BEFORE THE STATE ENGINEER, STATE OF NEVADA
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF WATER RESOURCES

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, 182 AND 184), LINCOLN COUNTY AND WHITE PINE COUNTY, NEVADA.	)	**DRAFT SUPPLEMENTAL RULING ON REMAND OF PROTESTANTS WHITE PINE COUNTY, GBWN, ET AL.[1]**

GENERAL

I.
SUPPLEMENTAL RULING ON REMAND

This *Supplemental Ruling on Remand* is issued in response to and at the direction of the Seventh Judicial District Court's December 13, 2013, *Decision* in *White Pine County, et al. v. Jason King* that remanded the above-captioned applications to the State Engineer to remedy deficiencies the court found in the State Engineer's 2012 Rulings 6164, 6165, 6166, and 6167 on SNWA's groundwater applications in Spring, Cave, Dry Lake, and Delamar Valleys, respectively.[2]

II.
MARCH 12, 2012, RULINGS 6164, 6165, 6166, AND 6167

On March 22, 2012, the State Engineer issued Rulings 6164, 6165, 6166, and 6167 on SNWA's groundwater applications in Spring, Cave, Dry Lake, and Delamar Valleys, respectively. Ruling 6164 granted 61,127 acre feet per year in staged development under Spring

[1]This *Draft Supplemental Ruling on Remand* is submitted on behalf of White Pine County, the Great Basin Water Network ("GBWN"), and a group of over 300 individuals and entities who either filed protests in their own names or joined Great Basin Water Network's protests to the Southern Nevada Water Authority's applications in Spring, Cave, Dry Lake, and Delamar Valleys. The list of individuals and entities who filed protests in their own names can be found on the first page of White Pine County, GBWN, et al.'s 2011 written closing statement. The list of those who joined GBWN's protests can be found at Exhibit A to White Pine County, GBWN, et al.'s 2011 written closing statement.

[2] SE_118; SE_140; SE_141; SE_142; SE_143, public administrative hearing before the State Engineer, September 25, 2017, through September 29, 2017, and October 2, 2017, through October 6, 2017. Hereinafter, exhibits from the 2011 hearing and the 2017 remand hearing will be referred to solely by the exhibit number.

Valley Applications 54003 to 54015, 54019, and 54020, and denied Spring Valley Applications 54016, 54017, 54018, and 54021 on the grounds that the use of the water would conflict with existing rights.[3] Ruling 6165 granted 5,235 acre feet per year under Cave Valley Applications 53987 and 53988.[4] Ruling 6166 granted 11,584 acre feet per year under Dry Lake Valley Applications 53989 and 53990.[5] Ruling 6167 granted 6,042 acre feet per year under Delamar Valley Applications 53391 and 53392.[6] All Applications granted pursuant to Rulings 6164 through 6167 were granted subject to compliance with SNWA's proposed monitoring and mitigation program and existing rights.

III.
PETITIONS FOR JUDICIAL REVIEW AND REMAND DECISION

A large coalition of protestants to SNWA's groundwater applications in Spring, Cave, Dry Lake, and Delamar Valleys, including White Pine County, Nevada and the Great Basin Water Network, filed petitions for judicial review of Rulings 6164, 6165, 6166, and 6167 in the Seventh Judicial District Court in Lincoln and White Pine Counties. In addition, the Ely Shoshone Tribe, Duckwater Shoshone Tribe, Confederated Tribes of the Goshute Reservation, the Corporation of the Presiding Bishop of the Church of Jesus Christ of Latter-Day Saints on behalf of the Cleveland Ranch, and Millard and Juab Counties, Utah, filed petitions for judicial review of Ruling 6164. These petitions were consolidated in one proceeding before Judge Robert Estes.[7] On December 13, 2013, Judge Estes issued a *Decision* in *White Pine County, et al. v. Jason King,* holding that the State Engineer's findings related to availability of water, conflicts with existing rights, the public interest, and the environmental soundness criteria in Rulings 6164 through 6167 were unsupported by substantial evidence and were arbitrary and capricious.[8] Specifically the Court required the State Engineer to perform four tasks on remand:

"1. The addition of Millard and Juab counties, Utah in the mitigation plan so far as water basins in Utah are affected by pumping of water from Spring Valley Basin, Nevada;

2. A recalculation of water available for appropriation from Spring Valley assuring that the basin will reach equilibrium between discharge and recharge in a reasonable time;

3. Define standards, thresholds or triggers so that mitigation of unreasonable effects from pumping of water are neither arbitrary nor capricious in Spring Valley, Cave Valley, Dry Lake Valley and Delamar Valley; and

4. Recalculate the appropriations from Cave Valley, Dry Lake and Delamar Valley to avoid over appropriations or conflicts with down-gradient, existing water rights."[9]

On November 28, 2016, the State Engineer issued a *Notice of Hearing and Interim Order* which provided that "the scope of the remand hearing will be limited to the specific issues identified in the Judge Estes' Ruling, and only new evidence relating to those issues will be

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[3]SE_140, at 216-18.
[4]SE_141 at 169-70.
[5]SE_142 at 163-64.
[6]SE_143 at 161-62.
[7]*White Pine County, et al. v. Jason King,* Case No. CV1204049 (Seventh Judicial Dist. Ct., Dec. 13, 2013)).
[8]SE_118 (hereinafter "*Remand Decision*"), at 12- 13, 16.
[9]*Id.* at 23.

considered in addition to the existing record."[10] The State Engineer set a two week remand hearing from September 25, 2017, through Friday, September 29, 2017, and October 2, 2017, through October 6, 2017.[11] Prior to the remand hearing, SNWA filed motions in limine to exclude evidence which it argued was outside the scope of the remand order.[12] The Corporation of the Presiding Bishop of the Church of Jesus Christ of Latter-Day Saints on behalf of the Cleveland Ranch filed a motion in limine arguing that SNWA could not present evidence related to points of diversion not listed on its applications. The State Engineer declined to exclude the evidence as requested, holding that "[t]he State Engineer is providing all parties the opportunity to address the remand issues and they have done so as they have seen fit."[13] The State Engineer acknowledges that there is disagreement among the parties about the interpretation of the *Remand Decision*. The State Engineer concludes that the *Remand Decision* set aside as arbitrary and capricious and unsupported by substantial evidence the State Engineer's findings on the issues of available and unappropriated water, conflicts with existing rights, public interest, and environmental soundness in the 2012 Rulings and required the State Engineer to perform the four tasks listed at the end of the *Decision* in order to remedy those deficiencies.[14]

Accordingly, this *Supplemental Ruling on Remand* addresses the tasks remanded by the district court in its December 13, 2013, *Remand Decision* in the context of the findings the State Engineer must make on the issues of available and unappropriated water, conflicts with existing rights, the public interest, and environmental soundness. Findings on those issues are made based on evidence presented in both the 2011 and 2017 hearings. This Supplemental Ruling's findings on the remanded issues, namely available and unappropriated water, conflicts with existing rights, public interest, and environmental soundness, as well as the four remanded tasks,[15] supersede the findings made in Rulings 6164, 6165, 6166, and 6167 on those issues, as indicated in footnotes below. The findings in Rulings 6164, 6165, 6166, and 6167 on the issues of beneficial use, need, good faith intention and financial ability to construct, and conservation plan,[16] were undisturbed by the district court, remain the findings of the State Engineer, and are not addressed in this *Supplemental Ruling on Remand*.[17] This *Supplemental Ruling on Remand*, therefore, is to be read in conjunction with Rulings 6164 through 6167 as appropriate and as indicated below.[18]

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[10]SE_133, at 1.
[11]*Id*. at 2.
[12]SE_144; SE_145.
[13]SE_157, at 15.
[14]*Remand Decision*, at 12- 13, 16; s*ee also* NRS 533.370(2); NRS 533.370(3)(c).
[15]*See* NRS 533.370(2); NRS 533.370(3)(c).
[16]*See* NRS 533.370(1), (3).
[17]*See Remand Decision*, at 23.
[18]"General" Subsections I through X of State Engineer Ruling No. 6164 (Spring Valley), State Engineer Ruling No. 6165 (Cave Valley), State Engineer Ruling No. 6166 (Dry Lake Valley), and State Engineer Ruling No. 6167 (Delamar Valley) remain undisturbed. "General" Subsections I though III of this *Supplemental Ruling on Remand* are to be read in conjunction with those sections. "General" Subsection IV of this Supplemental Ruling on Remand supersedes and replaces "General" Subsection XI of State Engineer Ruling No. 6164 (Spring Valley), State Engineer Ruling No. 6165 (Cave Valley), State Engineer Ruling No. 6166 (Dry Lake Valley), and State Engineer Ruling No. 6167 (Delamar Valley).

IV.
GUIDING PRINCIPLES IN THE APPLICATION OF THE WATER LAW TO THIS DECISION

The Nevada Division of Water Resources (NDWR) is headed by the State Engineer who supervises the appropriation of water in Nevada. The mission of the NDWR is to conserve, protect, manage and enhance the water resources of the state for Nevada's citizens through the appropriation and reallocation of the public waters. The State Engineer is responsible for reviewing all applications to appropriate water and, in conjunction with the water law and policies of Nevada, approving or rejecting such applications. The Nevada Legislature has expressed many guiding principles in the development of water resources in Nevada and has developed the statutory criteria the State Engineer must apply when approving or denying applications for a project involving the beneficial use of water. The following summarizes many of the guiding principles and statutory criteria that the State Engineer will follow in making the decision on the subject applications.

Nevada water law is first and foremost founded on the doctrine of prior appropriation. The most significant principles of the prior appropriation doctrine are as follows: (I) "first in time, first in right," in other words, priority controls the use of water in times of shortage; (2) beneficial use is the basis, the measure, and the limit of the right to the use of water; and (3) the "use it or lose it" principle, i.e., water not placed to beneficial use may be lost through cancellation, forfeiture or abandonment. In Nevada, the waters of all sources of water supply within the boundaries of the state belong to the public.[19] Subject to existing rights, and other statutory criteria, all water may be appropriated for beneficial use.[20] Specifically, a water right application must be denied where there is no unappropriated water in the proposed source of supply, where its proposed use or change conflicts with existing rights or with protectable interests in existing domestic wells as set forth in NRS 533.024, or threatens to prove detrimental to the public interest, or in the case of an interbasin transfer, is environmentally unsound as it relates to the basin of origin and would unduly limit future growth and development in the basin of origin.[21]

NRS 533.370(3) and 533.007 specifically provide for the interbasin transfer of water, which is defined as the transfer of groundwater for which the proposed point of diversion is in a different basin than the proposed place of beneficial use. In this matter, the Applicant has lawfully filed for an interbasin transfer of groundwater for a beneficial public use of water.

NRS 540.011 establishes a basic legislative policy, which recognizes the relationship between the critical nature of the state's limited water resources and the increasing demands placed on these resources as the population of the state continues to grow. The legislature further recognizes the important role of water resource planning and that such planning must be based upon identifying current and future needs for water. Consistent with this recognition, an interbasin transfer can only be approved if the applicant can provide substantial evidence of need for the requested water and a conservation plan if the State Engineer determines that one is necessary.[22] The State Engineer believes that the legislative declarations of policy establish the

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[19]NRS 533.025.
[20]NRS 533.030.
[21]NRS 533.370(2).
[22] NRS 533.370(3).

importance of protecting existing water rights, supporting water conservation, and acknowledging the role of water planning. The State Engineer will determine whether unappropriated water within the subject basins is available for SNWA's future water supply plans to protect against shortages on the Colorado River, meet projected demands, and replace temporary water supplies, and whether this can be done in a responsible manner utilizing all the tools at his disposal, including monitoring, adaptive management and, if necessary, mitigation to ensure that there is no conflict with existing water rights or other provisions of Nevada water law.

The legislature declared that it is the policy of this state to encourage the State Engineer to consider the best available science in rendering decisions concerning the available surface and underground sources of water in Nevada. NRS 533.024(1)(c). Understanding the hydrology of this region is critical in evaluating the potential hydrological impacts of groundwater development. Both the Applicant and Protestants submitted thousands of pages of scientific information, evidence and testimony for consideration during a record long six weeks of administrative hearing in 2011 and an additional two weeks of remand hearing in 2017. This area has been under study for decades and voluminous published scientific reports were made available as evidence for review. The State Engineer will weigh the evidence presented at the administrative hearings and utilize the best available science that has been correctly applied and evaluated for accuracy in rendering his decision on this matter in accordance with stated legislative policies.

Nevada is the driest state in the nation and has been one of the fastest growing. Due to its scarcity and the pressure placed on it, water is Nevada's most precious resource and must be managed wisely to make efficient and environmentally sound use of this limited resource. Accordingly, making beneficial use of Nevada's water resources shall not be done to the detriment of the other criteria found in Nevada's water law which are designed to ensure its long term sustainability.

FINDINGS OF FACT[23]

I.
AVAILABLE WATER
PERENNIAL YIELD AND UNAPPROPRIATED WATER[24]

NRS 533.370(2) requires the State Engineer to determine whether there is available water in the proposed source to support the applications in question and requires the State Engineer to reject an application where there is insufficient unappropriated water in the proposed source. The December 13, 2013, *Remand Decision* requires the State Engineer on remand to recalculate the available water from Spring Valley such that SNWA's appropriations would reach

[23]Findings of Fact Sections I, II, VIII, and IX of State Engineer Ruling No. 6164 (Spring Valley), State Engineer Ruling No. 6165 (Cave Valley), State Engineer Ruling No. 6166 (Dry Lake Valley), and State Engineer Ruling No. 6167 (Delamar Valley) remain undisturbed by the *Remand Decision* and are not addressed in this *Supplemental Ruling on Remand*.

[24]This Section supersedes and replaces Findings of Fact Section III of State Engineer Ruling No. 6164 (Spring Valley), State Engineer Ruling No. 6165 (Cave Valley), State Engineer Ruling No. 6166 (Dry Lake Valley), and State Engineer Ruling No. 6167 (Delamar Valley).

equilibrium between recharge and discharge within a reasonable amount of time without causing unreasonable impacts or conflicts with existing rights.[25] The *Remand Decision* further requires on remand additional hydrologic study to recalculate the appropriations from Cave Valley, Dry Lake and Delamar Valleys to avoid over appropriations or conflicts with down-gradient existing water rights.[26] In other words, the *Remand Decision's* direction requires the State Engineer to consider how much water can be considered available for SNWA's proposed pumping, taking into account the constraints or limitations placed on the availability of water by Nevada law such as conflicts with existing water rights and threats to the public interest, including unreasonable environmental impacts.[27] The proposed sources are: the Spring Valley Hydrographic Basin (No. 184) for SNWA's applications located in Spring Valley; the Cave Valley Hydrographic Basin (No. 180) for SNWA's applications in Cave Valley; the Dry Lake Valley Hydrographic Basin (No. 181) for SNWA's applications located in Dry Lake Valley; and the Delamar Valley Hydrographic Basin (No. 182) for SNWA's applications located in Delamar Valley.

In determining the amount of groundwater available for appropriation in a given hydrographic basin, the State Engineer relies on all available hydrologic studies to provide relevant data to determine the perennial yield for a basin. 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.[28] Perennial yield is ultimately limited to the maximum amount of the natural discharge that can be salvaged for beneficial use.[29] Perennial yield cannot be more than the natural recharge to a groundwater basin and in some cases is less.[30] If the perennial yield is exceeded, groundwater levels will decline and steady state conditions, or equilibrium, will not be achieved, a situation commonly referred to as groundwater mining.[31] The term groundwater mining typically refers to a prolonged and progressive decrease in the amount of water stored in a groundwater system, as may occur, for example, in heavily pumped aquifers in arid and semiarid regions.[32] Withdrawals of ground water in excess of the perennial yield contribute to adverse conditions such as water quality degradation, storage depletion, diminishing yield of wells, increased economic pumping lifts, land subsidence, and possible reversal of groundwater gradients which could result in significant changes in the recharge-discharge relationship.[33] The time to equilibrium, or a new steady state, is critically important in the case of large withdrawals such as those SNWA proposes, because if equilibrium is not reached for a long period of time, in the interim, the aquifer loses substantial amounts of stored water leading to severe impacts to existing water rights holders, future users or

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[25]*Remand Decision,* at 10-13, 16, 23.
[26]*Id.* at 1-2; 23.
[27]*Id*. at 12-13, 16, 23.
[28]Water Resources Bulletin, Nevada's Water Resources, Report No. 3, at 13 (1971).
[29]Thus, where it cannot be demonstrated that an application will actually capture ET, the State Engineer has denied the application. State Engineer Ruling 3486 (Jan. 11, 1988).
[30]Water Resources Bulletin, Nevada's Water Resources, Report No. 3, at 13 (1971).
[31]State Engineer Ruling No. 2453 (1979); State Engineer Ruling No. 3486 (1988); State Engineer Ruling No. 5621, at 17, 20 (2006); State Engineer Ruling No. 5750 (2007); State Engineer Ruling No. 6151 (2011); State Engineer Ruling No. 6256, at 13, 24, 25 (2014);
[32]Alley et al. (1999).
[33]Water Resources Bulletin, Nevada's Water Resources, Report No. 3, at 13 (1971).

future residents of the basin, and to the environment.[34] In view of the problems that groundwater mining causes, it has long been the policy of the State Engineer to prohibit groundwater mining and deny applications that would result in groundwater mining.[35]

In most Nevada basins, including Spring Valley, groundwater is discharged primarily through evapotranspiration (ET). In those basins, the perennial yield often has been found to be approximately equal to the estimated groundwater ET; the assumption being that water lost to natural ET can be captured by wells and placed to beneficial use. However, other factors may make the capture of ET discharge within a basin impractical or otherwise problematic, which would result in a lower perennial yield amount than ET discharge amount for the basin. In other words, the perennial yield is limited by the amount of ET discharge that can actually be captured.[36]

In addition, many of the basins in the Carbonate Aquifer terrain, including Cave, Dry Lake, and Delamar Valleys, discharge their groundwater mostly via subsurface flow to adjacent basins, that is, there is little or no ET. The amount of subsurface discharge that can be captured in those basins is highly variable and uncertain. Perennial yields for these basins have historically been set at one-half of the subsurface discharge. However, when conditions are such that there is subsurface flow through several basins, there is a potential for double accounting and over appropriating water that may already be appropriated downgradient. Therefore, downward adjustments may be required to the perennial yields of basins in these "flow systems" so that over appropriation or double counting of water does not occur.

In 2011, SNWA presented its own new estimates of the recharge and perennial yields of the four basins within which the applications in question are located. Substantial evidence demonstrated that these estimates lie at the high end of the range of previous recharge and perennial yield estimates for the four basins.[37] In an effort to support its perennial yield estimates, SNWA presented extensive testimony and documentary evidence reflecting SNWA's opinion regarding precipitation, recharge, evapotranspiration, geology, and interbasin flow within and affecting the basins in question. In 2011, Protestants White Pine County, GBWN, et al. presented substantial evidence that SNWA's estimates of precipitation, recharge, and evapotranspiration were inflated and that the data and analysis used by SNWA to arrive at these estimates was flawed and therefore suspect.[38] Protestants White Pine County, GBWN, et al. further presented substantial evidence that SNWA's interpretation of the relevant geology was

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[34]Transcript Vol. 6, at 1163 (Oct. 2, 2017) (Jones and Mayo Direct).

[35] *See e.g.*, State Engineer Ruling No. 707 (1964); State Engineer Ruling No. 2453 (1979); State Engineer Ruling No. 3486 (1988); State Engineer Ruling No. 5750 (2007); State Engineer Ruling No. 6151 (2011).

[36] State Engineer Ruling 3486 (1988); *see also* State Engineer Ruling 6256, at 13, 24, 25 (Garnet Valley 2014); State Engineer Ruling No. 5621, at 17, 20 (Three Lakes-Tikapoo Valleys 2006); Water Resources Bulletin, Nevada's Water Resources, Report No. 3, at 13 (1971).

[37]Transcript Vol. 17, at 3775-78, 3822 (Nov. 1, 2011) (Myers Direct); GBWN_103 at 4, 15, 17, 18; GBWN_110 at 3.3-54, 3.3-57, 3.3-58.

[38]*See* Transcript Vol. 17, at 3776-78, 3817, 3820, 3897-98 (Nov. 1, 2011) (Myers Direct); Transcript Vol. 18, at 4080-4082 (Nov. 2, 2011) (Myers Direct); Transcript Vol. 19, at 4207-4273 (Nov. 3, 2011) (Myers Direct); Transcript Vol. 24, at 5353-5411 (Nov. 10, 2011) (Bredehoeft Direct); GBWN_001 at 17-19, 21; GBWN_003 at 4; GBWN_009 at 4, GBWN_103 at 4, 15, 17, 18; *see also* GBWN_110 at 3.3-54, 3.3-57, 3.3-58.

flawed and suspect in a manner that distorted potential intrabasin and interbasin flow patterns in order to support the amounts of water that the applications seek.[39]

While SNWA's 2011 presentation was lengthy, the State Engineer finds that SNWA's evidence concerning recharge, evapotranspiration, and interbasin flow was not credible because the data gathered and the analysis of that data were distorted so as to exaggerate the amount of recharge and the perennial yield in each of the four basins in question. All of SNWA's scientific evidence was prepared after the fact in order to support application amounts that were set by SNWA in the late 1980s. The vast majority of SNWA's evidence was prepared by employees and long-term contractors of SNWA, who simply are not disinterested or objective scientists. In addition, at frequent junctures critical subjective judgments were made by these witnesses that uniformly had the effect of producing water where it conformed to the amounts and locations previously selected by SNWA long ago and preventing water from flowing in directions or to places that would undercut SNWA's applications. The sheer uniformity of SNWA's witnesses' testimony to the effect that every component of the water budgets for the target basins works out just so as to support the amounts of water applied for by SNWA is too implausible to be reasonably accepted.

The 2011 testimony of SNWA's geology witness, Dr. Peter Rowley, is an example of the result-oriented overreaching that plagues SNWA's entire case. Dr. Rowley testified at length about the voluminous geologic work he and his partner had performed in these basins for SNWA, but it became apparent during the course of his testimony that he did not in fact have any substantial evidence that fundamentally altered the picture of the relevant geology in any of the basins in question. Areas where interbasin flow has previously been considered permissible remain so, and virtually all of his analysis and testimony concerning "likely" flow patterns remains unverified by pump testing. In addition, Dr. Rowley plainly overstated the role of particular faults as essentially complete barriers to groundwater cross flow and virtually perfect conduits of groundwater in exactly the quantities to precisely the areas SNWA seeks.[40] Similarly, SNWA's principal hydrology witness, Andrew Burns, based his judgment that interbasin flow out of Spring Valley is practically nonexistent in the northern part of the valley and at the very low end of estimates in the southern part of the valley largely on a student's master's thesis that is framed from beginning to end as an argumentative piece in favor of reducing outflow estimates so that SNWA can export more water from Spring Valley. When asked about this fact, Mr. Burns professed not to be aware that the student paper was expressly written to justify increased water rights for SNWA in Spring Valley.[41]

Perhaps the most blatant obfuscation at the heart of SNWA's hydrology case was SNWA's attempt in 2011 to run away from its own model and the results of its own modeling efforts. On the one hand, SNWA's witnesses testified that the predictive model they developed for use in preparing the Environmental Impact Statement for the same Groundwater Development Project was superior to other models, and argued in particular that Dr. Myers' Spring Valley model should not be relied on because it was not as elaborately documented as SNWA's model.[42] Yet on the other hand, they repeatedly tried to persuade the State Engineer

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[39]Transcript Vol. 18, at 4086 (Nov. 2, 2011) (Myers Direct); GBWN_103 at 1, 5-15; GBWN_104 at 9.

[40] Transcript Vol. 17, at 3802, 3826 (Nov. 1, 2011) (Myers Direct).

[41]Transcript Vol. 7, at 1536-40 (Oct. 4, 2011) (Burns Cross).

[42]*See* Transcript Vol. 9, at 1902-06, 49 (Oct. 6, 2011) (D'Agnese Direct).

and his staff to disregard the predictions of SNWA's own model. SNWA's witnesses even argued that the State Engineer could not use SNWA's model for the very purpose it was developed and used in the BLM's Draft EIS, namely to predict likely hydrologic impacts and drawdown of the water table throughout the hydrologically connected basins in the region affected by SNWA's proposed pumping.[43] SNWA cannot rationally be allowed to have it both ways. The evidence in the record plainly demonstrates that, while it is flawed in some regards and has certain limitations, SNWA's model and other models, including Dr. Myers', that have been developed to project the impacts of SNWA's proposed pumping in part or all of the affected region are useful tools that the State Engineer should employ to predict in at least general terms impacts are likely to occur and the order of magnitude or rough degree of severity of such impacts in affected areas. The irony of SNWA's inconsistent and blatantly skewed approach to the use of its own model, is that the evidence shows that SNWA's model produces projections that are broadly similar to those produced by Dr. Myers' and other models.[44] The clear implication of this general consensus among different models as to the geographic scope and magnitude of impacts from SNWA's proposed pumping is that the State Engineer can rely with some degree of confidence on those projected impacts. By the same token, it would be irrational to disregard these predictions.

In the same vein, SNWA's refusal to present any model runs extending beyond 75 years was nothing more than a patent attempt to hide from the uniform evidence of ever graver impacts as SNWA's proposed groundwater development project continues to operate into the indefinite future, which is what the water rights SNWA has applied for would permit and which the overwhelming weight of the evidence indicates. Indeed, SNWA's witness Patricia Mulroy likened SNWA's supposed entitlement to this project to Rome's ability to build and rely on its aqueduct system, a water supply system that has been in operation for two millennia.[45] Reinforcing the fact that this proposed project must be viewed as much longer term than 75 years, no witness for SNWA was willing to commit to any limit whatsoever on the duration of SNWA's proposed pumping. Accordingly, SNWA's refusal to offer any evidence whatsoever concerning potential impacts beyond 75 years completely undercuts its case concerning both the availability of water and the proposed use's likely environmental impacts and conflicts with existing rights.

A. Spring Valley

The evidence introduced during the 2011 hearing demonstrated that both Dr. Myers' and SNWA's models were reasonable tools for analyzing the likely impacts of granting SNWA's applications in whole or in part, and for estimating the perennial yield of Spring Valley, despite the conflicting evidence concerning interbasin flow. The evidence demonstrated that there is a general consensus from all modeling that the system in Spring Valley will not approach any reasonable definition of equilibrium for over a thousand years and quite possibly not for several millennia.[46] The State Engineer finds that under any reasonable interpretation of Nevada water

[43]Transcript Vol. 9, at 1906-09 (Oct. 6, 2011) (D'Agnese Direct).
[44]*See* Transcript Vol. 24, at 5388-90 (Nov. 10, 2011) (Bredehoeft Direct); Transcript Vol. 19, at 4259-60 (Nov. 3, 2011) (Myers Direct).
[45] Transcript Vol. 1, at 92 (Sept. 26, 2011) (Mulroy Direct).
[46] *See* Transcript Vol. 18, at 4103-18 (Nov. 2, 2011) (Myers Direct).

law and traditional water policy, SNWA's proposed use would constitute unsustainable and impermissible groundwater mining.

With regard to interbasin flow into and out of Spring Valley, the evidence presented in 2011 clearly shows that flow is permissible into Spring Valley from Steptoe Valley and out of Spring Valley to Hamlin Valley and southern Snake Valley. During the 2011 hearing, substantial evidence was presented by Protestants White Pine County, GBWN, et al. demonstrating a reasonable probability that there is as much as 8,800 afa of interbasin flow from Steptoe Valley into Spring Valley and 11,800 afa of interbasin flow out of Spring Valley into Snake and Hamlin valleys.[47] It also is clear that both the gradients and some other evidence indicate that there is at least some flow. Additionally, there is great uncertainty about the amount of flow and that the system is not well understood. In such a situation the only responsible and rational approach to take is a conservative one that errs on the side of protecting the long-term viability of the resource.

SNWA presented no additional evidence during the 2017 remand hearing related to capture of ET from the application points of diversion. Therefore, the State Engineer bases this decision on evidence presented during the 2011 hearing. In 2011, protestants presented substantial evidence demonstrating that SNWA's existing applications in Spring Valley will not be able to capture a great deal of the groundwater ET in Spring Valley, meaning that SNWA's proposed groundwater pumping would not reach equilibrium and would amount to groundwater mining that would draw a large proportion of groundwater from storage for at least many centuries and likely millennia.[48] Protestants also presented substantial evidence that whether the present application locations or other locations in Spring Valley are pumped at even the reduced rate of 30,000 afa, that proposed pumping would not reach equilibrium within a reasonable timeframe and would cause impermissible impacts to existing water rights and environmental resources throughout Spring Valley and in southern Snake Valley.[49] The State Engineer finds this evidence to be credible.

During the 2017 remand hearing, despite the fact that the *Remand Decision* remanded to the State Engineer to approve an amount of water that will reach equilibrium in a reasonable period of time and for which it can be demonstrated by substantial evidence that impacts and conflicts can be effectively mitigated, SNWA chose not to present additional evidence related to the capture of ET or estimates of when equilibrium would be reached at the application points of

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[47]Transcript Vol. 17, at 3814 (Nov. 1, 2011); GBWN_103 at 27, 28 (citing Bureau of Land Management, Clark, Lincoln, and White Pine Counties Groundwater Development Project Draft Environmental Impact Statement (DEIS) model files (June 2010)).

[48]*See* Transcript Vol. 17, at 3883 (Nov. 1, 2011) (Myers Direct), Transcript Vol. 18, at 4067-4126 (Nov. 2, 2011) (Myers Direct), Transcript Vol. 19, at 4207-4273 (Nov. 3, 2011) (Myers Direct); Transcript Vol. 24, at 5353-5411 (Nov. 10, 2011) (Bredehoeft Direct); Transcript Vol. 27, at 5973-6148 (Nov. 16, 2011) (Mayo & Jones Direct); GBWN_003 at 5, 15-17, 24-28; GBWN_009 at 10, GBWN_103 at 2; GBWN_105 at 2-4, 23, 31; GBWN_110 at 3.3-98;

[49]*See* Transcript Vol. 18, at 4121-26 (Nov. 2, 2011) (Myers Direct); Transcript Vol. 19, at 4207-45 (Nov. 3, 2011) (Myers Direct); Transcript Vol. 24, at 5353-5411 (Nov. 10, 2011) (Bredehoeft Direct); Transcript Vol. 27, at 5973-6148 (Nov. 16, 2011) (Mayo & Jones Direct); Transcript Vol. 27, at 6149-6216 (Nov. 16, 2011) (Drew & Scott Direct); Transcript Vol. 28, at 6222-59 (Nov. 17, 2011) (Drew & Scott Direct); GBWN_003 at 7-28; GBWN_009 at 6-7, 10, GBWN_105; GBWN_109 at 5-8.

diversion, but chose instead to present evidence of equilibrium and impacts in a disjointed fashion, evaluating equilibrium for a hypothetical ET capture project which is not before the State Engineer, while limiting its discussion of impacts and mitigation of those impacts to the application points of diversion, for which no equilibrium analysis was done.[50] SNWA has acknowledged, that an ET capture project such as this redesigned project will result in vastly different impacts from the than were analyzed for the project as presented in the 2011 hearing.[51] Despite this inescapable fact, SNW A has chosen not to provide the State Engineer with drawdown maps for its ET capture scenario, asking the State Engineer instead to rely on those that resulted from the 2011 project, which SNWA suggests was designed to minimize impacts.[52] This fracturing of the permitting process and analysis is contrary to Nevada law, which requires a project to satisfy all of its requirements, including the limitations placed on appropriations by the availability of water, conflict with existing rights, public interest, and environmentally sound criteria of NRS 533.370(2) & (3). Thus, even assuming that the ET capture project presented by SNWA in 2017 satisfies the *Remand Decision*'s equilibrium requirement, because no impacts analysis was performed on that hypothetical ET capture project, the State Engineer cannot base the grant of any water rights to SNWA on this hypothetical project or its equilibrium analysis. Thus, the State Engineer must base this ruling on evidence of ET capture and equilibrium presented during the 2011 hearing for the application points of diversion, for which SNWA has presented a monitoring and mitigation plan that it claims will eliminate impermissible conflicts and impacts. Consequently, as the district court found in the *Remand Decision*, SNWA's evidence is insufficient to justify the granting of its Spring Valley applications, because SNWA has not demonstrated that equilibrium will be reached in a reasonable period of time when pumping from the application points of diversion. SNWA has not presented a unified single project that satisfies the *Remand Decision*'s equilibrium and mitigation requirements. In other words, SNWA has not introduced evidence that a project can be constructed which will both reach equilibrium and will not result in impermissible impacts. Thus, because SNWA's evidence is not responsive to the requirements of the *Remand Decision*, the *Remand Decision* mandates denial of SNWA's applications in Spring Valley.

B. Cave, Dry Lake, and Delamar Valleys

The *Remand Decision* requires the State Engineer to recalculate what, if any, amount of water is available for appropriation by SNWA in Cave, Dry Lake, and Delamar Valleys that will not conflict with down-gradient existing water rights.[53] This amount necessarily must be less than the amount granted in Rulings 6165, 6166, and 6167, given that the *Remand Decision* overturned as arbitrary and capricious the State Engineer's decision to grant water in an amount that he found would conflict with existing downgradient rights in the future. Despite this inescapable fact, SNWA chose to request even more water from Cave Valley than was granted in

[50]SNWA_475; SNWA_507; GBWN_297 at 7, 10, 13.
[51]*Compare* Southern Nevada Water Authority, Reply Brief at 39, *SNWA, et al. v. Seventh Judicial District Court, et al.,* No. 65775 (Nev. May 30, 2014) (citing CPB Answering Brief at 13 n5, 23) (noting that ET Capture project would result in devastating effects), *with* SNWA_475, at 21 (2017) (noting that the 2011 project was designed to minimize impacts).
[52]SNWA_475 at 21.
[53]*Remand Decision*, at 20, 23.

Ruling 6165 and chose to request the same amounts in Dry Lake and Delamar Valleys as was found to be unsupported by substantial evidence in the *Remand Decision*.[54]

During the 2017 remand hearing, SNWA chose to present evidence that amounted to an existing rights accounting exercise, which was designed to demonstrate that sufficient water is available in Cave, Dry Lake, and Delamar Valleys as long as 39,000 afa is hypothetically available somewhere in the White River Flow System (WRFS) to account for the required downgradient outflow to fully appropriated downgradient basins.[55] However, SNWA treated the WRFS as a large black box, without considering where recharge occurs, how and where interbasin water flows occur in the affected valleys, or whether it could actually be captured, and SNWA presented no evidence that its pumping could or would actually capture water other than water that is flowing to those downgradient basins.[56] In other words, SNWA presented no hydrologic evidence that its pumping would not, in fact, capture the very water that it claimed it reserved in its accounting exercise to provide the required outflow to downgradient fully appropriated basins.[57] SNWA presented no conceptual flow model to justify its accounting exercise or to demonstrate that it would not, in fact, capture water that flows to downgradient fully appropriated basins.[58] In fact, Mr. Stanka, the only expert through which SNWA presented its analysis of available water in the Cave, Dry Lake, and Delamar Valleys, is not a hydrologist and is not qualified to provide testimony or evidence about what water SNWA's pumping actually would capture or to perform a hydrologic evaluation of groundwater flow paths. Rather, he is a water rights surveyor and is qualified only to perform an accounting of groundwater rights that represent committed water resources in the subject basins.[59] Yet Mr. Stanka's analysis and conclusion that there is water available for appropriation in Cave, Dry Lake, and Delamar Valleys is based on flawed flow path analyses and assumptions he is not qualified to make.[60]

Because he is unqualified to assess hydrologic conditions and flow paths, a number of the assumptions upon which Mr. Stanka based his analysis are flawed and significantly bias the analysis in favor of a finding that water is available for appropriation in Cave, Dry Lake, and Delamar Valleys. For example, Mr. Stanka inappropriately limited the analysis of available water to 11 of the 13 White River Flow System basins despite the fact that the excluded two basins, Coyote Spring Valley and the Muddy River Springs Area, are downgradient and are hydrologically connected to and would be impacted by SNWA's proposed project.[61] Not only is Mr. Stanka unqualified to make this hydrologic judgment, but it is based on a misinterpretation of State Engineer Ruling 6255, and is inconsistent with the hydrologic evidence in the record which clearly demonstrates that Coyote Spring Valley and the Muddy River Springs Area are hydrologically connected to and downgradient of the CDD basins, and thus eventually will be impermissibly impacted as recognized by the *Remand Order*.[62] Mr. Stanka also inappropriately

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[54]SNWA_507, at 8-4; Transcript Vol. 1, at 22 (Sept. 25, 2017) (Stanka Direct).
[55]SNWA_483, at 1-10.
[56]Transcript Vol. 1, at 138-140 (Sept. 25, 2017) (Stanka Staff Questions); Transcript Vol. 8, at 1786, 1793-94, 1818, 1821 (Oct. 4, 2017) (Myers Direct); GBWN_297, at 18.
[57]*Id*.
[58]*See id.*
[59]SNWA_482.
[60]*See* SNWA_483, at 1-3 through 1-10; SNWA_482.
[61]Transcript Vol. 8, at 1787-88 (Oct. 4, 2017) (Myers Direct); GBWN_297, at 15-16.
[62]Transcript Vo. 8, at 1787-89 (Oct. 4, 2017) (Myers Direct).

allocated 33,700 acre feet per year of Muddy River stream flow to California Wash, outside the WRFS, effectively removing the Muddy River Springs from their place as the final discharge from the WRFS.[63] This approach is inconsistent with the evidence in the record presented by SNWA in 2011.[64] Finally, as pointed out by protestant witness Dr. Myers, Mr. Stanka failed to consider that Tikapoo Valley South is part of the Death Valley Flow System and thus failed to consider whether water flowing through it is appropriated or otherwise committed downgradient.[65]

In 2017, Protestant witness Dr. Myers testified that it is more likely than not that SNWA's pumping would, in fact, capture the actual outflow to downgradient basins which already are fully appropriated.[66] He further testified that no water is available for appropriation in the Cave, Dry Lake, and Delamar Valleys, because it all is fully appropriated downgradient.[67]

The depth to groundwater within the principal groundwater aquifer throughout Cave Valley generally exceeds 50 feet below ground surface; thus, groundwater ET within Cave Valley is minimal. Evidence was presented in 2011 indicating that there may be 1,290 afa or more of groundwater ET from Cave Valley.[68] However, the State Engineer finds that the groundwater level data suggests that the groundwater ET discharge that does occur most likely results from perched aquifers, and as such, it would be impracticable to capture the groundwater ET discharge with wells drilled into the principal groundwater aquifer may be limited. Substantial evidence was presented which demonstrates that the recharge in Cave Valley is accounted for by interbasin outflow into other basins within the White River Flow System, specifically White River Valley, Pahroc Valley, and Dry Lake Valley.[69] Dry Lake Valley and Delamar Valley do not have any significant natural groundwater ET discharge, rather all groundwater discharge occurs as subsurface outflow to adjacent downgradient basins in the White River Flow System.[70]

With regard to Cave, Dry Lake, and Delamar Valleys, substantial evidence presented in 2011 demonstrated that: (1) the is no significant groundwater ET available for capture by SNWA in any of those basins; and (2) the recharge in those three valleys is accounted for by interbasin flow in the White River Flow System, which flows out of those basins and into downgradient basins where it is completely appropriated at downgradient discharge points such as the Muddy River Springs, the regional springs in Pahranagat Valley, and longstanding wells.[71] The dangers of allowing water in the White River Flow System that already has been appropriated to be double appropriated already has been recognized by the State Engineer in Order 1169. It ultimately would be disastrous to water rights holders and the environment in those hydrologically connected downgradient basins to allow SNWA to appropriate and transfer

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[63]*See* SNWA_483, at 1-4; GBWN_297, at 15.
[64]GBWN_291, at 15.
[65]Transcript Vol. 1, at 141-42 (Sept. 25, 2017) (Stanka Staff Questions); Transcript Vol. 8, at 1784 (Oct. 4, 2017) (Myers Direct).
[66]Transcript Vol. 8, at 1818-19 (Oct. 4, 2017) (Myers Direct); GBWN_297, at 23.
[67]Transcript Vol. 8, at 1790-91 (Oct. 4, 2017) (Myers Direct).
[68]SNWA_258, at 514, Table 5-6.
[69]*See* Transcript Vol. 17, at 3779, 3823-34 (Nov. 1, 2011) (Myers Direct); Transcript Vol. 18, at 4088-4089 (Nov. 2, 2011); Transcript Vol. 19, at 4207-4273 (Nov. 3, 2011) (Myers Direct); GBWN_004 at 9, 11-41, GBWN_009 at 7-8, GBWN_110 at 3.3-48; 3.3-57.
[70]*See* GBWN_110 at 3.3-51, 3.3-58.
[71]GBWN_004, at 40-41; Transcript Vol. 17, at 3865 (Nov. 1, 2011)(Myers Direct).

any part of the interbasin flow out of Cave, Dry Lake or Delamar Valleys, when the evidence clearly indicates that such interbasin flow is accounted for by existing water rights at downgradient points of discharge or diversion within the same flow system.

The groundwater recharge in these three upgradient basins within the White River Flow System is not available for appropriation because it already has been appropriated elsewhere within the White River Flow System. This may be expressed by a finding that the perennial yield of Cave, Dry Lake, and Delamar Valleys effectively is zero afa. In the alternative, the unavailability of groundwater for appropriation in those basins may be expressed as a finding that, whatever the perennial yields of those basins might be in the absence of downgradient development, because the recharge in those basins makes up the interbasin flow out of those basins and into the downgradient portions of the White River Flow System where it is subject to existing water rights, granting the applications would impermissibly conflict with those prior existing rights. The State Engineer finds that, under either formulation, and in accordance with the *Remand Decision*, granting the applications in Cave, Dry Lake, and Delamar Valleys would sanction impermissible groundwater mining, would conflict with existing rights, would be detrimental to the public interest, and would be environmentally unsound.

The State Engineer found in the 2012 Rulings 6165, 6166, and 6167 that appropriations in Cave, Dry Lake, and Delamar Valleys would impact existing rights based on the evidence in the record, but because the impacts would not be felt for hundreds of years, they were permissible under the law.[72] The *Remand Decision* held that finding to be arbitrary and capricious, because NRS 533.320(2) provides that applications "shall" be rejected if a finding of a conflict is made, regardless of whether that conflict will take a long time to manifest itself.[73] SNWA's points of diversion have not changed since 2011 and because no new hydrologic evidence has been presented by SNWA in 2017 that would change that 2012 finding that conflicts with existing water rights eventually will occur in downgradient basins, in order to comply with the *Remand Decision* the State Engineer must deny SNWA's applications in Cave, Dry Lake, and Delamar Valleys. Because SNWA provided no evidence that it can feasibly capture unappropriated water in the Cave, Dry Lake, and Delamar Valleys, the State Engineer finds that SNWA has not provided substantial (or any) evidence that its pumping will not capture water that already is appropriated in downgradient basins, and thus the evidence in the record from 2011 and the *Remand Decision* require denial of SNWA's groundwater applications in Cave, Dry Lake, and Delamar Valleys. On a more basic level, because SNWA chose not to present additional hydrologic evidence on the issue of available water that was responsive to the *Remand Decision's* clear instructions that additional hydrologic study must be performed,[74] SNWA's applications must be denied.

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[72]Ruling 6165, at 48; Ruling 6166, at 47-48; Ruling 6167, at 47-48; *Remand Decision*, at 20.
[73]*Remand Decision*, at 20.
[74]*Remand Decision*, at 1-2 (remanding Rulings 6165, 6166, and 6167 "for additional hydrological study of Delamar, Dry Lake and Cave Valley…"); Transcript Vol. 1, at 138-42 (Sept. 25, 2017) (Stanka Staff Questions).

IV.
IMPACTS TO EXISTING RIGHTS AND DOMESTIC WELLS[75]

NRS 533.370(2) provides that the State Engineer shall reject an application where the proposed use conflicts with existing rights or protectable interests in existing domestic wells as set forth in NRS 533.024. NRS 533.024 provides that it is the policy of this State to recognize the importance of domestic wells as appurtenances to private homes, to create a protectable interest in such wells and to protect their supply of water from unreasonable adverse effects which are caused by municipal, quasi-municipal or industrial uses and which cannot be reasonably mitigated. In the 2017 Remand Hearing, SNWA presented no conflicts analysis. Therefore, the State Engineer bases his conflicts analysis on the evidence in the record from 2011.

In 2011, SNWA presented testimony that the project will have limited impact on the environment, local economies, and existing rights based on modeling projections limited to 75 years, and based on a reliance on its Monitoring and Mitigation program discussed below. SNWA also presented an effects analysis that plotted impacts based on drawdowns of 50 feet or more, and spring decline of 15% or more. The State Engineer finds that it is unreasonable to limit the examination of impacts to the effects caused by 50 foot drawdowns or 15% declines in spring flow given that impacts will occur much before that level of drawdown, and that such an approach departs from SNWA's work for the Draft Environmental Impact Statement without justification.[76] As discussed in previous sections of this ruling, in 2011 Protestants White Pine County, GBWN et al. witnesses Dr. Myers and Dr. Bredehoeft presented evidence that all model projections agree that there will be significant drawdown over vast areas after just 200 years with a large percentage of water being drawn from storage.[77] According to the Clark, Lincoln, and White Pine Counties Groundwater Development Project Draft Environmental Impact Statement ("DEIS") and Final Environmental Impact Statement ("FEIS") model, which show similar drawdowns to the model presented by Dr. Myers, at 200 years, Spring Valley will experience drawdowns of 100 feet or more over much of the valley.[78] The State Engineer finds that given the scale of the project, the fact that it is intended to serve as a source of supply relied on by southern Nevada in perpetuity, and its potential to have irreversible impacts on the affected

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[75]This Section supersedes and replaces Finding of Fact Sections IV, V, and X of Spring Valley Ruling 6164, Section Cave Valley Ruling 6165, Dry Lake Valley Ruling 6166, and Delamar Valley Ruling 6167.

[76]*See* Transcript Vol. 19, at 4167-68 (Nov. 3, 2011) (Deacon Direct).

[77]Transcript Vol. 24, at 5388-90 (Nov. 10, 2011) (Bredehoeft Direct); Transcript Vol. 18, at 4118 (Nov. 2, 2011) (Myers Direct); GBWN_109, at 5-8; GBWN_110 (Bureau of Land Management, Draft Environmental Impact Statement for the Clark, Lincoln, and White Pine Counties Groundwater Development Project, app. F3.3.7-3 (June 2010)); GBWN_300 (Bureau of Land Management Final Environmental Impact Statement for the Clark, Lincoln, and White Pine Counties Groundwater Development Project, app. F3.3.7-3 (August 2012). SNWA raised questions concerning the data used in Dr. Myers' model construction, conceptual accuracy and scale of the model, and testified that model results are uncertain and should be discounted. However, Dr. Myers' model is consistent with SNWA's own model and shows very similar drawdowns. *See id*.

[78]*Id.*

basins, it is unreasonable to limit the examination of impacts to a 75 year, or even a 200 year, time frame, and further that the reasoning and conclusions contained in the *Remand Decision* requires this finding.[79] The State Engineer further finds that the models all agree that drawdown will be severe and will spread over a vast area of eastern rural Nevada and into western Utah. The State Engineer finds that this consensus provides a high degree of certainty regarding the likelihood of serious impacts, and further concludes that modeling indicates that these impacts will extend over a vast area.

In Spring Valley, water rights that are likely to be adversely affected by the proposed applications include both groundwater rights and surface water rights originating as springs on the valley floor or valley margins. Surface water rights with points of diversion within the mountain block are not likely to be measurably affected by the proposed project. Water-level drawdown will occur in a cone of depression around the pumping wells, which will eventually coalesce, resulting in wide-spread water-level declines.[80] In particular, Applications 54016, 54017, 54018, and 54021 are located on the Cleve Creek alluvial fan. Distributed around the eastern toe of the fan there are 12 claims of vested spring rights, which total 9,600 acre-feet annually for the irrigation of 2,400 acres. These rights are likely to be adversely impacted.

In 2011 White Pine County, GBWN, et al. presented testimony and evidence through Dr. Myers that there is no water available for appropriation in Cave, Dry Lake, and Delamar valleys as the White River Flow System is fully appropriated due to existing senior appropriations in White River Valley, Pahranagat Valley, Coyote Spring Valley, and the Muddy River Springs Area and that Cave Valley, Dry Lake Valley and Delamar Valley should not be developed.[81] Protestants assert that the water rights in the down-gradient and hydrologically connected basins of White River Valley, Pahranagat Valley, Coyote Spring Valley and the Muddy River Springs Area will eventually be impacted. They assert that steady state will never be reached and SNWA is not going to capture ground-water ET; therefore, the use of water under these Applications will capture the discharge to the down gradient basins of White River Valley, Pahranagat Valley, Coyote Spring Valley and the Muddy River Springs Area, which they allege are fully appropriated. Dr. Myers's analysis shows significant drawdown, removal of ground water from storage, and that ground-water pumping will eventually reduce the flow at regional springs.[82] In 2017, SNWA failed to present any new hydrologic evidence that it would not capture water flowing out of Cave, Dry Lake and Delamar Valleys that already is appropriated downgradient. After carefully reviewing the evidence presented by the Applicant and Protestants, the State Engineer finds there is no dispute that the basins of the White River Flow System are hydrologically connected and that the downgradient basins are fully appropriated. Thus, permitting any groundwater in Cave, Dry Lake, or Delamar Valley would conflict with existing rights in violation of NRS 533.370(2) and the *Remand Decision*.

The State Engineer further finds that the vast majority of water rights in the subject basins will be impacted by the proposed use. In 2011, White Pine County, GBWN, et al. presented substantial evidence that water rights of multiple Protestants stand to be adversely impacted, including rights to stock water. In particular, White Pine County, GBWN, et al. presented evidence of impacts to the rights of Alamo Sewer and Water GID, Preston, Panaca,

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[79] *See Remand Decision*, at 12-13, 16, 20, 23.
[80] *Id.*
[81] Transcript Vol. 17, at 3865 (Nov. 1, 2011) (Myers Direct); GBWN_004, at 35, 40-42.
[82] GBWN_004, at 42-56.

and Lund Irrigation Companies, Gardner Quarter Circle 5 Ranch, Carter-Griffin, Inc., Kena and Patrick Gloeckner, John Wadsworth, Kathy Rountree, Baker Ranches, and Baker GID.[83] Protestant Confederated Tribes of the Goshute Reservation presented substantial evidence through witness Rupert Steele that CTGR has unclaimed federal reserved water rights in the project drawdown area that could be affected by the proposed use.[84] Protestant Corporation of the Presiding Bishop presented substantial evidence that its water rights on Cleveland Ranch in Spring Valley stand to be adversely impacted by the proposed use.[85]

After carefully reviewing the modeling and water rights evidence presented by the Applicant and Protestants, and contained in the State Engineer's files, the State Engineer finds that given the substantial drawdowns predicted by all models, there is little question that the vast majority of the water rights within the drawdown area will be adversely impacted. The State Engineer further finds that such a widespread adverse impact to existing rights is impermissible under Nevada law, which prohibits permitting a new use that would conflict with existing rights or protectable interests in domestic wells.

V.
PUBLIC INTEREST[86]

NRS 533.370(2) provides that the State Engineer must reject an application if the proposed use of the water threatens to prove detrimental to the public interest. The State Engineer finds the analysis of whether the use of water for a proposed project threatens to prove detrimental to the public interest must be addressed on a case-by-case basis. The State Engineer finds the statutory criterion, like beneficial use, is a dynamic concept changing over time.

To determine whether the use of water under these applications threatens to prove detrimental to the public interest, the State Engineer reviews how other State Engineers interpreted this provision of the law and finds that during the 1940s and 1950s the focus of the rulings was development of water resources and prevention of conflicts with existing rights. During these decades the public interest criterion was almost always tied to other statutory criteria such as water availability and impairment to existing rights.

Throughout the 1960s the question of whether the use of water would threaten to prove detrimental to the public interest was still almost always tied to another provision of Nevada water law. Applications were denied because the applicant could not demonstrate the ability to apply the water to beneficial use; therefore, granting the application would threaten to prove detrimental to the public welfare. Applications in Pahrump were denied on the grounds that the

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[83]*See generally*, Transcript Vol. 21 (Nov. 7, 2011) (John Wadsworth, Roderick McKenzie, Steven Carter Testimony); Transcript Vol. 22 (Nov. 8, 2011) (Nancy Brown, Rocky Hatch, Kirk Swanson, Jim Poulsen, Jeff Gardner Testimony); Transcript Vol. 23 (Nov. 9, 2011) (Doug Busselman Testimony); Transcript Vo. 24 (Nov. 10, 2011) (Kathy Rountree; Kenna Gloeckner, Craig Spratling, Dean Baker, Tom Baker, Craig Baker Testimony).

[84]*See* Transcript Vol. 25, at 5689-90 (Nov. 14, 2011) (Steele Direct).

[85]*See* Transcript Vol. 27, at 6005-15, 6044-45 (Nov. 16, 2011) (Jones and Mayo Direct); Transcript Vol. 6, at 121819 (Oct. 2, 2017) (Mayo Direct); CPB_19 at 3 & 5.

[86]This Section supersedes and replaces Finding of Fact Section VI of the Spring Valley Ruling 6164, Cave Valley Ruling 6165, Dry Lake Valley Ruling 6166, and Delamar Valley Ruling 6167.

Pahrump Fan was fully appropriated; therefore, granting the application would impair the value of existing rights and be detrimental to the public welfare. Also, applications were denied where a water purveyor under the provisions of NRS 534.120 could supply water to the applicant, and to grant a water right under those circumstances would threaten to prove detrimental to the public welfare.

The analyses did not change much during the 1970s except rulings now denied applications where the use of the water conflicted with a basin designation order; therefore, granting the application would be detrimental to the public interest. Additionally, applications were denied where use of the water would create a cone of depression that would potentially draw in nearby poor quality water; therefore, the State Engineer determined that use would conflict with existing rights and be detrimental to the public welfare.

Environmental issues were also coming to the forefront in the 1970s. For example, in 1974 the Federal District Court for Nevada decided the case of *United States* v. *Cappaert,* 375 F. Supp. 456 (D. Nev. 1974) pursuant to which it found that pumping of ground water in the area of concern was jeopardizing the survival of an endangered species because it was lowering the water level below the ledge where the endangered species bred. It found that the United States had shown the public interest lies in the preservation of endangered species. "Congress, state legislatures, local governments and citizens have all recently voiced their expression for the preservation of our environment, and the destruction of the Devil's Hole pupfish would go clearly against the theme of environmental responsibility."[87]

As we entered the 1980s, the rulings began to demonstrate a concern about areas of the state where issued or applied for water rights exceeded the estimated water availability and, during this period, analyses of the public interest criterion began to make significant changes. In Little Fish Lake Valley, a change application from mining and milling to irrigation was denied on the grounds that water levels were declining, water rights exceeded the availability of water in the source, irrigation was not a preferred use and the right sought to be changed had been issued as a temporary use. The State Engineer held that it would not be in the public interest to allow a preferred use to be changed to a non-preferred use within a designated basin as it would adversely affect existing rights. In State Engineer's Supplemental Ruling No. 2776, the State Engineer found that:

> The water law does not specifically define what criteria the State Engineer must follow in determining whether the act of appropriating or changing the point of diversion of existing water rights is "detrimental to the public interest or welfare." The State Engineer therefore must exercise discretion in his interpretation under the express authority granted in law. The State Engineer must, to the extent possible, make a factual determination of all interests involved in any particular appropriation or change of existing rights. It is not unusual that more than one public interest is determined or defined. Some interests may ultimately outweigh others.

In Steptoe Valley, the State Engineer designated the preferred use for industrial purposes and found that:

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[87] 375 F. Supp. at 460.

> The arid conditions that prevail in the state of Nevada dictate that this vital resource be allocated to the most reasonable and economic use and that the public interest and welfare be an integral part of any determination in reaching these decisions. That interest and welfare extends to the protection of the existing rights which is mandated by statute as well as the wants and necessities of the state and local areas. The State Engineer in many cases is simply faced with weighing one public interest against another in reaching a decision especially when competitive beneficial uses are at issue.

The 1990s saw interpretations very similar to the decades that preceded it. In the *Supplemental Ruling on Remand* in the Honey Lake case,[88] the State Engineer set forth for the first time the criteria he found in Nevada water law for assessing whether the use of water as proposed under those applications threatened to prove detrimental to the public interest. But he also made public interest findings on issues that were not identified in that list and made findings of what was in the public interest. He decided that to allocate resources to reasonable and economical uses was in the public interest, so long as other public interest values were not unreasonably compromised or cou1d be mitigated. But he also found that it wou1d threaten to prove detrimental to the public interest to impair the endangered or threatened species in the area or degrade the quality of the water in the Truckee River. He found that where there wou1d be minimal loss of wetlands there was an overriding public interest value to put the water to its highest and best use by allowing the water to be exported for municipal use.

In 1992, the State Engineer denied applications that were filed for a large quantity of water for municipal purposes to be used in every populated area in western Nevada on the grounds that it wou1d threaten to prove detrimental to the public interest to grant applications where the applicant had not provided information on its financial ability to construct the project, and had failed to provide information that it had even begun studies to determine whether the water was available, cost to capture the water or whether there was a potential buyer for the water. He also found that it would threaten to prove detrimental to issue permits on applications acquired for the purpose of speculation.

The State Engineer finds that he must exercise discretion in his interpretation under the express authority granted in law and must look at all the interests involved as to any particular appropriation and balance them. The public interest analysis has included looking at the benefits of a project, effect of water use on the economy of the area in general,[89] protection of the

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[88] *Supplemental Ruling on Remand* 3787A, at 13 (Oct. 9, 1992); *see also Pyramid Lake Paiute Tribe v. Washoe County*, 112 Nev. 743 (1996).

[89] *See Pyramid Lake Paiute Tribe v. Washoe County*, 112 Nev. 743 (1996).

environment,[90] protection of existing rights, and protection of the quality of water sources.[91] Unreasonable environmental harms include undue impacts on wildlife populations and habitat and on air quality that would harmfully affect human health and significant recreational and aesthetic values in the affected areas as a result of the drawdown of groundwater tables and spring flows in both the basins of origin and those basins that are hydrologically connected and downgradient from the basins of origin. Protestants Confederated Tribes of the Goshute Reservation, Ely Shoshone Tribe, and Duckwater Shoshone Tribe presented cultural resources evidence in connection with their protest case. The State Engineer finds that it is appropriate to consider impacts to cultural resources as part of the public interest criterion of Nevada water law.

Generally, it would threaten to prove detrimental to the public interest to allow large scale development of water resources to go forward in support of municipal development when the confidence in predictions as to water availability long-term without damaging impacts is low and dire consequences could result. Thus, in granting water rights in resources where it is not known if there will be impacts, but there is a concern there might be, the State Engineers' decisions have reflected a policy that the water belongs to the public and its appropriation is subject to availability, existing rights, economic impact, and environmental concerns.

SNWA presented no additional evidence or testimony in the 2017 Remand Hearing on the public interest criterion. Therefore, the State Engineer relies on evidence in the record from the 2011 hearing in evaluating whether SNWA's applications are in the public interest. In 2011, SNWA presented testimony that the project will have what it considered to be limited impact on the environment, local economies, and existing rights based on modeling projections limited to 75 years, and based on a reliance on its Monitoring and Mitigation program discussed below. SNWA also presented an effects analysis that plotted impacts based on drawdowns of 50 feet or more, and spring decline of 15% or more. The State Engineer finds that it is unreasonable to limit the examination of impacts to the effect of 50 foot drawdowns or 15% decline in spring flow given that impacts will occur much before that level of drawdown.[92] As discussed in previous sections of this ruling, Protestants GBWN et al. witnesses Dr. Myers and Dr. Bredehoeft presented evidence that all model projections agree that there will be significant drawdown over vast areas after just 200 years with a large percentage of water being drawn from storage.[93] At 200 years, Spring Valley will experience drawdowns of 100 feet or more over

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[90] The parties agree and the State Engineer has previously held that the public interest includes a requirement that the proposed use not cause unreasonable environmental harm resulting from hydrologic depletion as a result of the appropriation and export of the water, including effects on downgradient basins – such as White River Valley, Pahranagat Valley, Moapa Valley, and Snake Valley – that depend on inflow from the basins of origin as well as those basins of origin themselves. *See e.g.*, Transcript Vol. 9, at 2081 (Oct. 6, 2011) (Marshall Direct) (referencing the Biological Monitoring Plan area of interest). S*ee also* Ruling 5875, at 23- 25 (July 9, 2008) (Cave, Dry Lake, and Delamar Valleys Ruling).

[91] Supplemental Ruling on Remand 3787A, at 18 (Oct. 9, 1992).

[92] *See* Transcript Vol. 19, at 4167-68 (Nov. 3, 2011) (Deacon Direct).

[93] Transcript Vol. 24, at 5388-90 (Nov. 10, 2011) (Bredehoeft Direct); Transcript Vol. 18, at 4118 (Nov. 2, 2011) (Myers Direct); GBWN_109, at 5-8; GBWN_110 (Draft Environmental Impact Statement, app. F3.3.7-3 (June 2010)); GBWN_300 (Final Environmental Impact Statement, app. F3.3.7-3 (August 2012).

much of the valley.[94] The State Engineer finds that given the scale of the project, the fact that it is intended to serve as a source of supply relied on by southern Nevada in perpetuity, its potential to have irreversible effects on the affected basins, and the *Remand Decision's* conclusions of law which require denial of applications that would result downgradient impacts hundreds of years in the future,[95] it is unreasonable to limit the examination of impacts to a 75 year, or even a 200 year, time frame. The State Engineer further finds that the models all agree that drawdown will be severe and will spread over a vast area of eastern rural Nevada and into western Utah. The State Engineer finds that this consensus provides a high degree of certainty regarding the likelihood of serious impacts, and further concludes that modeling indicates that these impacts will extend over a vast area.

In 2011, Protestants White Pine County, GBWN, et al. presented testimony and evidence through Drs. Deacon, Patten, Kilkenny, and multiple lay witnesses regarding whether use of the water would threaten to prove detrimental to the public interest through multiple witnesses. Dr. Deacon testified that drawdowns of far less than 50 feet or 15% decline in spring flow would threaten to prove detrimental to the public interest because reductions in spring flow would result in the more rapid cooling of the thermal water of the regional springs, which will reduce the habitat for fish and spring snails and subsequently reduce reproductive potential. Dr. Deacon also testified that declines in spring flows or a lowering of the shallow water tables would reduce wetland areas, adversely impacting migratory birds, aquatic species, and mammals. With respect to Cave, Dry Lake, and Delamar basins, which are hydrologically connected to the fully appropriated down-gradient basins of the White River Flow System, Dr. Deacon testified that there will be impacts to the plants and animals dependent on those springs due to a reduction in discharge and those impacts threaten to prove detrimental to the public interest.[96] Dr. Deacon is very concerned about the regional springs in the down-gradient basins of the White River Flow System and does not believe that the Monitoring and Mitigation Program introduced by SNWA will protect those areas.[97]

Protestants White Pine County, GBWN, et al. witness Dr. Patten and Long Now witness Dr. Robinson presented substantial evidence in 2011 that the proposed use would result in the disappearance of wetlands, sub-irrigated meadows, swamp cedars, resulting in the potential for invasion by nonnative species and increased dust emissions from bare ground and dried playas.[98] These witnesses testified further that predicted drawdowns will have catastrophic impacts to wildlife, wildlife habitat, and plant communities in the affected region, including those in national wildlife refuges and state wildlife management areas, and have the potential to cause serious additional dust emissions in a number of the affected valleys that will create serious air quality issues possibly extending as far as the Wasatch front.[99] Impacts to Great Basin National Park air quality will also be likely.[100] GBWN et al. witness Rebecca Mills testified about the pristine nature of the Park's air quality and view shed. She expressed concern that the

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[94] *Id*.
[95] *Remand Decision*, at 20.
[96] Transcript Vol. 19, at 4164 – 69 (Nov. 3, 2011) (Deacon Direct).
[97] *See* Transcript Vol. 19 (Nov. 3, 2011) (Deacon Direct).
[98] Transcript Vol. 18, at 3973-83 (Nov. 2, 2011) (Patten Direct); Transcript Vol. 28, at 6276 -338 (Nov. 17, 2011) (Robinson Direct).
[99] *Id*.
[100] *Id*.

groundwater development project could destroy these qualities that are so integral to the Park's mission to interpret the Great Basin.[101] SNWA provided no new evidence in 2017 related to the public interest and attempted to rely instead on a monitoring, management, and mitigation plan that it suggested would mitigate predicted impacts. However, as discussed above in this ruling, the monitoring and mitigation approach advanced by SNWA is inadequate and does not support a finding that the applications are in the public interest.

The State Engineer finds that it would not be in the public interest to permit a project that would have such devastating and widespread impacts to Nevada's environmental resources, including impacts to threatened and endangered species and habitat, Great Basin National Park, wildlife refuges and management areas, and air quality.

The State Engineer finds in this case that SNWA has applied for water that belongs to the public at large. The State Engineer recognizes the limitations of SNWA's current water resources and the increasing demands based on projected population growth. However, the State Engineer recognizes that existing rights must be protected as well as a concern for local rural economies, wildlife and maintenance of wetlands and fisheries; therefore, the State Engineer finds that it would threaten to prove detrimental to the public interest to grant the subject applications. As discussed below, SNWA's monitoring and mitigation plan does not provide adequate assurance that unreasonable impacts will not occur.

The State Engineer further finds that SNWA has not adequately addressed the potential impact of its proposed pipeline on Native American cultural resources, sacred sites, or water uses. Such an evaluation of impacts to these resources is necessary in order for the State Engineer to evaluate the public interest implications of SNWA's proposed project. During the 2017 Remand Hearing, witnesses for Protestants Confederated Tribes of the Goshute Reservation, Ely Shoshone Tribe, and Duckwater Shoshone Tribe testified that SNWA's mitigation program, which contemplates allowing sacred swamp cedars to be killed by groundwater drawdown from SNWA's pumping and replacing them by planting new trees, was culturally inappropriate, offensive, and inadequate and that the Tribes were not consulted about the proposed mitigation approach.[102] The Spring Valley swamp cedars are designated by the Federal Government as a Traditional Cultural Property and have been listed on the National Register of Historic Places.[103] SNWA's response on cross examination about tribal involvement in its 3M program and protections for the swamp cedars confirmed that Tribal involvement in the protection of their sacred lands under SNWA's proposed 3M Plans is limited to litigation against SNWA.[104] The State Engineer finds that SNWA's approach to mitigation of impacts to cultural properties and failure to consult with impacted tribes is not in the public interest.

After carefully reviewing and weighing the evidence presented by SNWA and Protestants in 2011 and 2017, the State Engineer finds that the proposed use would prove detrimental to the public interest on environmental and cultural grounds in the affected region.

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[101] Transcript Vol. 22, at 4936-49 (Nov. 8, 2011) (Mills Direct).
[102] Transcript Vol. 7, at 1588, 1594, 1602 (Oct. 3, 2017) (Johnson Direct); Transcript Vol. 7, at 1598-1602 (Oct. 3, 2017) (Steele Direct).
[103] Transcript Vol. 7, at 1494, 1497 (Oct. 3, 2017) (Sanford Direct); CTGR_21.
[104]Transcript Vol. 4, at 861-61 (Sept. 28, 2017) (Marshall Cross).

VI.
ENVIRONMENTAL SOUNDNESS[105]

NRS 533.370(3)(c) provides that in determining whether an application for an interbasin transfer of ground water must be rejected the State Engineer shall consider whether the proposed action is environmentally sound as it relates to the basin from which the water is exported.[106] The public record and discussion leading up to the enactment of NRS 533.370(3)(c) do not specify any operational or measurable criteria for use as the basis for a quantitative definition. This provision of the water law provides the State Engineer with no guidance as to what constitutes the parameters of "environmentally sound;" therefore, like the criterion "does the use of the water threaten to prove detrimental to the public interest," it has been left to the State Engineer's discretion to interpret the meaning of environmentally sound.

The legislative history of NRS 533.370(3)(c) demonstrates that there was minimal discussion regarding the term environmentally sound. However, the State Engineer at that time indicated to the Subcommittee on Natural Resources that he did not consider the State Engineer to be the guardian of the environment, but rather the guardian of the state groundwater and surface water. The State Engineer noted that he was not a range manager or environmental scientist,[107] Senator James pointed out that by the language "environmentally sound" it was not his intention to create an environmental impact statement process for every interbasin water transfer application and that the State Engineer's responsibility should be for the hydrologic environmental impact in the basin of export.[108] Additional testimony pointed to the fact that the greatest concern was that there would be enough water left in the basin from which the water was exported to ensure that the basin would remain environmentally viable and that it was important to protect the future environment of basins in the rural communities to ensure water would be available for future growth.[109]

While there are no definitions of what environmentally sound is, there are examples of what environmentally sound is not, such as the Owens Valley project in California. The State Engineer believes that the legislative intent of NRS 533.370(3)(c) was to protect the natural

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[105]This Section supersedes and replaces the findings of fact related to environmental soundness contained in Findings of Fact Section VII of the Spring Valley Ruling 6164, Cave Valley Ruling 6165, Dry Lake Valley Ruling 6166, and Delamar Valley Ruling 6167. Findings of fact in Section VII of those Rulings that are unrelated to environmental soundness remain undisturbed by the Remand Decision and should be read in conjunction with this section.

[106] The State Engineer finds that SNWA's suggestion that the State Engineer simply rest his environmental soundness determination under the public interest and interbasin transfer statutes on the BLM's compliance with NEPA is unsupported by law. The State Engineer further finds that a thorough examination of these criteria is necessary to fulfill the statutory requirements under Nevada law.

[107]Minutes of the February 22, 1999, Subcommittee meeting of the Senate Committee on Natural Resources.

[108]*Id.;* Minutes of the March 8, 1999, Subcommittee meeting of the Senate Committee on Natural Resources.

[109]Minutes of the April 21, 1999, Subcommittee meeting of the Senate Committee on Natural Resources.

resources of the basin of origin and prevent a repeat of the Owens Valley while at the same time allowing for responsible use of the available water resources by the citizens of Nevada.

Environmental consideration for wildlife is found in NRS 533.367, which provides that before a person may obtain a right to the use of water from a spring or water that has seeped to the surface of the ground, he must ensure that the wildlife which customarily uses the water will continue to have access to it. While this provision of the water law does not specifically apply to an appropriation of groundwater, it is a clear demonstration of the public interest in that the sources of water for wildlife remain accessible and viable.

NRS 534.020 provides that it is the intention of the Nevada Legislature to prevent the pollution and contamination of the groundwater and empowered the State Engineer to take action to prevent that pollution. Pollution of the groundwater would be considered to be environmentally unsound; therefore, in allowing for appropriating water, the State Engineer must take into consideration whether the extent of the pumping could draw non-potable water into a drinkable water supply.

The environmentally sound criterion also may be implicated where groundwater pumping will result in groundwater level decline. The development of groundwater from a hydrologic basin with GWET occurs through the capture of the ET by groundwater pumpage and a resulting lowering of groundwater levels. NRS 534.110(4) provides that it is a condition of each appropriation of groundwater that the right must allow for a reasonable lowering of the static water level at the appropriator's point of diversion. While water-level decline in and of itself may not be environmentally unsound, the effects of water-level decline on the hydrologic-related natural resources must be considered.

Because SNWA provided no impacts analysis for the 2017 remand hearing, the State Engineer bases his evaluation of environmental soundness on the 2011 hearing record. As discussed in the Public Interest Section of this Ruling, Protestants White Pine County, GBWN, et al. witness Dr. Deacon testified during the 2011 hearing that the pumpage of groundwater will threaten to prove detrimental to the public interest because reductions in spring flow would result in the more rapid cooling of the thermal water of the regional springs, which will reduce the habitat for fish and spring snails and subsequently reduce reproductive potential. Dr. Deacon also testified that declines in spring flows or a lowering of the shallow water tables would reduce wetland areas, adversely impacting migratory birds, aquatic species, and mammals. With respect to Cave, Dry Lake, and Delamar basins, which are hydrologically connected to the fully appropriated down-gradient basins of the White River Flow System, Dr. Deacon testified that there will be impacts to the plants and animals dependent on those springs due to a reduction in discharge and those impacts threaten to prove detrimental to the public interest.[110] Dr. Deacon is very concerned about the regional springs in the down-gradient basins of the White River Flow System and does not believe that the Monitoring and Mitigation Program introduced by SNWA will protect those areas.

In addition, the models all concur that there will be a significant magnitude of drawdown which will spread throughout the Spring Valley, eventually resulting in the drying up of springs and wetlands through most if not all of Spring Valley. As the witnesses for Protestant Long Now Foundation testified in 2011, this drawdown will affect playa areas in Spring Valley that presently are moist, and could well give rise to substantially greater dust emissions in the Valley, affecting human and animal health, as well as Spring Valley's important scenic and recreational

[110]Transcript Vol. 19, at 4164 – 69 (Nov. 3, 2011) (Deacon Direct).

values.[111] The drawdown caused by SNWA's proposed pumping will create irreconcilable conflicts with existing rights such as those owned by Protestant CPB and associated with the Cleveland Ranch, and other existing rights associated with privately owned ranching operations such as the Eldridge family's ranching operations in Spring Valley. Protestants White Pine County, GBWN, et al. witness Dr. Patten and Long Now witness Dr. Robinson presented substantial evidence during the 2011 hearing that the proposed use would result in the disappearance of wetlands, sub-irrigated meadows, swamp cedars, resulting in the potential for invasion by nonnative species and increased dust emissions from bare ground and dried playas.[112]

There was no evidence presented in the 2017 remand hearing that refuted this substantial evidence of impacts. SNWA attempted to rely instead on a monitoring, management, and mitigation plan that it suggested would mitigate predicted impacts. However, as discussed below in this ruling, the monitoring and mitigation approach advanced by SNWA is inadequate and does not support a finding of environmental soundness. The State Engineer finds that the models all agree that drawdown will be severe and will spread over a vast area of eastern rural Nevada and will extend into western Utah.[113] These drawdowns will have catastrophic impacts to wildlife and plant communities in the affected region, including those in national wildlife refuges and state wildlife management areas, and have the potential to cause serious additional dust emissions in a number of the affected valleys that will create serious air quality issues possibly extending as far as the Wasatch front. Impacts to Great Basin National Park air quality will also be likely. The State Engineer finds that it would not be environmentally sound to permit a project that would have such devastating impacts within several hundred years.

VII.
MONITORING AND MITIGATION PLANS

As explained in other sections of this ruling, the State Engineer finds that absent a demonstrably effective and feasible monitoring and mitigation plan, the proposed use would conflict with existing rights, would be detrimental to the public interest, and would be environmentally unsound in the basin of origin. In an attempt to address this inevitability, SNWA in both 2011 and 2017 presented a hydrologic and biologic monitoring and mitigation program it claims is designed to detect and manage impacts to water dependent species in an environmentally sound manner and which could be used to support findings by the State Engineer on the issues of conflicts with existing rights, the public interest, and environmental soundness.[114] In 2015, the Nevada Supreme Court in *Eureka County v. State Engineer* held that a finding by the State Engineer that a mitigation plan would be able to adequately and fully mitigate a conflict must be supported by presently available and known substantial evidence.[115]

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[111] *See* Transcript Vol. 28, at 6276-338 (Nov. 17, 2011) (Robinson Direct).
[112] Transcript Vol. 18, at 3973-83 (Nov. 2, 2011) (Patten Direct); Transcript Vol. 28, at 6276 -338 (Nov. 17, 2011) (Robinson Direct).
[113] *See* Transcript Vol. 24, at 5388-90 (Nov. 10, 2011) (Bredehoeft Direct).
[114] *See generally* Transcript Vol. 8 & 9 (Oct. 5 & 6, 2011) (Marshall and Prieur Testimony); *see generally* Transcript Vol. 2 & 3 (Sept. 26 & 27, 2017) (Marshall & Prieur Testimony); SNWA_148, 149, 365, 366; SNWA_507; SNWA_592; SNWA_593.
[115] *Eureka County v. State Engineer*, 131 Nev. Adv. Op. 84, 359 P.3d 1114, 1120, 1121 (2015).

In other words, an applicant must submit evidence demonstrating the effectiveness and feasibility of mitigating predicted impacts such that any finding of no conflicts is supported by substantial evidence. Consistent with this decision, the *Remand Decision* found that the State Engineer's decision to rely on SNWA's 2011 monitoring and mitigation approach which contained neither evidence of effectiveness or feasibility nor triggers or thresholds that would ensure mitigation measures were taken, to support findings related to conflicts, public interest, and environmental soundness was arbitrary and capricious and unsupported by substantial evidence.[116] The *Remand Decision* explained that the lack of definite objective standards, thresholds, or triggers made it impossible for the State Engineer to make an informed determination about whether unreasonable effects of SNWA's proposed pumping to the environment or existing rights could be prevented or effectively mitigated.[117] As a result, Judge Estes held that the State Engineer' s approval of SNWA ' s applications was arbitrary and capricious with regard to the requirement under Nevada law that the State Engineer ensure that the proposed water use neither conflict with existing rights nor threaten the public interest, including unreasonable impacts to the environment.[118] Specifically, the court remanded to the State Engineer to "[d]efine standards, thresholds or triggers so that mitigation of unreasonable effects from pumping of water are neither arbitrary nor capricious in Spring Valley, Cave Valley, Dry Lake Valley and Delamar Valley."[119]

Addressing this issue on remand necessarily requires that the State Engineer consider evidence concerning, and make as fully informed a determination as possible about, whether the proposed amount of pumping and the proposed standards, thresholds, or triggers of SNWA's 3M Plans will ensure effective monitoring and appropriate action to prevent such proscribed effects and ensure timely effective mitigation of such effects throughout the affected groundwater systems. This in turn requires consideration of whether the model and modeling evidence presented by SNWA are adequate to set objective thresholds and triggers or to disclose when and where drawdown effects are likely to occur, when and where effective mitigation measures will need to be implemented, and whether and how those measures will actually and effectively mitigate the groundwater drawdown effects caused by SNWA's project.

SNWA's Monitoring and Mitigation Program, in both its 2011 and 2017 iterations, is premised on the ability to manage the succession from more water dependent species to less water dependent species in affected areas, which would be achieved by managing pumping levels and locations and by implementing targeted mitigation measures if necessary.[120] SNWA's witness Dr. McLendon testified in 2011 that it is possible to manage the succession from groundwater dependent species to non-groundwater dependent species and that such a transition would result in a viable, yet different, ecosystem.[121] The State Engineer finds that it is clear that if there were a decline in the groundwater table there would be a change in the existing groundwater dependent plant community. However, the type of plant community that will result and the time frame over which this transition would occur are unknown. There are many parameters which are part of a viable ecosystem, including the area of vegetative cover,

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[116] *Remand Decision*, at 12-13, 16, 23.
[117] *Remand Decision*, at 16.
[118] *Id*.
[119] *Remand Decision*, at 23.
[120] *See generally* Transcript Vols. 7 & 8 (Oct. 4 & 5, 2011) (McLendon Testimony).
[121] *Id.*

vegetative density, groundwater levels, rainfall, and soil type. These parameters have not been adequately evaluated by SNWA. The State Engineer finds that while it is evident that rainfall and groundwater dependent plant communities can exist in an area with similar ET and precipitation, there was no credible evidence or testimony presented which supported the concept that a plant community can transition from a ground-water dependent to precipitation-dependent without significant impacts to that ecosystem. The State Engineer finds that it is unknown whether the succession contemplated by SNWA is achievable given the variables involved.

Protestants White Pine County, GBWN et al. presented evidence through Drs. Bredehoeft, Deacon, Patten, and Harrington during the 2011 hearing criticizing SNWA's monitoring and mitigation plan. Drs. Deacon and Patten both presented substantial evidence that, even if SNWA is able to achieve its desired managed succession, such an approach would result in a long-term, extensive, widespread loss of biodiversity, and would be especially damaging to wetland areas which support the greatest level of biodiversity and which are the most water dependent.[122] Phreatophytic communities and wetland-upland communities also would be at risk.[123] Managed succession also would increase the likelihood of invasion of non-native species such as cheat grass.[124] For these reasons, in Owens Valley, succession is not permitted and is not considered to be an acceptable outcome.[125] The State Engineer finds that a monitoring and mitigation program based on managed succession is not environmentally sound because it would result in a significant loss of biodiversity, especially in wetland areas, would leave the basins of origin and hydrologically connected basins vulnerable to wind erosion and dust generation, and would threaten the swamp cedar population in Spring Valley.

SNWA presented evidence and testimony during the 2011 hearing that it had gathered a good deal of baseline data that will be used to develop targets in the future.[126] However, as Protestant witness Dr. Bredehoeft testified, even the best monitoring program does not necessarily support a successful management program.[127]

White Pine County, GBWN, et al. witnesses testified in 2011 that even assuming targets and thresholds are set up front, management in the manner contemplated by SNWA is not possible, especially given the scale of the proposed project, which is expected to create substantial drawdowns over a vast area of eastern Nevada and western Utah. Dr. Deacon testified that due to the dynamic nature of the problem of adaptive management, "while the MMM program can be viewed as an effort to minimize a narrowly-defined set of environmental objectives, it is scientifically indefensible to expect a high level of success from the program."[128] Protestant witness Dr. Bredehoeft testified that managing pumping rates based on measured impacts is problematic, because there is a lag time in the system's measurable response to drawdown. Thus, by the time impacts are measured, it will be too late to prevent further

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[122]*See* Transcript Vol. 18, at 3973, 83 (Nov. 2, 2011) (Patten Direct); GBWN_057; GBWN_112; Transcript Vol. 19, at 4164-68 (Nov. 3, 2011) (Deacon Direct).
[123]*See* Transcript Vol. 18, at 3973-74, 82 (Nov. 2, 2011) (Patten Direct); GBWN_057; GBWN_112.
[124]*Id*. at 82.
[125]Transcript Vol. 23, at 5256 (Nov. 9, 2011) (Harrington Direct); GBWN_121; GBWN_122.
[126]*See generally* Transcript Vol. 8 & 9 (Oct. 5 & 6, 2011) (Marshall and Prieur Testimony).
[127]Transcript Vol. 24, at 5409 (Nov. 10, 2011) (Bredehoeft Direct).
[128]Transcript Vol. 19, at 4164 (Nov. 3, 2011) (Deacon Direct).

impact.[129] Protestant witness Dr. Harrington testified that mitigation measures such as artificial recharge in the case of impacted springs often are ineffective at recreating lost habitat.[130] The State Engineer finds that the experience of Inyo County in Owens Valley provides valuable insight into the evaluation of SNWA's monitoring and mitigation plans and finds further that attempting to manage pumping to avoid unreasonable impacts to the environment and existing rights in the context of such a massive groundwater development project is unrealistic and is inconsistent with modeling results presented by both the Applicant and Protestants, which show substantial drawdowns over vast areas of eastern Nevada and western Utah.

Finally, during both the 2011 and 2017 hearings White Pine County, GBWN, et al. witnesses critiqued the management or decision-making regimes proposed in SNWA's monitoring and mitigation program. In 2011, protestants argued that the consensus-based decision making process gave SNWA an effective veto over any monitoring, management, or mitigation decision, because SNWA had a seat on each committee or panel involved in the decisionmaking process.[131] In 2017, SNWA removed that approach in favor of an entirely SNWA managed program with no provision at all for stakeholder involvement.[132]

Further, in both 2011 and 2017, White Pine County, GBWN, et al. witnesses pointed out the fact that the monitoring and mitigation program includes no process for ensuring implementation of mitigation measures, no dispute resolution mechanism, no timeframe or concrete procedure for decisionmaking, and does not specify how conflicts will be resolved or what specific management or mitigation measures will be used.[133] Thus, it is unlikely that effective action will be taken in a timely fashion if necessary. Dr. Bredehoeft pointed out that this lack of specificity leaves decisionmaking to the State Engineer in the future, putting the State Engineer in the position of having decide whether to shut the project down after its impacts already have become manifest. In both 2011 and 2017, protestant witnesses highlighted the inadequacy of the program because there is no provision for the involvement of affected water rights holders and no provision for payment to affected water rights holders or local governments that would enable them to protect their rights.[134] The 2017 3M Plans contain no provisions for stakeholder involvement, despite the fact that the authoritative federal government guide on adaptive management states that stakeholder involvement is a necessary component of any effective adaptive management program.[135] Rather than involving stakeholders, it appears to be

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[129]Transcript Vol. 24, at 5398-5401 (Nov. 10, 2011) (Bredehoeft Direct); *see also* Transcript Vol. 19, at 4171 (Nov. 3, 2011) (Deacon Direct).
[130]Transcript Vol. 23, at5261 (Nov. 9, 2011) (Harrington Direct).
[131]Transcript Vol. 11, at 2496 (Oct. 10, 2011) (Marshall Cross).
[132]Transcript Vol. 6, at 1206 (Oct. 2, 2017) (Mayo Direct); *see also* Transcript Vol. 4, at 861-61 (Sept. 28, 2017) (Marshall Cross); *see generally* SNWA_507; SNWA_592; SNWA_593.
[133]Transcript Vol. 23, at 5268-70 (Nov. 9, 2011) (Harrington Direct); GBWN_119, at 2-4; CTGR_22, at 1-20; GBWN_297, at 32-55; Transcript Vol. 7, at 1519-1557 (Oct. 3, 2017) (Reich Direct).
[134]Transcript Vol. 23, at 5313-15, 5323-24 (Nov. 9, 2011) (Harrington Redirect and Staff Questions); Transcript Vol. 24, at 5508-09 (Nov. 10, 2011) (Gloeckner Direct); Transcript Vol. 24, at 5545 (Nov. 10, 2011) (Rountree Direct); Transcript Vol. 4, at 861-61 (Sept. 28, 2017) (Marshall Cross).
[135]Transcript Vol. 4, at 861-61 (Sept. 28, 2017) (Marshall Cross); Transcript Vol. 6, at 1206 (Oct. 2, 2017) (Mayo Direct).

SNWA's position that stakeholders may adequately protect their interest by asserting and protecting their interests through litigation in court.[136] Additionally, there is evidence in the record that SNWA does not have a history of treating water rights holders in the area of impact with respect and has operated in a way that is designed to intimidate them and even put local ranchers out of business.[137] Finally, the State Engineer notes that the monitoring and mitigation program introduced by SNWA does not provide for the involvement of Lincoln or White Pine Counties. Nevada water law contemplates the involvement of counties of origin in the study of the aquifer system that is the subject of an interbasin transfer.[138] Thus the State Engineer finds that it would not only be appropriate, but necessary to include White Pine and Lincoln Counties in the management regime for the monitoring and mitigation program introduced by SNWA. SNWA's failure to do so renders its 3M Plans deficient.

In the 2017 remand hearing, after its 2011 approach to monitoring and mitigation was found to be inadequate by the district court, SNWA again presented 3M Plans that purported to monitor, manage, and mitigate impacts of its proposed groundwater development project. Protestants, however, presented substantial evidence that the monitoring, management, and mitigation plans presented by SNWA on remand remain fatally flawed and deficient, and therefore cannot be used as the basis for finding that there will be no impermissible conflicts with existing rights or unreasonable effects on the environment.

First, the 3M Plans include a monitoring regime that is not based on evidence of a conceptual flow model which would support the effective siting of monitoring wells.[139] In other words, the siting of monitoring wells in the 3M Plans is arbitrary and has no scientific basis in the record. Because there is no evidence in the record of a conceptual flow model that was used to site the 3M Plans' monitoring wells, the State Engineer is unable to assess whether those wells would be effective in detecting drawdown in sufficient time to effectively manage or mitigate impacts.

Second, the State Engineer finds that the baseline conditions presented in the Plan are biased in a way that would mask impacts of SNWA's pumping, resulting in a delayed response. Triggers for the 2017 3M Plans were set using a seasonally adjusted linear regression equation to simulate baseline conditions, which was demonstrated by protestant witnesses to bias the baseline condition by producing an artificial downward trend in groundwater levels, thereby masking impacts that properly should be attributed to SNWA's groundwater development project.[140] As a result, declines in water levels likely would be artificially and inappropriately attributed to naturally occurring baseline water level decreases instead of appropriately attributed to pumping. This biased baseline combined with a presumption that SNWA pumping is not the cause of drawdown sufficient to trigger an investigation, let alone necessary management and

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[136]*Id*.

[137]Transcript Vol. 5, at 1097-1106 (Sept. 29, 2017) (Gloeckner Oral Public Comment); Henry C. Vogler IV Written Public Comment (Oct. 16, 2017); Patrick and Kena Gloeckner Written Public Comment (Oct. 19, 2017).

[138]NRS 533.368(4).

[139]Transcript Vol. 8, at 1719-89, 1725-28 (Oct. 4, 2017) (Myers Direct); Transcript Vol. 7, at 1426 (Oct. 3, 2017) (Roundy Direct); *see also* Transcript Vol. 6, at 1206 (Oct. 2, 2017) (Mayo Direct).

[140]Transcript Vol. 8, at 1759-1765 Oct. 4, 2017) (Myers Direct); Transcript Vol. 6, at 1212-13 (Oct. 2, 2017) (Mayo Direct).

mitigation measures, all but ensures that any mitigation will not be initiated in time to protect the resource.[141]

Third, the State Engineer finds that the 3M Plans use as a basis for the establishment of triggers, an arbitrary and inadequate definition of unreasonable effects that allows for widespread destruction of the area of impact and would not prevent conflicts with existing rights or unreasonable impacts to the environment.[142] Thus, even if SNWA could demonstrate that its 3M program is effective in preventing what it has defined as unreasonable impacts, the impacts the program would allow are not permitted under Nevada law.[143] Specifically, SNWA's program defines unreasonable effects as effects to hydrologic or environmental resources that conflict with senior existing rights or protectable interests in existing domestic wells, jeopardize the continued existence of federally listed threatened or endangered species, cause extirpation of native aquatic-dependent special status animal species from a hydrographic basin's groundwater discharge area, elimination of habitat types from a hydrographic basin's groundwater discharge area, or cause excessive loss of shrub cover that results in extensive bare ground.[144] Despite the fact that protestant witness Mr. Reich testified that it is common practice to consult stakeholders when setting goals of projects subject to adaptive management, there is no evidence in the record that SNWA consulted any stakeholders or agencies with expertise in managing the impacted resources in forming its definition of unreasonable effects, an in fact the 3M Plans' jeopardy standard sets a lower bar for mitigation than would be set by the U.S. Fish and Wildlife Service.[145] Because on their face SNWA's 3M Plans do not even set out to comply with the protections for the environment and existing rights guaranteed by Nevada law, the Plan is not sufficient to support findings under the conflicts with existing rights, public interest, or environmental soundness criteria of Nevada water law, and the applications must be rejected for this reason as well.

Fourth, while superficially, the 3M Plans presented by SNWA in 2017 contain triggers as directed by the district court, SNWA has provided no scientific basis for setting those triggers. Thus, the State Engineer finds that the investigation and mitigation triggers contained in the 3M Plans are, in effect, arbitrary because they are not based on a localized site-specific groundwater model that could be used to predict impacts and potential resource responses to mitigation.[146] For example, since baseline assessments have not been completed for water resources, true quantitative triggers have not been set at senior water rights.[147] As a result, the plan also does not, and indeed could not, include any evaluation of the feasibility or effectiveness of the triggers' ability to detect an impact in sufficient time to protect existing rights and environmental

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[141]Transcript Vol. 24, at 5398-5401 (Nov. 10, 2011) (Bredehoeft Direct); *see also* Transcript Vol. 19, at 4171 (Nov. 3, 2011) (Deacon Direct).
[142]*See* CTGR_22, at 1-3;Transcript Vol. 7, at 1516-17, 1521-22, 1524, 1539-40 (Oct. 3, 2017) (Reich Direct).
[143]*See* NRS 533.370(2), (3)(c).
[144]SNWA_507, at 2-2.
[145]Transcript Vol. 7, at 1516-17, 1521-22, 1524, 1539-40 (Oct. 3, 2017) (Reich Direct); CTGR_18, at 2.
[146]CTGR_22, at 2, 8, 9; Transcript Vol. 6, at 1206 (Oct. 2, 2017) (Mayo Direct); Transcript Vol. 7, at 1426 (Oct. 3, 2017) (Roundy Direct); Transcript Vo. 7, at 1524-25, 1553 (Oct. 3, 2017 (Reich Direct); Transcript Vol. 8, at 1719-89, 1725-28 (Oct. 4, 2017) (Myers Direct).
[147]CTGR_22, at 9; Transcript Vol. 2, at 429, 449-450 (Sept. 26, 2017) (Prieur Direct).

resources.[148] Without an assessment of the feasibility and effectiveness of triggers, which necessarily must be based on a site specific assessment of predicted impacts, SNWA has not provided substantial evidence to support a finding of no conflicts with existing rights, public interest, or environmental soundness provisions of Nevada water law. Additionally, because quantitative triggers have not been set, SNWA has not complied with the remand order and the applications must be denied.

Similarly, the State Engineer finds that SNWA has provided no feasibility analysis related to potential mitigation measures listed in the plan. Specifically, there is no feasibility analysis related to the use or availability of replacement water as a mitigation tool and whether or not that water would be either available or effective as a mitigation measure.[149] Given that the modeling predicts widespread significant drawdown, the availability of mitigation water is an open question on which SNWA has provided no evidence. There also is no evidence in the record that would support a finding that the use of mitigation water, if it could be obtained, actually would effectively mitigate predicted conflicts.[150] Additionally, protestants presented evidence documenting the difficulty of reseeding as mitigation.[151] SNWA has provided no feasibility analysis related to reseeding.

Finally, SNWA's 3M Plans include no accountability provision to ensure that mitigation measures actually will be taken or will be effective. The plans, in effect, amount to a "trust us" approach to management of the groundwater systems in which the 3M Plans will be applied by SNWA with no built in oversight.[152] SNWA witness Mr. Prieur testified that if a water rights holder feels that a senior water right is being impacted by SNWA's pumping, their available recourse would be to perform an independent investigation and contact the State Engineer,[153] an approach which places the burden of demonstrating an impact wholly on the senior water rights holder. SNWA witness Mr. Marshall further confirmed that a water rights owner's only recourse against SNWA in the event of a conflict is to pursue litigation against SNWA.[154] This "trust us" approach, which places the burden on senior water rights holders to demonstrate that they are being impacted, is not appropriate especially in the context of substantial evidence in the record that SNWA does not have a demonstrated track record of responsible environmental stewardship

[148]CTGR_22, at 8; Transcript Vol. 8, at 1767-68 (Oct. 4, 2017) (Myers Direct).
[149]Transcript Vol. 8, at 1767-70 (Oct. 4, 2017) (Myers Direct); *see also Eureka County*, 131 Nev. Adv. Op. 84, 359 P.3d at 1120 (citing *e.g., Weibert v. Rothe Bros., Inc.*, 200 Colo. 310, 618 P.2d 1367, 1373 (1980) ("In order to determine the adequacy of the [augmentation] plan to accomplish its intended purpose, it is necessary to consider the adequacy of the replacement water rights."); *see also Rocky Ford Irrigation Co. v. Kents Lake Reservoir Co.*, 104 Utah 202, 135 P.2d 108, 114 (1943) (examining whether the exchange of water deteriorates water quality or quantity to such a degree as to "materially impair[ ] the use")).
[150]Transcript Vol. 8, at 1769-70 (Oct. 4, 2017) (Myers Direct).
[151]Transcript Vol. 7, at 1422-23 (Oct. 3, 2017) (Roundy Direct).
[152]*See* Transcript Vol. 7, at 1428 (Oct. 3, 2017) (Roundy Direct); Transcript Vol. 6, at 1206 (Oct. 2, 2017) (Mayo Direct).
[153]Transcript Vol. 3, at 774-75 (Sept. 27, 2017) (Prieur Cross).
[154]Transcript Vol. 4, at 861-61 (Sept. 28, 2017) (Marshall Cross).

in the affected area or of working with local communities or tribes that will be impacted by its proposed project.[155]

After carefully reviewing and weighing the evidence presented by both the Applicant and Protestants in both the 2011 and 2017 hearings, the State Engineer finds that the management regime proposed by SNWA's 3M Plans does not adequately protect existing rights, the public interest, or the environment in the affected area, because it provides no assurance that impacts will detected in a timely fashion or that appropriate effective action will be taken in a timely fashion when impacts are detected. Moreover, all models agree that the proposed project will cause significant drawdowns over a vast area of Nevada and western Utah. Mitigation of such a significant drawdown in valleys with limited recharge likely would be of limited effect. While managing pumping locations and rates might be effective in the short term, over the long term it is impossible to avoid the inevitable catastrophic impacts predicted by all the models. Therefore, the State Engineer finds that SNWA's proposed use would conflict with existing rights, would be detrimental to the public interest, and is not environmentally sound.

CONCLUSIONS OF LAW

I.

The State Engineer has jurisdiction over the parties and the subject matter of this action and determination.[156]

II.

The State Engineer is prohibited by law from granting an application to appropriate the public waters where:[157]

A. There is no unappropriated water at the proposed source;
B. The proposed use or change conflicts with existing rights;
C. The proposed use or change conflicts with protectable interests in existing domestic wells as set forth in NRS 533.024; or
D. The proposed use or change threatens to prove detrimental to the public interest.

The State Engineer concludes, based on the findings, that there is no unappropriated water for export from the subject basins, that there is substantial evidence that the proposed use will conflict with existing rights and protectable interests in existing domestic wells, and that the proposed use of the water threatens to prove detrimental to the public interest; thus, under NRS 533.370(2), the law mandates denial of the water rights applications.

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[155]Transcript Vol. 5, at 1097-1106 (Sept. 29, 2017) (Gloeckner Oral Public Comment); Transcript Vol. 7, at 1584-1613 (Oct. 3, 2017) (Johnson and Steele Direct); Henry C. Vogler IV Written Public Comment (Oct. 16, 2017); Patrick and Kena Gloeckner Written Public Comment (Oct. 19, 2017).
[156] NRS chapters 533 and 534; *Remand Decision,* Case No. CV1204049.
[157]NRS 533.370(2).

III.

In determining whether an application for an interbasin transfer of groundwater must be rejected, the State Engineer shall consider whether the proposed action is environmentally sound as it relates to the basin from which the water is exported.[158]

The State Engineer concludes that the use of water is not environmentally sound as it relates to the basin of origin, and thus, under NRS 533.370(3)(c), the law mandates denial of the water rights applications.

RULING

The protests to Applications 54003 through 54021, inclusive, and Applications 53987 through 53992, inclusive, are hereby upheld in part and overruled in part, as noted above and in the findings contained in Rulings 6164, 6165, 6166, and 6167 that were undisturbed by the district court, as explained above.

Applications 54003 through 54021, inclusive, and Applications 53987 through 53992, inclusive, are hereby denied.

Respectfully submitted,

_____
Jason King, P.E.
State Engineer

Dated this ____ day of _____, 2018.

Respectfully submitted this 19th day of January, 2018.

_____
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[158] NRS 533.370(3)(c).

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of this **DRAFT SUPPLEMENTAL RULING ON REMAND OF PROTESTANTS WHITE PINE COUNTY, GBWN, ET AL.** was served on the following, on this 19th day of January, 2018.

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