNWA monitor wells *within the Zone* are presented on Figure 3 and listed in Table 2. Carbonate Well 184W502M has already been installed. Right-of-way applications for the five new well locations were submitted to the BLM for approval on November 26, 2007 and approved on October 8, 2009. The five new wells will be completed to a depth of approximately 250 to 300 ft below the water table depending upon hydrogeologic conditions encountered during drilling. The wells will be installed in the future to meet the Monitoring and Mitigation Plan time frame requirements.
>
> In addition to the new SNWA wells, and are included in the existing well monitoring program, as presented in Section 3.2.1. Two additional wells have been installed by USGS in the immediate vicinity of Big Springs as part of the SNPLMA

> program. The wells, which are currently maintained by USGS, are completed in the carbonate rock-aquifer southwest and in basin-fill aquifer northwest of Big Springs.

ROA 13354, 13357- 13358 (Figure 3 and Table 2); *see also,* ROA 13353 ("The network also includes monitoring wells within the Zone to assist in the evaluation of the relationship of groundwater flow between Spring, Hamlin, and Snake Valleys."). Therefore, it is indisputable that monitoring wells are being placed within the Spring, Hamlin and Snake Valley basins. As the parties to the Stipulation stated, the wells are intended to "effectively characterize the hydraulic gradient between Spring, Hamlin, and Snake Valleys." ROA 13354.

In addition, Dr. Hurlow recommended that data from UGS monitoring wells existing on the Utah portion of Snake Valley be included in the Management Plan. ROA 31527-31533. In Ruling 6164, the State Engineer ordered SNWA to do exactly that. ROA 115. Therefore, the recommendations of the Counties' expert, Dr. Hurlow, are incorporated into the Plan, despite the Counties' assertion otherwise. *See,* Counties' OB at 6.

In light of the evidence demonstrating that the Plan incorporates the recommendations of the Counties' expert, the Counties fail to present any basis for this Court to overrule the State Engineer's Ruling 6164.

VII. CONCLUSION

The State Engineer considered voluminous evidence which covered every element required by NRS 533.370 in granting an application to appropriate water within Nevada. The State Engineer considered data and model predictions that stretch centuries into the future to determine the effect of the applications on Nevada's groundwater. The State Engineer found that water was available for appropriation, that the appropriation would not conflict with existing rights and that the interbasin transfer criteria had been satisfied. The Rulings are consistent with the policy of Nevada to put water to beneficial use. The findings of the State Engineer are all supported by substantial evidence that the State Engineer found was the best available science.

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The State Engineer's determinations are entitled to deference from the court and the State Engineer respectfully requests that State Engineer Rulings 6164, 6165, 6166, and 6167 be affirmed.

DATED this 15th day of April 2013.

CATHERINE CORTEZ MASTO
Attorney General

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CERTIFICATE OF MAILING

I certify that I am an employee of the Office of the Attorney General, State of Nevada, and that on this 15th day of April 2013, I deposited for mailing at Carson City, Nevada, a true and correct copy of the foregoing STATE ENGINEER'S ANSWERING BRIEF addressed as follows:

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EXHIBIT 1

EXHIBIT 1

THE STATE OF NEVADA

PERMIT TO APPROPRIATE WATER

Name of Permittee:	**SOUTHERN NEVADA WATER AUTHORITY**
Source:	**UNDERGROUND**
Basin:	**SPRING VALLEY**
Manner of Use:	**MUNICIPAL**
Period of Use:	**JANUARY 1ST THROUGH DECEMBER 31ST**
Priority Date:	**10/17/1989**

****

APPROVAL OF STATE ENGINEER

This is to certify that I have examined the foregoing application, and do hereby grant the same, subject to the following limitations and conditions:

This permit is issued pursuant to State Engineer's Ruling No. 6164 dated March 22, 2012.

This permit is issued subject to existing rights. It is understood that the amount of water herein granted is only a temporary allowance and that the final water right obtained under this permit will be dependent upon the amount of water actually placed to beneficial use. It is also understood that this right must allow for a reasonable lowering of the static water level. This well shall be equipped with a two (2) inch opening for measuring depth to water. If the well is flowing, a valve must be installed and maintained to prevent waste. A totalizing meter must be installed and maintained in the discharge pipeline near the point of diversion and accurate measurements must be kept of water placed to beneficial use. The totalizing meter must be installed before any use of water begins or before the Proof of Completion of Work is filed. The State retains the right to regulate the use of the water granted herein at any and all times.

The well must be sealed with cement grout, concrete grout or neat cement from ground level to 100 feet.

The total combined duty of water under Permits 54003 through 54015, 54019 and 54020 shall not exceed 61,127 acre-feet annually subject to the staged development as set forth in State Engineer's Ruling No. 6164, which includes:

- Stage 1 Development limits these permits to 38,000 acre-feet annually, of which at least 85% must be pumped each year for a minimum of eight consecutive years, after which the State Engineer will determine whether the permittee can proceed to Stage 2.
- Stage 2 Development limits these permits to 50,000 acre-feet annually, of which at least 85% must be pumped each year for a minimum of eight consecutive years, after which the State Engineer will determine whether the permittee can proceed to Stage 3.
- Stage 3 Development allows pumpage up to the full 61,127 acre-feet annually.

This application is granted conditioned upon the applicant's compliance with the approved Hydrologic Monitoring and Mitigation Plan and the Biological Monitoring Plan. Prior to the permittee exporting any groundwater resources from Spring Valley a minimum of two years of hydrologic and biological baseline data shall be collected by the permittee in accordance with these plans. The State retains the right to amend these plans at any time.

(Continued on Page 2)

The permittee shall update a computer groundwater flow model approved by the State Engineer; once before groundwater development begins, and at a minimum of every eight years thereafter, and provide predictive results for 10-year, 25-year and 100-year periods.

Monthly records shall be kept of the amount of water pumped from this well and those records shall be submitted to the State Engineer on a quarterly basis. The permittee shall file an annual report with the State Engineer by March 31st of each year, detailing the findings of the approved hydrologic and biological plans.

The issuance of this permit does not waive the requirements that the permit holder obtain other permits from State, Federal and local agencies.

This permit does not extend the permittee the right of ingress and egress on public, private or corporate lands.

The point of diversion and place of use are as described on the submitted application to support this permit.

The amount of water to be appropriated shall be limited to the amount which can be applied to beneficial use, **and not to exceed 6.0 cubic feet per second or 4,343 acre-feet annually.**

Work must be prosecuted with reasonable diligence and proof of completion of work shall be filed on or before: **August 10 2017**

Water must be placed to beneficial use and proof of the application of water to beneficial use shall be filed on or before: **August 10 2022**

Map in support of proof of beneficial use shall be filed on or before: **N/A**

IN TESTIMONY WHEREOF, I, JASON KING, P.E.,

State Engineer of Nevada, have hereunto set my hand and the seal of my office, this 10th day of **August, 2012**

J. King P.E.

State Engineer

Completion of work filed _____

Proof of beneficial use filed _____

Cultural map filed _____

Certificate No. _____ Issued _____

EXHIBIT 2

EXHIBIT 2

IN THE MATTER OF THE INFORMAL FIELD INVESTIGATION OF PROOF OF APPROPRIATION NO. V-05762 FOR THE WATERS OF SULPHUR SPRING LOCATED IN PUMPERNICKEL VALLEY, HUMBOLDT COUNTY, NEVADA.

FIELD INVESTIGATION

10884

General

Proof of Appropriation No. V-05762 was filed on July 17, 1992, by George Penola, Edna Penola, Raymond Segura and Susan Segura and later assigned to Richard Rosasco claiming a right to water 200 head of cattle and to divert up to 0.10 cfs of water from Sulphur Spring in Pumpernickel Valley with a claimed priority date of 1900. The point of diversion is described as being located within the SE¼NW¼ Section 34, T.35N., R.41E., M.D.B.&M. The place of use is located within the same subdivision as the point of diversion.

FINDINGS

An informal field investigation in the matter of Claim V-05762 was conducted on November 8, 2007, at 1:00 P.M. by representatives[1] of the State Engineer's Office. The field investigation was initiated based on a letter, dated March 20, 2007, that requested an "informal field hearing" regarding the alleged drying up of Sulphur Spring by Newmont Mining Corporation's dewatering activities at the Lone Tree Mine. Present at the investigation were Roger Johnson, Richard Rosasco, Sarah Rosasco and Bob Brewer, ranchers and current range users on lands dependent on stock water from Sulphur Spring.

Bob Brewer and Roger Johnson said that the spring had dried up approximately six (6) years ago. At that time Mr. Brewer dug the spring out to a depth of approximately eight (8) feet and placed a 4 foot length of 1 foot diameter perforated well casing in the spring to capture water. The casing was welded closed at both ends and a pipeline was run to a stock trough located approximately 100 feet to the east of the spring and abandoned hovel. The collection box was set in a pit lined with cobble to boulder sized rock with larger rock placed over the casing to preclude it from becoming plugged with the anaerobic clay associated with the spring area. Mr. Brewer said that the spring ran at a rate of about 1 gallon per minute until it dried up again about six months after the collection box had been installed.

[1] Robert Zeisloft, P.E., Manager II, and Steve Walmsley, Staff Engineer III, and Steve Del Soldato, Water Commissioner.

Figure 1. Final excavation depth of the Sulphur Spring and associated collection box. Bob Brewer is standing at an approximate 4' depth below the land surface.

During the excavation the spring site was located using GPS (NAD 83), Lat. N. 40.86436°, Lon. 117.34944°. A Bureau of Land Management monument at the site near the stock trough noted the site as: "**B.L.M. PROJECT NO. 159.711 SULPHUR SPRING SW¼NE¼ SEC. 34, T35N R41E 1962**".

Mr. Brewer said that water also emerged from numerous seeps along a northeasterly running line of approximately ¼ mile in length. Remnants of rhizomatous salt grass and several Russian olive trees remain along the seep area.

At this point Mr. Brewer began excavation of the collection box and spring with the backhoe that he had driven to the site from the Rosasco ranch located several miles to the south of Sulphur Spring. After digging down approximately 4 feet some of the old steel pipe from the original development of the spring was encountered. The light-green mottled clay began to show enough moisture at about 4 feet below the land surface to cause cohesion of the clay, silt and sand mixture. No flowing water was encountered at this depth. The excavation continued to a final depth of approximately 8 feet below the land surface. The consistency of the soil did not change with the increase in depth. No flowing water was encountered during the excavation down to the collection box described in the preceding paragraphs.

Remnants of the original spring development were encountered during the excavation. Large stones and associated formed concrete were dug up along with pieces of wooden framing.

After noting the fact that no developable water existed at the collection box, it was decided that it would not be necessary to dig any further. At this point Mr. Brewer placed the excavated material back into its' original hole.

During discussion after the filling of the hole, Mr. Walmsley[2] explained that it would be necessary to conduct additional research of Newmont Mining's monitoring well data to attempt to determine the reason for the spring going dry. Mr. Walmsley also explained that the State Engineer's staff was in the process of obtaining useable coordinates for the monitoring wells associated with the Lone Tree Mine.

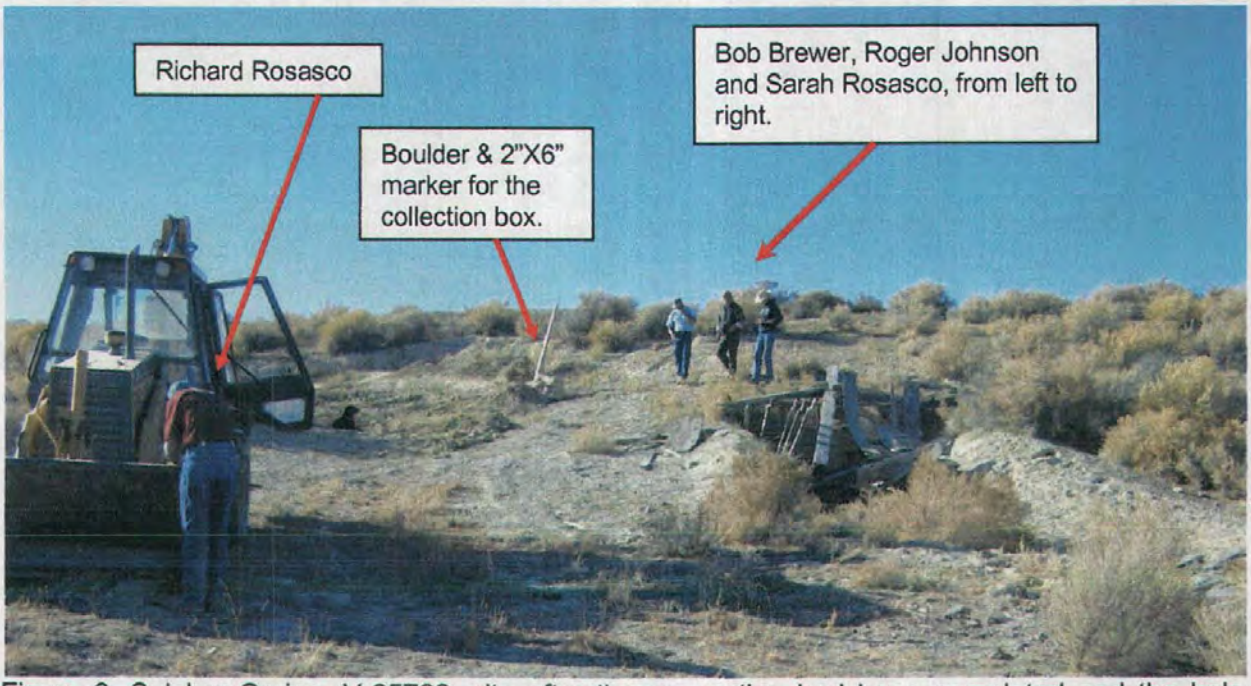

Figure 2. Sulphur Spring, V-05762, site after the excavation had been completed and the hole refilled with the same native material.

The field investigation was concluded at this point. The participants were encouraged to write this office requesting the acquisition of the coordinates for the Newmont monitoring well data. We stated that this matter would probably have to be handled by our hydrologists upon receipt of the requested monitoring well coordinates from Newmont Mining Company.

Bob Zeisloft suggested that we inspect Brooks Spring following the conclusion of the Sulphur Spring investigation. We proceeded to Brooks Spring, which is located approximately 3.4 miles to the southeast of Sulphur Spring. Brooks Spring was dried up many years ago and a pipeline had been run by Newmont Mining to a location approximately 0.2 mile northeast of the original spring.

A well was noted near the pond and pipeline terminus, but appeared to have been abandoned and was not measureable at the time of our investigation. We located a monitoring well near the original Brooks Spring at GPS (NAD 83), Lat. N. 40.82650°, Lon. 117.30217°. The monitoring well had a locked cap and was not accessible for a water level measurement at the time of the investigation.

[2] Steve Walmsley, Staff Engineer III, Nevada Division of Water Resources.

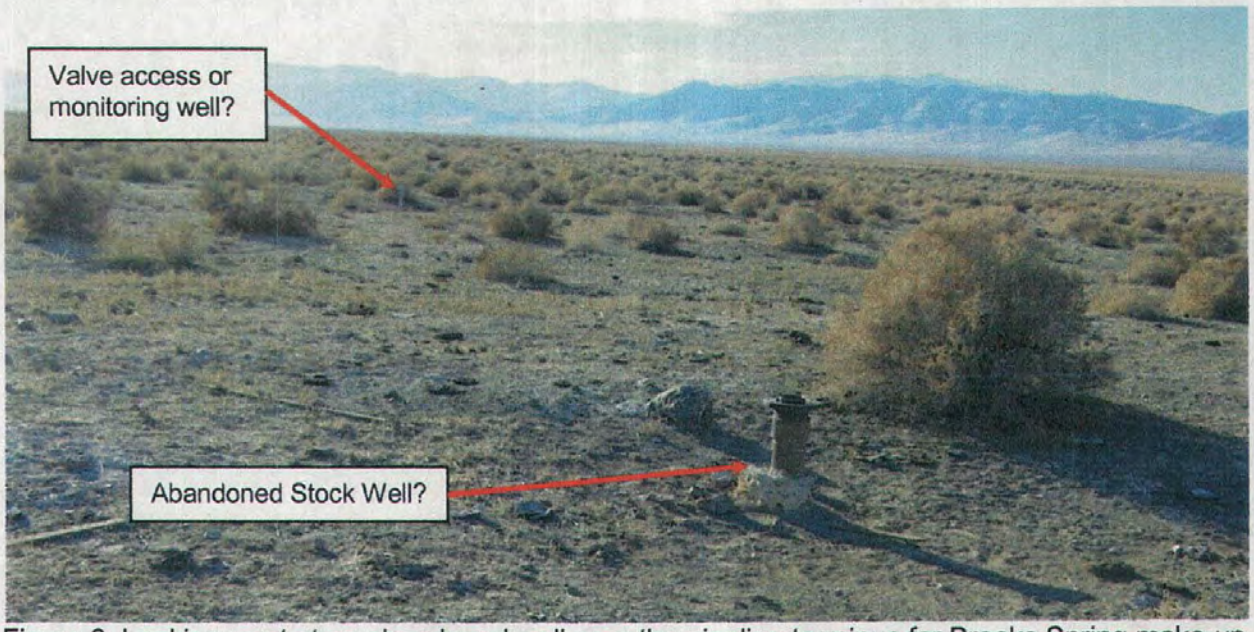

Figure 3. Looking west at an abandoned well near the pipeline terminus for Brooks Spring make-up water.

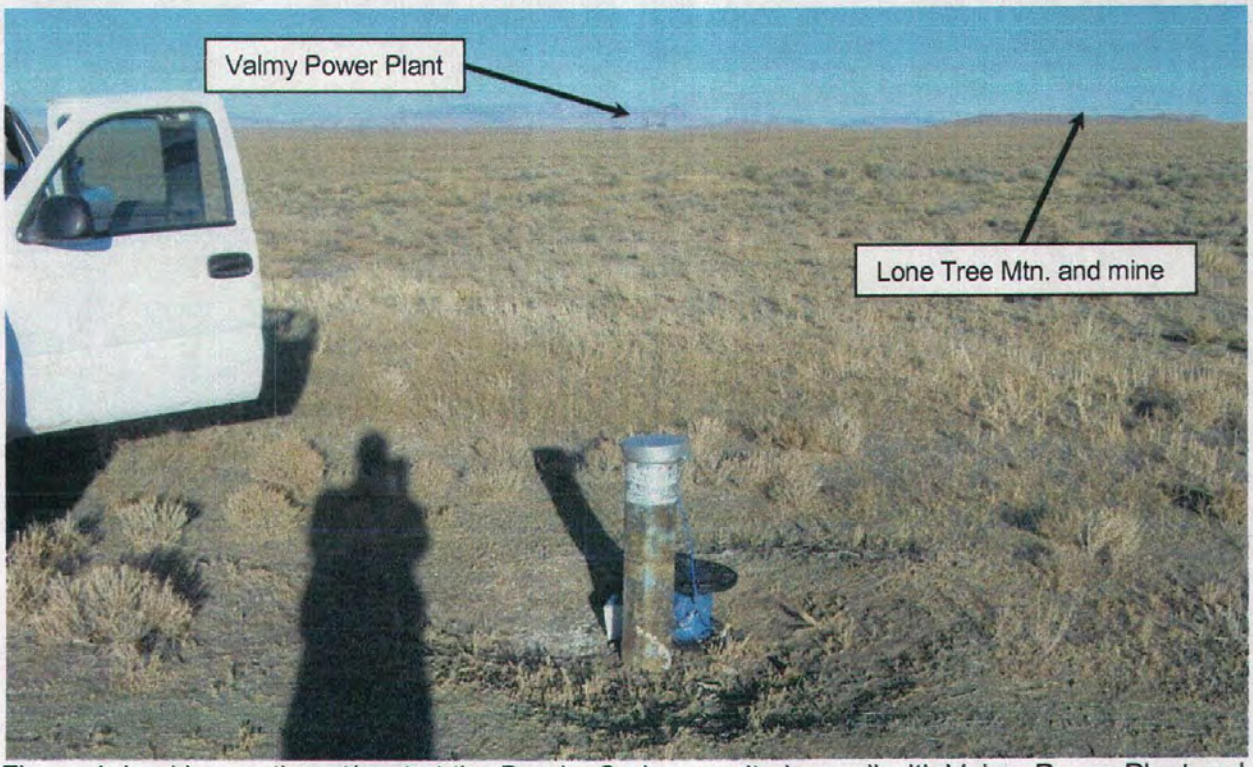

Figure 4. Looking northeast/east at the Brooks Spring monitoring well with Valmy Power Plant and Lone Tree Mountain in the background.

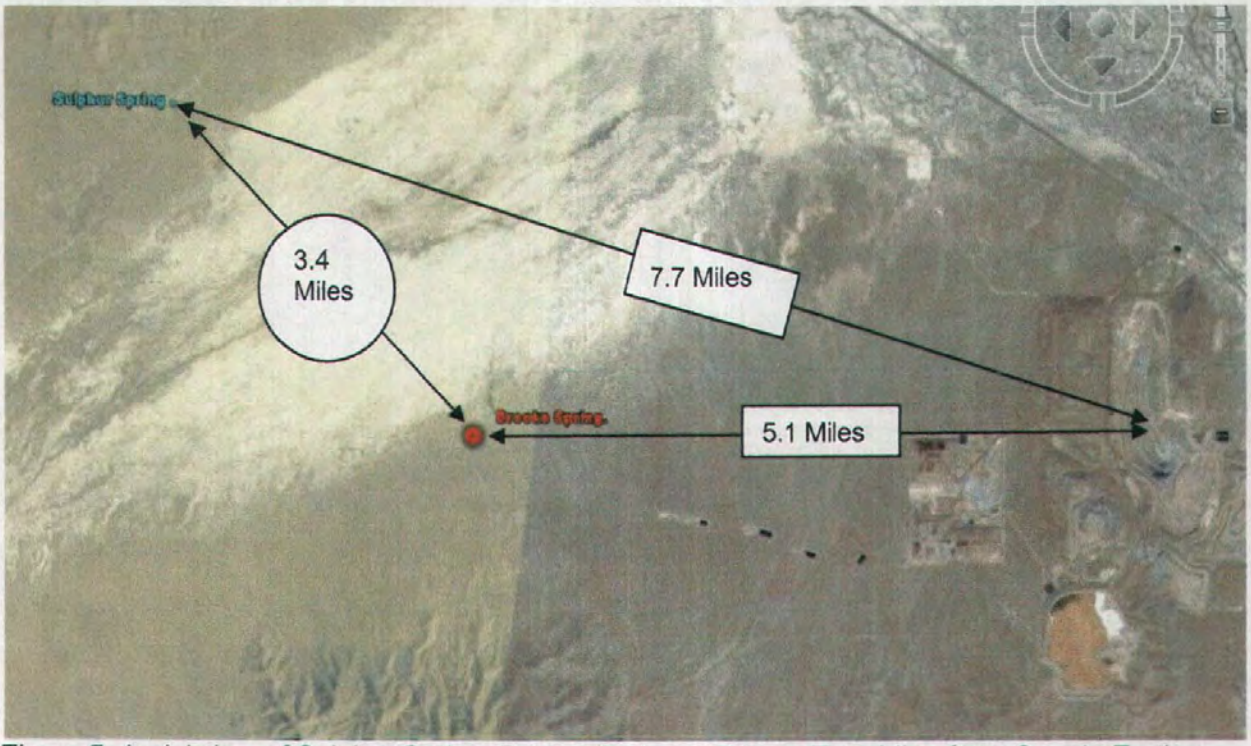

Figure 5. Aerial view of Sulphur Spring, Brooks Spring and Lone Tree Mine from Google Earth.

CONCLUSIONS AND RECOMMENDATIONS

This office needs to pursue the acquisition of monitoring well locations in the state plane coordinate system, latitude and longitude, etc., for monitoring well data that was submitted to this office by Newmont Mining Company. Currently, the data is in the mine coordinate system that is based on points set by the mine and not tied to survey systems commonly used by land surveyors and engineers. This data could potentially help with the analysis of water level declines in Sulphur Spring.

Also, any water level measurements from other nearby wells could be useful in analyzing the water level decline and ultimate drying of the spring source.

Respectfully Submitted,

Steve Walmsley
Staff Engineer III

Concurring,

R H Zeisloft, P.E.

Robert Zeisloft, P.E.
Manager II

Dated this 20th day of November, 2007.

NEWMONT

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Facsimile 775.635.4333
www.newmont.com

12 October 2011

CERTIFIED MAIL - RETURN RECEIPT REQUESTED
CERTIFIED MAIL NO. – 7009 2250 0004 4535 1733

Mr. Richard Rosasco
Rock Creek Ranch
P.O. Box 99
Golconda, NV 89414

RE: Sulphur Springs Project

Dear Mr. Rosasco:

Newmont Mining Corporation provides this letter as notification that work on the Sulphur Springs project has been completed. In a meeting on 08 April 2008 with yourself and representatives from Nevada Division of Water Resources (NDWR), Newmont agreed to file a water right application, submit required plans to Bureau of Land Management (BLM) and drill a well at the Sulphur Springs site.

Newmont prepared the water right application which was submitted in your name. The well is located on public land therefore required BLM approval prior to drilling the well. The March 2010 BLM decision was protested by Western Watersheds Project and the BLM provided a final Notice of Decision in September 2010 approving use of the BLM lands. Following the BLM decision NDWR proceeded with the water right application and issued Permit 79654 to Richard Rosasco on 25 February 2011. Newmont drilled the well in June of this year. A copy of the Well Driller's Report filed with NDWR is attached.

Newmont has completed the tasks as committed to in the 08 April 2008 meeting. Based on conversations this summer, Newmont is providing enclosed check #100773093 in the amount of $6,576.06 which is the estimated amount for the pump and associated solar equipment. As the water right holder you will be responsible for procurement, installation, operation and maintenance of pump, solar equipment and the well. In addition, all required filings for Water Right Permit

79654 are the responsibility of the permit holder. Please sign below in acknowledgement and return this document in the enclosed envelope. Please keep a copy for your own records.

Newmont appreciates your patience during this process. If you have comments or questions, please feel free to contact me at 775.778.4979 or Charlie Hager at 775.635.4363.

Sincerely,

Steve Skidmore
Senior Manager, Nevada Closure and Reclamation

Agreed to this _____day of October, 2011

By:_____, Rock Creek Ranch

cc: J. Black - BLM
[redacted]

STATE OF NEVADA
DIVISION OF WATER RESOURCES

WELL DRILLER'S REPORT

OFFICE USE ONLY
Log No. 114373
Permit No. 79654
Basin 065

PRINT OR TYPE ONLY
DO NOT WRITE ON BACK

Please complete this form it its entirety in accordance with NRS 534.170 and NAC 534.340

NOTICE OF INTENT NO. 65816

1. OWNER NEWMONT MINING CORP
MAILING ADDRESS 1655 MTN CITY HWY ELKO, NEVADA 89801

ADDRESS AT WELL LOCATION PUMPERNICKEL VALLEY
OFF I-80 3.7 MILES SOUTH

2. LOCATION NW ¼ SE ¼ Sec 34 T 35 N R 41 E
PERMIT/WAIVER No. 79654 (Issued by Water Resources) Parcel No.

Latitude
Longitude
Subdivision Name:

UTM E 470801 ☒ NAD 27
N 4523389 ☐ NAD 83/WGS 84
County: HUMBOLDT

3. WORKED PERFORMED
☒ New Well ☐ Replace ☐ Recondition
☐ Deepen ☐ Other...

4. PROPOSED USE
☐ Domestic ☐ Irrigation ☐ Test
☐ Municipal/Industrial ☐ Monitor ☒ Stock

5. WELL TYPE
☐ Cable ☐ Rotary ☒ RVC
☐ Air ☐ Other...

6. LITHOLOGIC LOG

Material	Water Strata	From	To	Thickness
SAND, GRAVEL		0	25	
BASALT, CHUNT		25	135	110
CLAY		135	155	20
CLAY ROCK MIX		155	160	5
DRILLED TEST HOLE TO 160', NO WATER FROM 135-160. OPENED UP HOLE TO 100',				
SET CASING TO 95', CAUGHT IN BAD				
DEVELOPED 25 GPM CLEAN AFTER 3 HOURS LOW AIR				

Date started 6-20, 20 11
Date completed 6-24, 20 11

8. WELL CONSTRUCTION
Depth Drilled 160 Feet Depth Cased 95 Feet

HOLE DIAMETER (BIT SIZE)

		From		To	
18	Inches	0	Feet	20	Feet
12 3/4	Inches	20	Feet	100	Feet
8 3/4	Inches	100	Feet	160	Feet

CASING SCHEDULE

Size O.D. (Inches)	Weight/Ft. (Pounds)	Wall Thickness (Inches)	From (Feet)	To (Feet)
8 5/8	-	.250	+2½	95

Perforations:
Type of perforation LOUVERED ROSCOE MOSS
Size of perforation 1/8

From 95	feet to	55	feet
From	feet to		feet
From	feet to		feet
From	feet to		feet
From	feet to		feet

Surface Seal: ☒ Yes ☐ No
Depth of Seal 50
Placement Method: ☒ Pumped ☐ Poured
Seal Type: ☒ Neat Cement ☐ Cement Grout ☐ Concrete Grout
Gravel Packed: ☒ Yes ☐ No
From 95 feet to 50 feet

9. WATER LEVEL
Static water level 39 feet below land surface
Artesian flow NO G.P.M N/A P.S.I
Water temperature COOL °F Quality GOOD

7. WELL TEST DATA
TEST METHOD: ☐ Bailer ☐ Pump ☒ Air Lift

	G.P.M.	Draw Down (Feet Below Static)	Time (Hours)
50 PSI	25	3-5	3 HOURS

10. DRILLER'S CERTIFICATION
This well was drilled under my supervision and the report is true to the best of my knowledge.
Name BOART LONGYEAR Contractor
Address P.O BOX 2748 Contractor
ELKO NEVADA 89803
Nevada contractor's license number issued by the *State Contractor's Board* 0073086
Nevada driller's license number issued by the Division of Water Resources, the *on-site driller* 1777
Signed Dennis L White
By driller performing actual drilling on site or contractor
Date 6-24-11

RECEIVED
JUL 11 2011
STATE ENGINEER'S OFFICE

(Rev. 06/10) USE ADDITIONAL SHEETS IF NECESSARY

40.862906°N NAD27
117.346588°W