

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

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 )  
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**PROPOSED RULING SUBMITTED BY CORPORATION OF THE  
PRESIDING BISHOP OF THE CHURCH OF JESUS CHRIST OF  
LATTER-DAY SAINTS ON BEHALF OF THE CLEVELAND RANCH**

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Presiding Bishop of The Church of Jesus Christ  
of Latter-Day Saints on behalf of the  
Cleveland Ranch

I.

**BACKGROUND**

In 1989, the Las Vegas Valley Water District filed 25 water right Applications to appropriate groundwater from Spring, Cave, Dry Lake and Delamar Valleys for importation into the Las Vegas area. Nineteen of these Applications seek to appropriate water from Spring Valley. These Applications are now held in the name of the Southern Nevada Water Authority (SNWA). A hearing was held on the Spring Valley Applications from September 11-25, 2006. The State Engineer issued Ruling # 5726 on April 16, 2007. On June 17, 2010, in *Great Basin Water Network v. Taylor*,<sup>1</sup> the Nevada Supreme Court reversed Ruling # 5726 because the Applications had not been acted upon within one year after the close of the protest period. The Supreme Court ordered that the Applications be renoticed and that the protest period be reopened. Following renotice, a hearing was held from September 26 to November 18, 2011.

II.

**THE APPLICATIONS**

1. Application 54003 was filed on October 17, 1989, by the Las Vegas Valley Water District to appropriate 6 cubic feet per second (cfs) of underground water from the Spring Valley Hydrographic Basin for municipal and domestic purposes within Clark, Lincoln, Nye and White Pine Counties as more specifically described and defined within NRS §§ 243.210-243.225 (Lincoln), 243.275-243.315 (Nye), 243.365-243.385 (White Pine), and 243.035-243.040 (Clark). The proposed point of diversion is described as being located within NW¼ NE¼ of Section 20, T.8N., R.68E., M.D.B.&M. In the

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<sup>1</sup> *Great Basin Water Network v. Taylor*, 126 Nev. Adv. Op. 2, 222 P.3d 665 (2010), modified on petition for rehearing 126 Nev. Adv. Op. 20, 234 P.3d 912 (2010).

remarks section of the Application, Item 12, the Applicant states that the water sought under the Application shall be placed to beneficial use within the Las Vegas Valley Water District service area as set forth in Chapter 752, Statutes of Nevada 1989, or as may be amended. The Application further states that the water may also be severed and beneficially used by lawful users within Lincoln, Nye, and White Pine Counties, and that water would be commingled with other water rights owned or served by the Applicant or its designee.

2. Application 54004 was filed on October 17, 1989, by the Las Vegas Valley Water District to appropriate 6 cfs of underground water from the Spring Valley Hydrographic Basin for municipal and domestic purposes within Clark, Lincoln, Nye and White Pine Counties as more specifically described and defined above. The proposed point of diversion is described as being located within NE $\frac{1}{4}$  SE $\frac{1}{4}$  of Section 25, T.9N., R.67E., M.D.B.&M. This Application, along with the others referenced below, all contain the same remarks as those identified as to Application 54003.

3. Application 54005 was filed on October 17, 1989, by the Las Vegas Valley Water District to appropriate 6 cfs of underground water from the Spring Valley Hydrographic Basin for municipal and domestic purposes within Clark, Lincoln, Nye and White Pine Counties as more specifically described and defined above. The proposed point of diversion is described as being located within NE $\frac{1}{4}$  NE $\frac{1}{4}$  of Section 14, T.9N., R.67E., M.D.B.&M.

4. Application 54006 was filed on October 17, 1989, by the Las Vegas Valley Water District to appropriate 6 cfs of underground water from the Spring Valley Hydrographic Basin for municipal and domestic purposes within Clark, Lincoln, Nye and

White Pine Counties as more specifically described and defined above. The proposed point of diversion is described as being located within SE $\frac{1}{4}$  SE $\frac{1}{4}$  of Section 22, T.10N., R.67E., M.D.B.&M.

5. Application 54007 was filed on October 17, 1989, by the Las Vegas Valley Water District to appropriate 6 cfs of underground water from the Spring Valley Hydrographic Basin for municipal and domestic purposes within Clark, Lincoln, Nye and White Pine Counties as more specifically described and defined above. The proposed point of diversion is described as being located within SE $\frac{1}{4}$  NW $\frac{1}{4}$  of Section 34, T.11N., R.66E., M.D.B.&M.

6. Application 54008 was filed on October 17, 1989, by the Las Vegas Valley Water District to appropriate 6 cfs of underground water from the Spring Valley Hydrographic Basin for municipal and domestic purposes within Clark, Lincoln, Nye and White Pine Counties as more specifically described and defined above. The proposed point of diversion is described as being located within SW $\frac{1}{4}$  SW $\frac{1}{4}$  of Section 1, T.11N., R.66E., M.D.B.&M.

7. Application 54009 was filed on October 17, 1989, by the Las Vegas Valley Water District to appropriate 6 cfs of underground water from the Spring Valley Hydrographic Basin for municipal and domestic purposes within Clark, Lincoln, Nye and White Pine Counties as more specifically described and defined above. The proposed point of diversion is described as being located within NW $\frac{1}{4}$  NE $\frac{1}{4}$  of Section 36, T.13N., R.66E., M.D.B.&M.

8. Application 54010 was filed on October 17, 1989, by the Las Vegas Valley Water District to appropriate 6 cfs of underground water from the Spring Valley

Hydrographic Basin for municipal and domestic purposes within Clark, Lincoln, Nye and White Pine Counties as more specifically described and defined above. The proposed point of diversion is described as being located within SE $\frac{1}{4}$  SE $\frac{1}{4}$  of Section 25, T.14N., R.66E., M.D.B.&M.

9. Application 54011 was filed on October 17, 1989, by the Las Vegas Valley Water District to appropriate 6 cfs of underground water from the Spring Valley Hydrographic Basin for municipal and domestic purposes within Clark, Lincoln, Nye and White Pine Counties as more specifically described and defined above. The proposed point of diversion is described as being located within NE $\frac{1}{4}$  SE  $\frac{1}{4}$  of Section 14, T.14N., R.66E., M.D.B.&M.

10. Application 54012 was filed on October 17, 1989, by the Las Vegas Valley Water District to appropriate 6 cfs of underground water from the Spring Valley Hydrographic Basin for municipal and domestic purposes within Clark, Lincoln, Nye and White Pine Counties as more specifically described and defined above. The proposed point of diversion is described as being located within SE $\frac{1}{4}$  NE $\frac{1}{4}$  of Section 16, T.14N., R.67E., M.D.B.&M.

11. Application 54013 was filed on October 17, 1989, by the Las Vegas Valley Water District to appropriate 6 cfs of underground water from the Spring Valley Hydrographic Basin for municipal and domestic purposes within Clark, Lincoln, Nye and White Pine Counties as more specifically described and defined above. The proposed point of diversion is described as being located within SW $\frac{1}{4}$  SW $\frac{1}{4}$  of Section 25, T.15N., R.66E., M.D.B.&M.

12. Application 54014 was filed on October 17, 1989, by the Las Vegas Valley Water District to appropriate 6 cfs of underground water from the Spring Valley Hydrographic Basin for municipal and domestic purposes within Clark, Lincoln, Nye and White Pine Counties as more specifically described and defined above. The proposed point of diversion is described as being located within SW $\frac{1}{4}$  SW $\frac{1}{4}$  of Section 15, T.15N., R.67E., M.D.B.&M.

13. Application 54015 was filed on October 17, 1989, by the Las Vegas Valley Water District to appropriate 6 cfs of underground water from the Spring Valley Hydrographic Basin for municipal and domestic purposes within Clark, Lincoln, Nye and White Pine Counties as more specifically described and defined above. The proposed point of diversion is described as being located within SW $\frac{1}{4}$  NW $\frac{1}{4}$  of Section 14, T.15N., R.67E., M.D.B.&M.

14. Application 54016 was filed on October 17, 1989, by the Las Vegas Valley Water District to appropriate 6 cfs of underground water from the Spring Valley Hydrographic Basin for municipal and domestic purposes within Clark, Lincoln, Nye and White Pine Counties as more specifically described and defined above. The proposed point of diversion is described as being located within NE $\frac{1}{4}$  SW $\frac{1}{4}$  of Section 7, T.15N., R.67E., M.D.B.&M.

15. Application 54017 was filed on October 17, 1989, by the Las Vegas Valley Water District to appropriate 6 cfs of underground water from the Spring Valley Hydrographic Basin for municipal and domestic purposes within Clark, Lincoln, Nye and White Pine Counties as more specifically described and defined above. The proposed

point of diversion is described as being located within NW $\frac{1}{4}$  SE $\frac{1}{4}$  of Section 25, T.16N., R.66E., M.D.B.&M.

16. Application 54018 was filed on October 17, 1989, by the Las Vegas Valley Water District to appropriate 6 cfs of underground water from the Spring Valley Hydrographic Basin for municipal and domestic purposes within Clark, Lincoln, Nye and White Pine Counties as more specifically described and defined above. The proposed point of diversion is described as being located within SE $\frac{1}{4}$  NE $\frac{1}{4}$  of Section 24, T.16N., R.66E., M.D.B.&M.

17. Application 54019 was filed on October 17, 1989, by the Las Vegas Valley Water District to appropriate 10 cfs of underground water from the Spring Valley Hydrographic Basin for municipal and domestic purposes within Clark, Lincoln, Nye and White Pine Counties as more specifically described and defined above. The proposed point of diversion is described as being located within SW $\frac{1}{4}$  NE $\frac{1}{4}$  of Section 32, T.12N., R.68E., M.D.B.&M.

18. Application 54020 was filed on October 17, 1989, by the Las Vegas Valley Water District to appropriate 10 cfs of underground water from the Spring Valley Hydrographic Basin for municipal and domestic purposes within Clark, Lincoln, Nye and White Pine Counties as more specifically described and defined above. The proposed point of diversion is described as being located within SE $\frac{1}{4}$  SE $\frac{1}{4}$  of Section 14, T.14N., R.67E., M.D.B.&M.

19. Application 54021 was filed on October 17, 1989, by the Las Vegas Valley Water District to appropriate 10 cfs of underground water from the Spring Valley Hydrographic Basin for municipal and domestic purposes within Clark, Lincoln, Nye and

White Pine Counties as more specifically described and defined above. The proposed point of diversion is described as being located within SW¼ NE¼ of Section 33, T.16N., R.66E., M.D.B.&M.

### III.

#### **ALL 19 OF SNWA'S APPLICATIONS WERE PROTESTED BY A VARIETY OF PROTESTANTS**

Many persons or entities protested SNWA Applications 54003–54021 inclusive; however, not every person protested every Application and the grounds of protest varied among the Protestants.

PROTESTANTS: Great Basin Water Network, 2<sup>nd</sup> Big Springs Irrigation Company, Keith Anderson, Craig Baker, Dean Baker, Thomas Baker, Baker GID, Baker Ranches, Inc., James & Donna Bath, Bath Lumber Company, Govert Basset, Walter Benoit, Border Inn, Cater-Griffin, Inc., Max & Diane Chipman, Citizens Education Project, Louis Cole, Defenders of Wildlife, Kristine Fillman, Patrick Fillman, Gardner's Quarter Circle 5 Ranch, Jo Anne Garrett, Kena Gloeckner, Patrick Gloeckner, Great Basin Business & Tourism Council, Kathy Hiatt, County of Inyo, California, Abigail Johnson, Linda Johnson, League of Women Voters of Salt Lake City, Robert Lewis, Lund Irrigation & Water Company, Orvan Maynard, Roderick McKenzie, Nevada Farm Bureau, Panaca Irrigation Company, Gary & Jo Ann Perea, Preston Irrigation Company, Launce Rake, William & Kathy Rountree, Toiyabe Chapter Sierra Club, Amelia Sonnenberg, Sportsworld, Terrance & Debra Steadman, Utah Audubon Council, Mildred Valencia, David Von Seggern, Mark Wadsworth, Lois Weaver, County of White Pine, City of Ely, Debra Whipple, all represented by Simeon Herskovits, Esq.

Long Now Foundation, represented by Laura Welcher and Stephen Reich.



Millard County, Utah, and Juab County, Utah, both represented by John Rhodes, Esq.

The Confederated Tribes of the Goshute Reservation, Duckwater Shoshone Tribe, and Ely Shoshone Tribe, all represented by Paul Echohawk, Esq.

EskDale Center, represented by Jerald Anderson.

Corporation of the Presiding Bishop of The Church of Jesus Christ of Latter-day Saints, represented by Severin A. Carlson, Esq. and Paul R. Hejmanowski, Esq.

Nye County, Nevada represented by George Benesch, Esq.

Henry Vogler IV represented himself.

The following individuals and entities also filed protests in this matter, but did not directly appear or have a representative appear at the time of hearing: Janell Ahlvers, Joseph I. Anderson, Mary Ellen Anderson, Dolores A. Arnold, Bruce Ashby, Fred Baca, John Barney, Helen Barton, Evan R. Barton, Louis Benezet, Robert and Sandra Benson, Walter J. Benson, Neva Bida, Bidart Brothers, Robert L. Birch, Sarah G. Bishop, D. Dane Bradfield, Joseph M. Boland, Boundy & Forman, Inc, Lance Burns, Col. James R. Byrne, Jeffrey C. Carlton, Donald R. Carrick, Dewey E. and Marietta Carson, Cory Carson, Kay Carson, Central Nevada Regional Water Authority, Citizens Alert, City of Caliente, Jim Cole, Kathleen M. Cole, Steve Collard, Mary Collins, Don Cooper, Alex P. Coroneos and Steve T. Sendlein, Peter M. Coroon, Danny and Cindy Cracraft, Diana Barclay Crane, Tara Cutler, Rutherford Day, Frank Delmue, Pete T. Delmue, Irvin Baker Edwards, David and Helen Eldridge, George Eldridge & Sons, Inc., Mary R. Eldridge, Elva J. Eldridge, Nancy J. Eldridge, Dennis H. Eldridge, Gordon D. Eldridge, Delbert D. Eldridge, El Tejon Cattle Company, Elko Band Council, Juan M. Escobedo, Donald

Terry Fackrell, Sherlyn K. Fackrell, Shelby Farnsworth, Mary J. Feldman, Lory M. Free, Marcia Forman, Richard W. Forman, Selena M. Forman, James R. Fraser, Beverly R. Gaffin, Julie E. Gianoli, John C. Gianoli, Mary Goerginger, Danny E. Griffith, Sally Gust, Helen Hackett, John Hadder, Mary S. Hager, Shawn Hamilton, Alyson Hammond, Max Hannig, John F. Hanson, Robert L. and Fern A. Harbecke, Glen W. Harper, John A. and Vivian A. Havens, Rick Havenstrite, Randy J. Heinfer, Norris B. Hendrix, Drew A. Herbst, Christine Hermansen, Jess Hiatt, Bonnie J. Higdon, Bunny R. Hill, Merle C. Hill, Harry J. and Edith Jean Hill, Garland N. Hollingshead, Karma H. Hollingshead, Wesley A. and Charlene Holt, Ronda Hornbeck, Jesse J. Howard, Frank C. Hulse, Barry C. and Linda H. Isom, Lee Jensen, Kristiner P. Kaiser, Art Kinder, Kirkeby Ranch, Torrie and Steve W. Klomp, Rudolph E. Krause, Las Vegas Fly Fishing Club, Alton C. Leavitt, James I. Lee, Leland Rex Leonard, Rowena R. Leonard, Brandi Lewis, Norman L. Lindley, Jane Lindley, Brad Lloyd, Jason Lloyd, Mick Lloyd, Lynn Lloyd, Sarah Locke, Dr. Dan A. Love, Donna Lytle, Farrel W. Lytle, Kenneth Lytle, Manetta B. Lytle, Dennis Mangum, Beatrice D. Mathis, John R. McKay, Wanda McKrosky, Lenora McMurray, Daniel Maes, Chuck Marques, Thelma Matlin, Kathryn J. Miller, Laurel Ann Mills, Terrence Morasco, Moriah Ranches, Inc., Vernal J. Mortensen and Chester R. Johnson, Mary Mosley, Rob Mrowka, Frances Murrajo, Dean G. and Janet K. Neubauer, Nevada Cattlemen's Association – Eastern Unit, Nevada Department of Wildlife, Jim and Betty Nichols, Robert Nichols, Lyle Norcross, Donna A. Nye, Helen O'Connor, KoDee Hiatt O'Connor, Nancy Overson, Edna Oxborrow, Pahrnagat Valley Joint Services Board, Linda Palczewski, Bruce Pencek, Carter L. Perkins, John Perondi, Cecelia D. Phillips, Pioche Town Board, Clarence S. Prestwich, Karen L. Prestwich, James R. Prince, Duane

Reed, Melissa Renfro, Mark E. Rogers, Susan Rogers, Debbie Rollinson, George T. Rowe, Margaret Rowe, Marsha Lynn Sanders, Tyler Seal, Mark Schroeder, Steve T. Sendlein, Larry Shew, Mariba Singleton, Douglas Smith, Diana Smith, Irene Spaulding, Delaine Spilsbury, Richards Spilsbury, Clive Sprouse, Karen Sprouse Bevis, Yvonne Stackhouse, Connie K. Stasiak, Mildred L. Stevens, L. Ryan Stever, Lorena A. Stever, Richard Stever, Virginia B. Terry, John Theissen, Tonya K. Tomlinson, David E. Tilford, Edith A. Tilford, Unincorporated Town of Pahrump, John G. Tryon, Candi Tweedy, Freddy and Jack Van Camp, Richard and Renee Vincent, John M. Wadsworth, Grace L. Wallis, Stanley L. and Charlotte Wallis, Daniel Weaver, Anthony Wells, Christopher C. Wheeler, Darwin C. Wheeler, White Pine County Cowebelles, Barlow White, Thomas R. and Kelly Wiedmeyer, Paul Williams, Paula Williams, Patricia Williams, Holly M. Wilson,

Protests filed by the following individuals and entities were withdrawn prior to the hearing in this matter: Richard and Lesley Sears, Margaret H. Jones, Lincoln County Board of Commissioners, Moapa Band of Paiute Indians, United States Fish and Wildlife Service, United State Department of Agriculture Forest Service, United States Department of the Interior National Park Service, and the United States Bureau of Land Management.

#### IV.

#### FINDINGS OF FACT

##### 1. NOTICE

By Notice dated April 1, 2011, the State Engineer gave notice to all Protestants at their addresses of record in the Office of the State Engineer and to the Applicant as to the

scheduling of a pre-hearing conference. NRS § 533.365 requires that if within the State Engineer's discretion he decides to hold a public administrative hearing on a protested application, he shall give notice of the hearing by certified mail to the applicant and protestants. The State Engineer provided the required notice to Applicant and Protestants at the addresses of record in the relevant application files in the Office of the State Engineer. The State Engineer also finds that it is the responsibility of every applicant and protestant to keep the Office of the State Engineer informed as to a current address. The State Engineer finds that proper notice was given to the Applicant, Protestants, and the public.

**2. STATUTORY STANDARD TO GRANT**

The State Engineer finds that NRS § 533.370(1) provides that the State Engineer shall approve an application submitted in proper form which contemplates the application of water to beneficial use if the application is (a) accompanied by the prescribed fees, (b) the proposed change, if within an irrigation district, does not adversely affect the cost of water for other holders of water rights in the district or lessen the efficiency of the district in its delivery or use of water; and (c) the applicant provides proof satisfactory to the State Engineer of the applicant's (1) intention in good faith to construct any work necessary to apply the water to the intended beneficial use with reasonable diligence, and (2) financial ability and reasonable expectation actually to construct the work and apply the water to the intended beneficial use with reasonable diligence.

The State Engineer finds that the burden is on SNWA to prove that its Applications meet all the statutory standards. *See Bacher v. Office of State Engineer.*<sup>2</sup> NRS § 533.024(1)(c) states that it is Nevada's policy 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." To the extent that there are gaps in the evidence, an applicant has not met its burden of proof and its application(s) must be denied.<sup>3</sup> Both the quality and quantity of evidence are to be considered.<sup>4</sup> Vague, uncertain, and speculative evidence is not of the quality sufficient to meet an applicant's statutory burden.<sup>5</sup>

### **3. STATUTORY STANDARD TO DENY**

The State Engineer finds that NRS §533.370(5) directs that the State Engineer *shall* reject an application where there is no unappropriated water in the proposed source of supply, or 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.

### **4. ADDITIONAL STATUTORY STANDARDS TO REJECT INTERBASIN TRANSFERS OF WATER**

The State Engineer finds that SNWA has applied for an interbasin transfer of water. NRS § 533.370(6) imposes additional criteria to the conditions set forth in NRS §§ 533.370(1) and (5) in determining whether an application for an interbasin transfer of

<sup>2</sup> 122 Nev. 1110, 1116, 146 P.3d 793, 797 (2006) ("NRS Chapter 533 prescribes the general requirements that every applicant must meet to appropriate water.")

<sup>3</sup> The Nevada Supreme Court has long noted State Engineer importance in determining water rights. That role includes an obligation to proceed in the manner directed by statute and to obtain "the best evidence to be had, whether judgment, documentary, or oral, and to carefully and accurately determine the relative rights of water users." *Ormsby County v. Kearney*, 37 Nev. 314, 142 P. 803, 811 (1914), concurring opinion of Chief Justice Talbot.

<sup>4</sup> *State, Emp. Security v. Hilton Hotels*, 102 Nev. 606, 608, fn 1, 729 P.2d 497, 498, fn 1 (1986).

<sup>5</sup> *Bacher, supra*, 122 Nev. at 1122-23, 146 P.3d at 801.

groundwater must be rejected. Under subsection (6), in determining whether to reject an application for an interbasin transfer of groundwater, the State Engineer must consider:

- (a) whether the applicant has justified the need to import the water from another basin;
- (b) if the State Engineer determines that a plan for conservation of water is advisable for the basin into which the water is to be imported, whether the applicant has demonstrated that such a plan has been adopted and is being effectively carried out;
- (c) whether the proposed action is environmentally sound as it relates to the basin from which the water is exported;
- (d) whether the proposed action is an appropriate long-term use which will not unduly limit the future growth and development in the basin from which the water is exported; and
- (e) any other factors the State Engineer determines to be relevant.

**5. CLEVELAND RANCH AND ITS PROTEST**

Protestant Corporation of the Presiding Bishop of the Church of Jesus Christ of Latter-Day Saints ("CPB"), on behalf of the Cleveland Ranch ("Cleveland Ranch"), protested 12 of SNWA's 19 Applications which seek to appropriate groundwater in Spring Valley -- Applications 54009 through 54018, 54020 and 54021

Located in Northern Spring Valley, Cleveland Ranch has been operating as a cattle ranch since at least the 1870s. Cleveland Ranch grazes cattle on fee land of about 7,000 acres and on Bureau of Land Management grazing allotments of approximately 60,000 acres. As part of the ranching operations, Cleveland Ranch relies upon vested irrigation surface water rights, certified or deeded surface water rights, supplemental groundwater irrigation rights, and numerous stockwater rights that allow the ranch to utilize springs on the BLM allotments as an integral part of cattle grazing.

The deeded land, permitted grazing allotments, and water is used to sustain a large livestock production operation that is a major producer of beef for the LDS Church Welfare Program. The Cleveland Ranch operations produce approximately 1,750 head of beef annually, which amounts to approximately 35% of the beef production needs for the Church Welfare Program.

SNWA has applied to appropriate 91,244 AFA from Spring Valley. On behalf of Cleveland Ranch, the CPB has protested 12 of SNWA's Applications -- Applications 54009 through 54018, 54020 and 54021 -- as directly interfering with Cleveland Ranch's existing water rights and posing a serious deleterious impact on the ranching operations, the environment, and the public interest. SNWA Applications 54016, 54017, 54018, and 54021 were previously rejected by the State Engineer in its 2007 Ruling # 5726, at § XXIV, pp. 35-37, on the grounds they unreasonably impacted existing rights. Those grounds for denial are still applicable to the 4 Applications that were previously denied and to all 12 Applications that the CPB has currently protested on behalf of Cleveland Ranch.<sup>6</sup> Cleveland Ranch's protests are made on the grounds that:

(1) Only SNWA's actual 19 Applications were before the State Engineer and any consideration of SNWA's future possible future applications, intentions, or changes would violate NRS § 533.370 and fundamental due process;

(2) SNWA's analysis overestimates the amount of water available for appropriation in Spring Valley;

(3) SNWA's analysis underestimates existing uses in Spring Valley;

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<sup>6</sup> When previous applications within the same hydrologic groundwater basin have been rejected on the grounds that there is no unappropriated water or when the proposed use would conflict with existing rights or would threaten to prove detrimental to the public interest, new applications within the same basin may be similarly denied. *See e.g.* State Engineer Ruling # 6134.

(4) SNWA's own data and model demonstrate that the 12 wells protested by Cleveland Ranch will directly conflict with Cleveland Ranch's water rights and have a devastating impact, including the creation of a massive and ever-increasing aggregate cone of depression that will consume the springs and wetlands located on and around Cleveland Ranch;

(5) Even with removal of the four wells denied by the State Engineer's Ruling # 5726 in 2007, SNWA's model demonstrates dramatic drawdown and interference with Cleveland Ranch's existing water rights;

(6) Over time, the extensive drawdowns are likely to cause substantial subsidence and the permanent loss of aquifer storage capacity;

(7) SNWA's Groundwater Project ("GWP") will result in substantial and perpetual groundwater mining, prohibited under Nevada law;

(8) SNWA offers no realistic ability to mitigate the tremendous risks that its GWP poses to Cleveland Ranch, the public interest, and the environment;

(9) SNWA's current Applications cannot capture much of the evapotranspiration ("ET") and will instead result in substantial and continual groundwater mining;

(10) SNWA's reliance on a 2006 Stipulation between it and three bureaus of the Department of the Interior offers no substantive protection to Cleveland Ranch; and

(11) Further study and analysis is needed because the potential effects of SNWA's Applications are extremely difficult to anticipate and the risks posed by its GWP are very serious.



6. **THE PERENNIAL YIELD IN SPRING VALLEY IS 80,000 AFA**

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 that basin. The perennial yield of a basin may be defined as the maximum amount of groundwater that can be salvaged from that basin each year over the long term without depleting the groundwater reservoir. Perennial yield is ultimately limited to the maximum amount of natural discharge that can be salvaged for beneficial use; it cannot be more than the natural recharge to a groundwater basin and in some cases is less. While a short-term adjustment period is always expected, when perennial yield is exceeded, groundwater levels continuously decline and steady-state conditions are never achieved, a situation commonly referred to as groundwater mining. Additionally, withdrawals of groundwater in excess of perennial yield may contribute to adverse conditions such as water quality degradation, loss of storage capacity, diminishing yield of wells, increased pumping costs, land subsidence, and loss of important wildlife habitats.

In most Nevada basins, groundwater is discharged primarily through ET. In those basins, the perennial yield is 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. The Spring Valley Hydrographic Basin has a significant amount of discharge via ET and an uncertain amount of subsurface flow to adjacent basin(s). Historically, in basins similar to the Spring Valley Hydrographic Basin, the perennial yield has generally been established as equal to estimated ET. Based on historical studies and the evidence presented at the previous hearing on these Applications, the State

Engineer determined that “a reasonable and conservative estimate of the perennial yield of the Spring Valley Hydrographic Basin is 80,000 acre-feet.”<sup>7</sup> Nothing has changed in the physical world since then. The geology and hydrology are the same. The 80,000 AFA is prudent and supported by substantial evidence.

After several previous lower estimates, SNWA now estimates the perennial yield for Spring Valley as 94,800 AFA. This estimate was contained in SNWA Exhibit 258 and is based primarily on the work of SNWA witnesses Drs. Peter Rowley and Lynn Fenstermaker.

Dr. Rowley presented a theory about the role of faults and barriers as conduits for water flow in both the alluvial and carbonate aquifers. But he acknowledged that his theory cannot be measured or tested and is “largely theoretical.”<sup>8</sup> He also acknowledged that reasonable professional geologists can and do disagree with his theory.<sup>9</sup> Dr. Rowley's theories are unproven and do not provide the credible, substantial evidence on which the State Engineer must rely.

Dr. Fenstermaker testified at length about her ET calculations based on remote sensing and a variety of other techniques. She acknowledged that her approach was based on “emerging” techniques.<sup>10</sup> She also acknowledged that “there are not a lot of measurements encompassing the whole valley ....”<sup>11</sup> She admitted that there is not even five years' worth of data.<sup>12</sup> And the relatively scant data she has is derived from only seven sampling stations clustered in a valley of 1,600 square miles. And she confessed

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<sup>7</sup> Ruling # 5726, p. 32.

<sup>8</sup> Transcript, pp. 1322-23.

<sup>9</sup> Transcript, p. 1296.

<sup>10</sup> Transcript, p. 756.

<sup>11</sup> Transcript, p. 759.

<sup>12</sup> Transcript, p. 760.

that she does not know if the limited data she used is representative of a longer period of time.<sup>13</sup> "And I doubt that really anybody could make that assessment because of the lack of measurement data within the state of Nevada," she conceded.<sup>14</sup> Because of the lack of data, she admitted an inability to make any long-term projections.<sup>15</sup> Finally, she admitted that her approach has only a 68% accuracy rate.<sup>16</sup>

Another SNWA witness, James Watrus, admitted that there is a dearth of information regarding precipitation: "[W]e don't have a lot of information on the precipitation and how much it falls. The recharge is not a measureable value as Mr. Burns has already described."<sup>17</sup>

The State Engineer finds that the weight and credibility of the evidence presented does not support SNWA's estimate of perennial yield.<sup>18</sup> Dr. Rowley's theory is theoretical and cannot be tested. It does not suffice to support grant of SNWA's Applications because it is theoretical and cannot be tested. Dr. Fenstermaker's conclusions were likewise based on limited data, and she acknowledged her inability to make long-term projections based on this limited data. But long-term projections are required here. The State Engineer finds that it would be unwise to grant applications for the long-term appropriation of such a significant amount of water based on uncertain and speculative theories about the amount of available groundwater. Such vague, uncertain,

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<sup>13</sup> Transcript, p. 762.

<sup>14</sup> Transcript, p. 762.

<sup>15</sup> Transcript, p. 763.

<sup>16</sup> Transcript, pp. 768-69.

<sup>17</sup> Transcript, p. 2565. Andrew Burns is the Water Resources Division Manager in the SNWA Groundwater Resources Department and was previously the Senior Hydrologist.

<sup>18</sup> The term "weight of the evidence" is defined by *Black's Law Dictionary* (9<sup>th</sup> ed. 2009) as meaning "[t]he persuasiveness of some evidence in comparison with other evidence." The term "credibility" is defined by *Black's* as meaning "[t]he quality that makes something (as a witness or some evidence) worthy of belief." The terms are used in this Ruling in accord with those definitions.

and speculative evidence as presented by SNWA in support of its Applications does not meet the criteria of the “substantial evidence” test.<sup>19</sup>

In sum, the State Engineer finds that there is no reason to depart from the original conservative estimate of 80,000 AFA. Although SNWA has presented additional evidence on this point, the speculative nature of that evidence only highlights the uncertainty that counsels for a cautious and conservative estimate.

From the calculated perennial yield, certain deductions must be made to determine how much water is available for appropriation. SNWA contends that only 10,429.51 AFA is already committed for existing rights. In the most recent Inventory, the State Engineer found that 14,203 AFA is committed. SNWA's lower number is the result of two flaws. First, SNWA underestimates the amount of supplemental groundwater that will be used.<sup>20</sup> Second, SNWA underestimates the amount of water used by domestic wells.<sup>21</sup> The State Engineer finds that the total committed groundwater rights in Spring Valley is 14,203 AFA.<sup>22</sup>

NRS § 533.370(6) provides that in determining whether an application for an interbasin transfer of groundwater must be rejected, the State Engineer shall consider whether the proposed action is an appropriate long-term use that will not unduly limit the future growth and development in the basin from which the water is exported. The State Engineer finds that the evidence presented in this hearing confirms its previous finding

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<sup>19</sup> See e.g. *Peardon v. Peardon*, 65 Nev. 717, 765, 201 P.2d 309, 333 (1948) (“substantial evidence” is “[s]omething of substance and relevant consequence, and not vague, uncertain, or irrelevant matter not carrying the quality of “proof” or having fitness to induce conviction.”); see also *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579, 590 (1993) (“Reliable testimony must be grounded in the methods and procedures of science and signify something beyond ‘subjective belief or unsupported speculation’”).

<sup>20</sup> CPB\_Exhibit 007, p. 9.

<sup>21</sup> *Id.*

<sup>22</sup> See Spring Valley Hydrographic Basin 10-184 NRS § 533.364 Inventory available at <http://www.water.nv.gov>.

"that it is reasonable and necessary to leave 10% of the perennial yield [8,000 AFA] of Spring Valley Hydrographic Basin as unappropriated water for the future growth and development within said basin.<sup>23</sup>

The State Engineer finds that the evidence presented in this hearing confirms its previous finding that 1,265 AFA should be subtracted from the perennial yield for future use.<sup>24</sup>

The State Engineer finds, and SNWA's expert agreed,<sup>25</sup> that the amount of water available for appropriation must be reduced by the amount of water that will be consumed by replacement wells that are used to mitigate the impact to existing rights. It must also be reduced by the amount of groundwater that remains uncaptured and is therefore lost to ET.<sup>26</sup> Although the former cannot be measured at this point, the State Engineer finds that it will be significant, given the amount of drawdown that will likely result from the proposed pumping and corresponding impact on existing rights, as explained below. The latter can be measured. Drs. Mayo and Jones demonstrated that SNWA's wells can capture only 50,000 AFA of ET.<sup>27</sup> This means that 30,000 AFA of ET will remain uncaptured and will continue to be lost. Therefore, this 30,000 AFA must be subtracted from the groundwater that is available for appropriation.

The State Engineer finds that the perennial yield of Spring Valley is 80,000 AFA, that committed consumptive use of groundwater rights is 14,203 AFA, that 8,000 AFA must be left for future growth in the basin of origin, that 1,265 AFA must be left for future domestic use in the basin of origin, and that SNWA's well-field design will leave

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<sup>23</sup> Ruling #5726, p. 52.

<sup>24</sup> *Id.*

<sup>25</sup> Transcript, p. 2510.

<sup>26</sup> Transcript, pp. 2508-2509.

<sup>27</sup> Transcript, p. 6040.

30,000 AFA uncaptured and therefore lost to ET and that this amount must be subtracted from the amount of water that is available for appropriation. The State Engineer therefore finds that there is **26,532 AFA** available for appropriation before reduction for replacement wells, far less than the 91,000 AFA SNWA applied for. Thus, SNWA's Applications must be substantially rejected on this basis alone.

7. **SNWA'S 12 APPLICATIONS PROTESTED BY CLEVELAND RANCH WOULD CONFLICT SUBSTANTIALLY WITH THE RANCH'S EXISTING WATER RIGHTS**

A. **Cleveland Ranch Is Wholly Dependent upon Its Water Rights Which Are Described in CPB Exhibits 1 and 7**<sup>28</sup>

The high water table in Spring Valley is what sustains both the springs and sub-irrigated lands on the Ranch.<sup>29</sup> Lowering the water table would destroy these water rights and devastate the Ranch. The springs are the primary source of water for the cattle.<sup>30</sup> Additionally, the high water table supports the production of quality forage: "The naturally irrigated land is very productive and it's very high-quality forage."<sup>31</sup>

Cleveland Ranch manager, John Sanders, explained that "if the springs go dry, we lose the source for cattle water as well as ... the forage production that that water and those springs produce."<sup>32</sup> Much of the Ranch grazing allotments would become inaccessible to the cattle. "Cattle can only travel so far in the day before they have to turn around and go back [to their drinking water], so if we lose these spring sources, we will not be able to access large portions of the allotment where cattle just will not be able

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<sup>28</sup> CPB\_001 is Resource Concept, Inc.'s July 1, 2011, "Water Rights, Land & Water Resources Report for Northern Spring Valley, Nevada." CPB\_007 is Resource Concept, Inc.'s August 28, 2011, "Technical Review and Comment Regarding SNWA Exhibits 037, 096, 307, and 363."

<sup>29</sup> Transcript, p. 6233 (Sanders).

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

<sup>31</sup> Transcript, p. 6232 (Sanders).

<sup>32</sup> Transcript, p. 6233 (Sanders). Mr. Sanders has been with the Ranch since 2001 and its Manager since 2007. He has a Bachelor's Degree in Animal Science from the University of Arizona.

to physically reach before they're turning around and heading back for water."<sup>33</sup>

As the water table goes down, the good forage will be replaced, first by cheatgrass and then by shrubs. Dr. Terry McLendon, a SNWA witness, explained that grasses "need more water or more resources in general" than shrubs, and "the more water available to them the more productive they can become and be more competitive against the shrubs."<sup>34</sup> "Secondly, and even more importantly, a high water table inhibits shrub encroachment. Most shrubs do not tolerate saturated soils.... So a high water table inhibits most shrubs and favors grasses."<sup>35</sup> Dr. McLendon acknowledged that the grasslands are the most beneficial for cattle ranches, and the grasslands are the first to go as the water supply depletes.<sup>36</sup>

Dr. Clay Robinson explained that "losses of ET to the basin are going to have dramatic impacts, devastating impacts ... irreversible impacts on the ecosystem, wetlands, meadows, everything."<sup>37</sup> Even a ten-foot drop in the water table will eliminate most of the wetlands.<sup>38</sup> Those wetlands act as filters that improve the quality of groundwater and surface water.<sup>39</sup> "[O]nce a wetland is gone, trying to pump more water back onto it doesn't restore the wetland, necessarily. Once you've lowered the water table significantly, pumping more water just tends to run back down to the sponge, back down to the groundwater, but it doesn't restore the wetland ecosystem ...."<sup>40</sup> The loss of the wetland ecosystem damages grazing. "[T]o graze the same number of animal

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<sup>33</sup> Transcript, pp. 6233-6234 (Sanders).

<sup>34</sup> Transcript, p. 1653. Dr. McLendon is a Principal Scientist at KS2 Ecological Field Services.

<sup>35</sup> Transcript, p. 1653 (McLendon).

<sup>36</sup> Transcript, p. 1755.

<sup>37</sup> Transcript, p. 6356 (Robinson). Dr. Robinson testified on behalf of Protestant Long Now Foundation.

<sup>38</sup> Transcript, p. 6320-6322 (Robinson).

<sup>39</sup> Transcript, p. 6327 (Robinson).

<sup>40</sup> Transcript, p. 6328 (Robinson).

units, you're going to need two to seven times as much land.... because now it takes more land to produce the same amount of animals."<sup>41</sup>

Dr. Robinson explained what will happen to the currently productive meadows if the water table is lowered just ten feet:

Well, if you start with a wet meadow that has a water table within or near the surface, or a grassland meadow even, with a water table within one to five feet of the surface, ... those meadows go away, because there's no longer water to support them. So, they're going to transition to some sort of a shrub community.

Those transitions are going to be dramatic in the overall effect on the ecosystem.... So there's a dramatic decrease in the amount of vegetative production or biomass production, which then is going to affect things like the grazing rights, as well as the physical properties that are out there. You decrease vegetative cover, you increase bare soil. You increase bare soil, you increase erosion potential and the potential for dust erosion or dust generation.<sup>42</sup>

What will replace the high-quality forage? "[Y]ou've heard people talk about cheatgrass, probably til you're sick of it, but cheatgrass is one of those quick-growing annuals that takes advantage of really [shallow] surface ... water, but in so doing it robs it from other plants. So you're going to have transitions that are essentially, in many cases ... irreversible."<sup>43</sup>

There is plenty of cheatgrass seed around the Ranch ready to populate the de-watered ground. Cheatgrass has already replaced the higher quality forage after a fire occurred on the slope of the alluvial fan near the Ranch.<sup>44</sup>

Cheatgrass is not adequate cattle feed. "It's a good feed for about 60 days in the spring when it's green and actively growing," but after that, the best that can be said is

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<sup>41</sup> Transcript, p. 6328 (Robinson).

<sup>42</sup> Transcript, p. 6333-6334 (Robinson).

<sup>43</sup> Transcript, p. 6336 (Robinson).

<sup>44</sup> Transcript, p. 6167, 6172 (Drew).



that it "can keep a cow alive."<sup>45</sup>

The loss of high-quality forage will lower the cattle weight and lower reproduction rates. Sanders explained how cattle partition their nutrient intake:

[T]here's a partitioning effect where basically cattle will first take care of – the mother cow will first take care of her own survival. Her heart will continue to beat, she will breathe and she will get along. Then she'll take care of her own growth and development if there's extra nutrition that's available. Past that, she'll take care of any lactation for any young that she might be rearing at that time. And then lastly, on that partitioning of nutrients, if they are sufficient, she'll take care of reproduction for next year's cattle crop.<sup>46</sup>

The south unit of the Ranch near Hiko, which has no springs and no sub-irrigation, provides a useful comparison. It "is wholly dependent on precipitation."<sup>47</sup>

Sanders explained that the cattle on the south unit of the Ranch are of lower weight and do not reproduce at the same rates as the cattle in Spring Valley.

Basically [it's] because of the lack of quality forage and/or the lack of forage in general. The cattle cannot produce as well on the southern ranges year in and year out as they do up around the Cleveland [Ranch] area. We typically are looking at a [wean] weight of 430, 450 pounds for our steers coming off the desert, and this year, for example, our [wean] weight of some of our steers on the Cleveland [Ranch] approach 600 pounds.<sup>48</sup>

The reproduction rate on the southern end is between 65 and 75 percent, but at the Cleveland Ranch it is over 90 percent.<sup>49</sup> The difference is attributable to the availability of water.

SNWA's response was that plant succession can be managed as depth to groundwater increases, and that any harmful effects can be mitigated. However, several

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<sup>45</sup> Transcript, p. 6230 (Sanders).

<sup>46</sup> Transcript, p. 6234 (Sanders).

<sup>47</sup> Transcript, p. 6231 (Sanders).

<sup>48</sup> Transcript, pp. 6231-6232.

<sup>49</sup> Transcript pp. 6234-34.

critical factors to managing plant succession, such as timing and amount of precipitation, presence and influence of noxious weeds, altered fire cycles and climate change, simply cannot be managed.

Finally, there is no guarantee that any of this management and mitigation would be successful. Dr. McLendon testified that if the water table drops 10 meters or more — far less than SNWA's model predicts — the ability to manage plant succession decreases dramatically.<sup>50</sup> Andrew Burns testified for SNWA that you can irrigate to mitigate the effect of lowering the water table beneath the rooting depth, but this requires drilling more wells and pumping more water.<sup>51</sup> In other words, mitigating the effects of lowering the water table requires pumping more water, which will lower the water table even further, requiring further mitigation.

SNWA's GWP will eliminate the springs and high-quality forage on which the Ranch relies. This is not an environmentally sound result. SNWA's own experts admit that the soundness of the project depends entirely on the success of the monitor-manage-mitigate plan.<sup>52</sup> For these reasons, the State Engineer finds that 12 Applications protested by Cleveland Ranch will interfere with the Ranch's water rights and grazing operations and that SNWA's GWP is not environmentally sound. NRS § 533.370(5) and (6).

**B. SNWA Has the Burden to Show There Are No Conflicts with  
Existing Water Rights**

The State Engineer “shall reject” an application and “refuse to issue the requested permit” where “(1) there is no unappropriated water in the proposed source of supply, or (2) where its proposed use or change conflicts with existing rights or with protectable

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<sup>50</sup> Transcript, p. 1757.

<sup>51</sup> Transcript, pp. 1635-1636.

<sup>52</sup> Transcript, pp. 2534-2355 (Marshall and Luptowitz). Zane Marshall and Lisa Luptowitz are employed by SNWA's Environmental Resources Department.

interest in existing domestic wells ..., or (3) threatens to prove detrimental to the public interest.” NRS § 533.370(5). The State Engineer must also consider “[w]hether the proposed action is environmentally sound as it relates to the basin from which the water is exported.” NRS 533.370(6). Applications must also be rejected when they cause continual groundwater mining.<sup>53</sup>

The burden is on SNWA to prove that the challenged Applications meet the statutory standards. *See Bacher v. Office of State Engineer*, 122 Nev. 1110, 1116, 146 P.3d 793, 797 (2006) (“NRS Chapter 533 prescribes the general requirements *that every applicant must meet to appropriate water*” (emphasis added)). To the extent there are gaps in the evidence, SNWA has not met its burden of proof and its Applications must be denied.

The Nevada Supreme Court has long noted the importance of the role entrusted to the State Engineer in determining water rights.<sup>54</sup> To withstand judicial review, the State Engineer's determination must be supported by "substantial evidence." *See Bacher*, 122 Nev. at 1121, 146 P.3d at 800 (the "court's review focuses on whether the record includes substantial evidence to support the State Engineer's decision"). "Substantial evidence" means such evidence "which 'a reasonable mind might accept as adequate to support a conclusion.'" *Id. quoting State, Emp. Security v. Hilton Hotels*, 102 Nev. 606, 608, 729 P.2d 497, 498 (1986).

Quantity alone does not equal substantial evidence -- both the quantity *and* quality of the evidence presented must be considered. *Hilton Hotels*, 102 Nev. at 608, fn. 1, 729 P.2d at 498, fn. 1, *quoting Robertson Transp. Co. v. P.S.C.*, 159 N.W.2d 636, 638

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<sup>53</sup> Ruling # 5726.

<sup>54</sup> *See* fn. 3, discussing *Ormsby County v. Kearney*, 37 Nev. 314, 142 P. 803, 811 (1914).

(Wis. 1968) ("We [equate] substantial evidence with that quantity and quality of evidence which a reasonable man could accept as adequate to support a conclusion."). Vague, uncertain, and speculative evidence does not meet the "substantial evidence" test. *See e.g. Peardon v. Peardon*, 65 Nev. 717, 765, 201 P.2d 309, 333 (1948) ("substantial evidence" is "[s]omething of substance and relevant consequence, and not vague, uncertain, or irrelevant matter not carrying the quality of "proof" or having fitness to induce conviction."). For example, in *Bacher*, the Supreme Court reversed the district court's affirmance of the State Engineer's approval of an interbasin groundwater transfer because the evidence of the applicant's need was not based on specific facts, but speculation:

When reaching his decision to grant Vidler Water's application, the State Engineer considered the proposed power plant second phase expansion, the mall expansion, the MGM Grand employee housing, an industrial park, and a theme park. Both the State Engineer's decision and the record suffer from a fundamental defect: neither specifies how much afa of water each project would require and how that quantity would be reduced by Primm South's unused water permits. ***Without this specificity, a reasonable mind could not accept as adequate the conclusion that Vidler Water had justified a need to import 415 afa of water from the Sandy Valley Basin. Because he failed to make the necessary calculations to determine Primm South's future water usage by project and the support of that usage by the imported water, the State Engineer's decision is not supported by substantial evidence. We therefore conclude the State Engineer abused his discretion in finding that Vidler Water had presented sufficient evidence to justify a need to import water*** under NRS 533.370(6)(a). [Emphasis added.]

122 Nev. at 1122-23, 146 P.3d at 801; *see also id.*, 122 Nev. at 1123, fn. 37, 146 P.3d at 801, fn. 37 ("Some projects... had contingencies attached to them. In other words, the projects may be speculative in nature . . . speculative evidence of development projects is not sufficient to survive a substantial evidence inquiry on review").

In *People v. Tri-Union Seafoods, LLC*, 90 Cal. Rptr. 3d 644, 658 (Cal. App. 2009), a case brought by the state for alleged failure to label tuna with warnings for the presence of methylmercury, the appellate court affirmed judgment for the defendants, explaining the applicability of the substantial evidence standard to expert testimony:

The substantial evidence rule applies equally to expert and lay testimony. Thus, *expert testimony does not constitute substantial evidence when based on conclusions or assumptions not supported by evidence in the record..., or upon matters not reasonably relied upon by other experts....* Further, *an expert's opinion testimony does not achieve the dignity of substantial evidence where the expert bases his or her conclusion on speculative, remote or conjectural factors....* When the trial court accepts an expert's ultimate conclusion without critically considering his or her reasoning, and it appears the conclusion was based on improper or unwarranted matters, we must reverse the judgment for lack of substantial evidence.... On the other hand, the trial court is free to reject testimony of a party's expert, so long as the trier does not do so arbitrarily. [Internal citations omitted.] [Emphasis added.]

Where an expert's opinion is based on statistical sampling, as is Dr. Fenstermaker's opinion, particular caution is required. Even more caution is warranted when an expert such as Dr. Rowley testifies about theories that cannot be tested or measured. See *Abarca v. Franklin County Water District*, 761 F.Supp.2d 1007, 1021 (E.D. Cal. 2011), quoting *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579, 590 (1993) ("Reliable testimony must be grounded in the methods and procedures of science and signify something beyond 'subjective belief or unsupported speculation'"). *Daubert* identifies the factors relevant to "reliability" as including (1) whether the theory can be and has been tested; (2) whether it has been subjected to peer review; (3) the known or potential rate of error; and (4) whether the theory or methodology employed is generally accepted in the relevant scientific community. *Abarca, id.*; *Daubert*, 509 U.S. at 593-94. However, even given a solid methodology, the conclusion may be unsupportable. Thus,

the State Engineer finds that there is "simply too great an analytical gap between the data and the opinion proffered." *Abarca, id., citing General Elec. v. Joiner*, 522 U.S. 136, 146 (1997).

**C. SNWA's Own Model and Data Demonstrate Serious Conflicts with Cleveland Ranch's Existing Water Rights**

One of those critical issues concerning the 12 Applications challenged by Cleveland Ranch is the requirement that SNWA prove that its Applications will not conflict with Cleveland Ranch's existing water rights. That burden led to SNWA Exhibit 337, which used the SNWA hydrologic model to predict drawdown at existing water rights locations, including springs and wells. That exhibit, however, only reported results based on an arbitrary fifty-foot criterion, omitted the actual drawdown predicted by its own model at each location, and failed to report the results of the full 200-year simulation. When the SNWA model was analyzed using only SNWA's own data, Drs. Jones and Mayo demonstrated that:

- (1) the 12 protested wells will directly conflict with the Ranch's water rights and will cause all of the Ranch's springs and its sub-irrigated pastures to go dry;
- (2) the 12 protested wells will create a massive aggregate cone of depression that will dominate Spring Valley in the vicinity of the Ranch with drawdowns up to 200 feet;
- (3) the extensive drawdowns are likely to cause substantial subsidence and the permanent loss of aquifer storage capacity;
- (4) the protested wells will result in substantial and perpetual groundwater mining; and

(5) other experts opined that such drawdown will result in significant and irreversible impacts on unique animal and plant communities dependent on the current hydrological regime, destroying plant communities on which the Ranch relies.

Drs. Alan Mayo and Norman Jones analyzed the impact of the 12 protested Applications on the Ranch's water rights. Their work is based entirely on SNWA's own model and data without change. They simply performed analysis that SNWA either did not perform or performed but did not report. Drs. Jones and Mayo "took the output from the SNWA model without any modifications to the model and developed more detailed drawdown maps of the output from the model into the vicinity of the Cleveland Ranch in the center of Spring Valley."<sup>55</sup>

Drs. Jones and Mayo used the SNWA model to predict drawdown of the water table at the site of each water right and to show the drawdown.<sup>56</sup> While Mr. Watrus criticized their use of SNWA's regional model to make site-specific predictions, this was his only criticism of their work. And, Mr. Watrus acknowledged that his own analysis included site-specific predictions.<sup>57</sup> In fact, Mr. Watrus did "[e]xactly what Aquaveo did" and Watrus could have reported "the exact drawdown at a specific location..."<sup>58</sup> He simply chose to report the drawdown in terms of plus or minus 50 feet instead of reporting the actual drawdown. According to Watrus, "50 feet was just chosen as – as

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<sup>55</sup> Transcript, p. 6002 (Jones).

<sup>56</sup> Transcript, pp. 6000-6001.

<sup>57</sup> Transcript, p. 2643.

<sup>58</sup> Transcript, p. 2646 (Watrus). Jones and Mayo likewise were criticized for using the model based on the points of diversion of the 19 wells assuming full buildout and assuming full pumping so that SNWA was taking the maximum amount of water it applied for. But, again, that is exactly how SNWA used its model and what SNWA asked for in its Applications. Transcript, pp. 2555-56 (Watrus). "Pumping continues at the full maximum volume throughout the simulation period." Transcript, p. 2557 (Watrus). That is what has been applied for by SNWA.

my gut confidence in this prediction.”<sup>59</sup> He testified it was “a nice round number.”<sup>60</sup> As

Dr. Jones explained:

Our report has been criticized by the SNWA because we used the model to analyze impact at site-specific locations. However, the SNWA used the model in the same fashion, as documented in Exhibit 337. The only difference is the manner in which the site-specific values were reported. They reported values using the 50-foot threshold criteria, and we showed the actual model results, the actual drawdown values in more detail.<sup>61</sup>

**D. The SNWA Data Discloses an Ever-Increasing Aggregate Cone of Depression that Will Consume the Springs and the Wetlands**

In Ruling # 5726, the State Engineer explained that “[w]ater-level drawdown will occur in a cone of depression around the pumping wells, which will eventually coalesce, resulting in wide-spread water-level declines.”<sup>62</sup> Jones and Mayo presented a series of drawdown maps showing the aggressive growth of the aggregate cone of depression for the years 2042, 2062, 2082, 2117, and 2242.<sup>63</sup>

Those drawdown maps showed the aggregate cone of depression for these years assuming all 19 wells are pumping. The first drawdown map, CPB\_011 Fig. 9, showed that as early as 2042, the year all the wells are projected to be completed, drawdowns are

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<sup>59</sup> Transcript, p. 2645.

<sup>60</sup> *Id.*, see also SNWA Exhibit 337 Table 6.2, Watrus Oct. 10. But, even this was more than SNWA presented in the 2006 hearing on these Applications when “none of [SNWA’s] witnesses presented any testimony or evidence pertaining to the magnitude or timing of water-level declines, decrease in spring flows, or impacts to existing rights.” Ruling # 5726, p. 35.

<sup>61</sup> Transcript, p. 6010. From the very beginning, Jones and Mayo acknowledged that the regional nature of the SNWA model introduced uncertainty because of the large grid cells, some elevation errors and model calibration errors. Nonetheless, they noted: “When looking at an individual spring the point in time at which the spring is predicted to go dry may be off by several years (either too early or too late), but the overall trends provides [sic] an estimate of when the springs will go dry.” CPB\_011, p. 47.

<sup>62</sup> Ruling # 5276, p. 35.

<sup>63</sup> CPB\_011, at 23. Dr. Jones explained that “when you pump an individual well, it develops what is called a cone of depression, which is an area of drawdown surrounding the well. When you have a well field such as this where the cones of depression overlap, it forms what we call an *aggregate* cone of depression ....” Transcript, p. 6003, (emphasis added).



approaching 40 to 50 feet.<sup>64</sup> The next map, CPB\_011 Fig. 10, showed that at 20 years after completion of the wells “the center of the aggregate cone of depression correspond[s] to drawdown levels on the order of 60 to 80 feet, and as you can see, they’re starting to overlap many of the water rights locations associated with the ranch.”<sup>65</sup> Just 40 years after the wells are completed, the drawdown map, CPB\_011 Fig. 11, showed “drawdown values on the order of 100 feet.”<sup>66</sup> Then, at 75 years after completion of the wells, “the bulk of the aggregate cone of depression ... corresponds to drawdown levels on the order of 120 to 150 feet.”<sup>67</sup> These are very significant drawdowns which will adversely impact existing water rights.

For the same 75-year period, SNWA also prepared a drawdown map. Its map, however, was buried as one of 10 tiny thumbnail maps at the back of SNWA Exhibit 337 as Plate 2. As presented, it was so small that it could not be used to make meaningful conclusions.<sup>68</sup> When expanded to normal size however it showed the same thing — 100 to 150 feet of drawdown after 75 years of pumping.<sup>69</sup>

Watrus and Drici reported simulated model results for only 75 years after completion of the wells, even though, as Mr. Watrus testified, the water rights being requested do not end after 75 years; they run in perpetuity.<sup>70</sup> After 200 years, the

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<sup>64</sup> Transcript, p. 6003 (Jones).

<sup>65</sup> Transcript, p. 6003-6004 (Jones) (emphasis added).

<sup>66</sup> Transcript, p. 6004 (Jones).

<sup>67</sup> Transcript, p. 6004 (Jones), referring to CPB\_11 Fig. 12.

<sup>68</sup> Transcript, p. 6002 (Jones). Curiously, this is the only observed instance in all the SNWA exhibits where critical information was presented in a thumbnail sized map. It would have been more candid and forthright for SNWA to have presented drawdowns in the necessary detail as Jones and Mayo did.

<sup>69</sup> The exact convergence is not surprising because both maps were prepared from the same model and the same data.

<sup>70</sup> Transcript, p. 2657. Both Mr. James Watrus and Ms. Warda Drici are employed by the Water Resources Division of SNWA's Groundwater Resources Department. Mr. Watrus is the Department's Senior Hydrologist and Ms. Drici is a Hydrologist II in the same department. Watrus and Drici co-authored

drawdown map produced by Jones and Mayo, CPB\_011 Figure 13, shows drawdowns “as high as 200 feet” in most of the aggregate cone of depression.<sup>71</sup>

Dr. Jones pointed out a couple of additional concerns about this final map, CPB\_011 Figure 13. First, the “north[west] corner of this aggregate cone of depression ... corresponds to the Cleve Creek alluvial fan,” and by this point the alluvial fan is “substantially dewatered,” which is critical because this fan “is a source of the water to the springs that are on the fringe of the alluvial fan ...”<sup>72</sup> Second, it shows that the drawdown “doesn’t reach a state of equilibrium. The longer the wells are pumped, the larger and deeper the aggregate cone of depression.”<sup>73</sup>

The weight and credibility of SNWA's evidence on the detrimental impact of its 12 Applications protested by Cleveland Ranch was vague and uncertain, and thus insufficient to satisfy SNWA's burden. SNWA's witnesses did not report projections beyond 75 years, even while acknowledging that the rights SNWA is applying for will be perpetual and that pumping will continue beyond 75 years. Cleveland Ranch submitted the more credible, convincing and cogent evidence. The work of Drs. Jones and Mayo was particularly convincing. They used SNWA's own model without any modifications to the inputs to develop more detailed drawdown maps and to predict the actual drawdown at specific points in time that will result from SNWA's pumping. SNWA's witnesses criticized the work of Jones and Mayo in only one respect -- that SNWA's

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SNWA Exhibit 377, titled "Conflicts Analysis Related to Southern Nevada Water Authority Groundwater Applications in Spring, Cave, Dry Lake, and Delamar Valleys, Nevada and Vicinity in June 2011.

<sup>71</sup> Transcript, p. 6005. Watrus and Drici actually ran model simulations to predict drawdowns out to the year 2254, but did not deign to include those results in their report for SNWA. Their results, like Jones' and Mayo's results, show that the drawdown continues. Transcript, p. 6260-51 (Watrus).

<sup>72</sup> Transcript, p. 6005 (Jones). The map likely underestimates the drawdown in the alluvial fan because of a conductivity anomaly in the model. See Transcript, p. 6006 (Jones).

<sup>73</sup> Transcript, p. 6004-6005 (Jones).

regional model was not equipped to make site-specific drawdown predictions.<sup>74</sup> Dr. Jones testified that using a regional model for site-specific analysis results in a high degree of uncertainty when considering individual predictions. However, when the individual predictions viewed in aggregate show a consistent pattern or trend, it is perfectly reasonable to draw conclusions from these trends. Furthermore, Mr. Watrus admitted that his own analysis was based on site-specific work and that the only difference was his use of a 50-foot threshold instead of reporting the exact drawdowns predicted by the model.<sup>75</sup> In fact, Mr. Watrus confirmed that he did "[e]xactly what" Drs. Jones and Mayo did and that he could have reported "the exact same drawdown at a specific location," but chose not to do so.<sup>76</sup> Watrus then concluded he had no other criticisms of the work performed by Jones and Mayo.<sup>77</sup>

Drs. Jones and Mayo also ran the same simulations without the four wells that were previously denied. In other words, they predicted what the drawdown would be even if those four wells were denied again. These maps show "less drawdown in the northern end of the ... aggregate cone of depression. But there's still substantial drawdown on the order of 120 to 160 feet resulting from the remaining wells" after 200 years.<sup>78</sup>

Jones and Mayo also ran model simulations to predict what the impact would be on the Ranch's water rights if all 12 of the Applications protested by the Ranch are denied and only the remaining 7 are granted. CPB\_011 Fig. 19. This map shows "very

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<sup>74</sup> Transcript, p. 6000-6001.

<sup>75</sup> Transcript, p. 2643.

<sup>76</sup> Transcript, p. 2646.

<sup>77</sup> Transcript, p. 2646.

<sup>78</sup> Transcript, p. 6007 (Jones). Maps for the years 2042, 2062, 2082, 2117 and 2242 are found in CPB\_011 Figs. 14 to 18.

small levels of drawdown” pertinent to the Ranch.<sup>79</sup>

The State Engineer concludes that the report and testimony of Drs. Jones and Mayo constitute credible, reliable, and substantial evidence that the 12 Applications protested by Cleveland Ranch will have an unreasonable impact on the Ranch's existing water rights.

Drs. Jones and Mayo then used the output from the SNWA model to generate time-series plots to show the water level at specific points in time at the location of each water right.<sup>80</sup> Dr. Jones summarized that SNWA's own model “shows that the project would result in substantial drawdown of the water rights locations corresponding to the Cleveland Ranch, and that drawdown is likely to have severe impact to wells, springs and sub-irrigated lands associated with the ranch.”<sup>81</sup> While SNWA criticized Drs. Jones and Mayo for using SNWA's regional model to predict site-specific drawdowns, Mr. Watrus and Ms. Drici used it for exactly the same thing, but chose instead to report results using an arbitrary 50-foot threshold.

When analyzed in depth, the SNWA model results consistently show significant and continuous drawdown. These predictions may not be perfectly precise at specific locations, but the overall conclusion of continuous drawdown is strongly confirmed by the model results.

To the extent SNWA's model has limitations, it defeats SNWA's case. The burden in these proceedings is on SNWA. SNWA's complaint that its model cannot accurately predict what will happen merely underscores SNWA's failure to present credible and reliable evidence to support its case. The “best available science” (NRS §

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<sup>79</sup> Transcript, p. 6008 (Jones).

<sup>80</sup> Transcript, p. 6008.

<sup>81</sup> Transcript, p. 6011.

533.024) presented in this case persuasively shows that the pumping proposed under these 12 protested Applications would create a massive aggregate cone of depression as the result of continuous drawdown. This will adversely impact existing water rights.

Such drawdown also creates “a real risk for subsidence, and of course ... the main problem with subsidence is the permanent loss of storage to the aquiver [sic].”<sup>82</sup> SNWA does not deny this risk. Mr. Watrus testified that the factors controlling subsidence in Spring Valley are not understood,<sup>83</sup> which presumably means that SNWA does not, and would not, know how to prevent it.<sup>84</sup>

#### **E. Over Time, the Ranch's Springs Will Go Dry**

Many of the Ranch’s water rights are associated with springs.<sup>85</sup> Most of these springs occur at the edge of the alluvial fans, where SNWA’s wells will cause substantial drawdown.<sup>86</sup>

The drawdown will cause all of the Ranch springs in the valley to go dry.<sup>87</sup> SNWA’s own model shows “that virtually all of the springs go dry just after a few years....”<sup>88</sup> Mr. Watrus acknowledged that, in his simulations, 15 of the 31 springs had a drawdown of greater than 50 feet after just 75 years.<sup>89</sup>

There is uncertainty in predicting precisely when each of the springs will go dry,

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<sup>82</sup> Transcript, pp. 6005-6006 (Jones).

<sup>83</sup> Transcript, p. 2613.

<sup>84</sup> Mr. Watrus testified that, in areas outside of Spring Valley, he is aware of subsidence of an average of one foot of decline for every 20 feet of drawdown. Transcript, p. 2613.

<sup>85</sup> CPB\_6, CPB\_011, p. 44.

<sup>86</sup> *Id.*

<sup>87</sup> CPB\_011, Table 8, and *id.* at Figure 26 showing an analysis for Big Reservoir Springs No. 5 (by 2041 according to Dr. Jones at Transcript, p. 6013).

<sup>88</sup> Transcript, p. 6013 (Jones); *id.*, p. 6013 (Dr. Jones explained that the model results show that some of the springs start out dry as the result of a calibration error in SNWA’s model. The baseline should be shifted up 15 to 20 feet. But “that doesn’t change the overall conclusions here,” it simply means it will take a few years longer for the springs to go dry; but they will still go dry.).

<sup>89</sup> Transcript, p. 2587.

but SNWA's own model shows that they will all go dry. SNWA's project would also eliminate the sub-irrigated lands that currently support much of Cleveland Ranch. SNWA's witness, Mr. Burns, testified that the current sub-irrigation "is represented in our ET estimate and our ground water ET estimate."<sup>90</sup> In other words, this water is part of the perennial yield that SNWA intends to capture.

Mr. Prieur acknowledged that the very purpose of lowering the water table is to eliminate the loss of water through ET:

Q. Doesn't the program contemplate lowering the water table?

A. The water table is lowered as – as a result of any pumping in – pumping, yes.

Q. Yes. And the purpose of that was to, among other things, to eliminate the loss of water that normally would occur through evapotranspiration?

A. Yes.<sup>91</sup>

Cleveland Ranch is wholly dependent on its springs and sub-irrigated lands. The Ranch depends on the naturally occurring high water table. Lowering the water table will destroy Cleveland Ranch's water rights.

SNWA's model was also disingenuous because it ignored the detrimental impact of substantial and continual groundwater mining to Cleveland Ranch's water rights, as explained below. The State Engineer finds that the springs and groundwater used for sub-irrigation are put to beneficial use by Cleveland Ranch and that the drawdown that would result from SNWA's proposed pumping would interfere with those rights. The State Engineer further finds that not only has SNWA not met its burden, but the weight

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<sup>90</sup> Transcript, p. 744.

<sup>91</sup> Transcript, p. 2502. Mr. James Prieur is a Senior Hydrologist for the Water Resources Division of SNWA's Groundwater Resources Department.

and credibility of the evidence presented shows that the 12 Applications protested by Cleveland Ranch will interfere with the Ranch's existing water rights.

**F. Nevada Policy Prohibits the Substantial and Continual Groundwater Mining Which Would Result from Grant of SNWA's 12 Protested Applications**

When asked why SNWA's proposed project is not groundwater mining, Mr. Watrus responded that SNWA "will not in all likelihood be awarded" what it has applied for and, besides, SNWA's intentions are good: "We have no intention of pumping above the perennial yield year [sic]."<sup>92</sup> This proceeding, however, must not be concerned with SNWA's claimed intentions, but rather, with SNWA's actual pending Applications.

The 12 Applications protested by the Ranch will result in continual and significant groundwater mining. The water that is available for appropriation in Spring Valley is the water that is currently being lost to evapotranspiration ("ET"). As currently constituted, the SNWA well-field design will not capture significant portions of the ET and can only make up the difference through groundwater mining. In Ruling # 5726, the State Engineer stated, "Mining of ground water is not acceptable and appropriation of this magnitude will lower the water table ...."<sup>93</sup> SNWA needs to start over with a new plan that is actually designed to capture ET without harming existing water rights.

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<sup>92</sup> Transcript, p. 2609.

<sup>93</sup> Ruling #5726, p. 52. In addition, it has long been the policy of the State Engineer's Office to prohibit groundwater mining and it has regularly denied applications which would result in groundwater mining. See e.g., 07/09/1964 Ruling #707, pg. 1 (extraction of any additional water would have an adverse effect on existing water rights within the basin); 02/03/1969 Ruling #1327, pg. 1 (existing groundwater rights exceeded estimates of recharge to the basin); 04/26/1972 Ruling #1842, pg. 1 (existing groundwater rights exceeded estimated recharge); 04/13/1975 Ruling #2045, pg. 1 (existing groundwater rights exceeded the perennial yield); 04/10/1979 Ruling #2453, pgs. 4-5 (additional withdrawal of water would result in groundwater mining); 01/13/1988 Ruling #3486, pg. 6 (additional withdrawal of water would result in groundwater mining); 12/28/1989 Ruling #3664, pg. 9 (existing groundwater rights exceeded annual recharge within the basin); 05/21/1990 Ruling #3708, pgs. 3-4 (existing groundwater rights substantially exceeded the perennial yield); 01/23/1990 Ruling #3679, pgs. 11-12 (existing groundwater rights exceeded perennial yield); 04/16/2007 Ruling #5726, pp. 52-53 (mining of groundwater is not acceptable);

Groundwater mining simply means taking more water out of the ground than is being put back in. As discussed in Ruling #5726, pp. 26-27, and discussed above, it is tied to the concept of perennial yield. The State Engineer's April 2007 Ruling thus explains that in most Nevada basins, ground water is discharged primarily through ET and that in those basins "the perennial yield is approximately equal to the estimated ground-water ET; *the assumption being that water lost to natural ET can be captured by wells and placed to beneficial use.*"<sup>94</sup> After discussing various studies and reports, the State Engineer found "that a reasonable and conservative estimate of the perennial yield of the Spring Valley Hydrographic Basin is 80,000 acre-feet. *This estimate relies on the capture of ground-water ET as the limit of the perennial yield.*"<sup>95</sup>

Potential ET has to be captured either before it enters the ET area — *e.g.*, as runoff — or by lowering the groundwater table below the root extinction depth so that the plants cannot use it. Dr. Mayo concluded that there are "too few wells" and the wells are screened too deep to capture ET.<sup>96</sup> That means this will not be an ET-salvage project, but will be a groundwater-mining project.

Using the SNWA model, Dr. Jones did a spatial analysis and generated maps showing how much ET is being captured in the zone where ET is occurring. Their analysis shows that after 200 years of pumping "at the center and southern parts of the

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06/17/2007 Ruling #5750, pgs. 21-22 (withdrawal of substantial amounts of groundwater in excess of perennial yield would result in groundwater mining); and 10/14/2011 Ruling #6151, pg. 4 (approval of application would result in withdrawal of groundwater in substantial excess of perennial yield).

<sup>94</sup> Ruling #5726, p. 27 (emphasis added).

<sup>95</sup> Ruling #5726, p. 32 (emphasis added).

<sup>96</sup> Transcript, p. 6034.



valley, we have complete ET capture,” which is unfortunately where the Ranch is located, which means the springs are dry and the sub-irrigated lands are gone.<sup>97</sup>

“But in the northern part of the valley, there’s still substantial amounts of evapotranspiration which remains uncaptured.”<sup>98</sup> In short, SNWA’s water is coming primarily from the center and southern parts of the valley. “And this creates a water imbalance and results in groundwater mining because that evapotranspiration at the northern end of the valley was part of the ET discharge that’s used to calculate the perennial yield.”<sup>99</sup>

This holds true even if the four previously denied wells are removed from the simulation. Even without those four wells, “after 200 years, there’s substantial groundwater mining still occurring with this simulation.”<sup>100</sup> Dr. Jones explained that the problem is not only the pumping rate, but the distribution and design of the wells:

Q. So even reducing the ... demands on the system by taking four wells out, you still don’t approach equilibrium?

A. Yeah, what ... this indicates is reducing the [pumping] rate doesn’t solve the ... problem.... [I]t doesn’t solve the problem of groundwater mining. It’s the primary flaw in the system, and it’s the – where the wells are located. And not – it’s not completely related to the pumping rate, *but the distribution of the wells and the depth from which they’re drawing water is what results in the groundwater mining.*<sup>101</sup>

The water available for appropriation in Spring Valley is the uncaptured ET. Ruling # 5726, p. 32. ET salvage occurs when the water table is lowered beneath root depth due to pumping. The water table drops below the root extinction depth, and water previously lost to ET can be captured for use by the wells. In order for this to work in a

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<sup>97</sup> Transcript, pp. 6038-6039.

<sup>98</sup> Transcript, p. 6038 (Jones).

<sup>99</sup> Transcript, pp. 6038-6039 (Jones).

<sup>100</sup> Transcript, p. 6043 (Jones).

<sup>101</sup> Transcript, p. 6043 (emphasis added).

sustainable fashion, the water table must be lowered over a large region. In this case, SNWA's own models show that an aggregate cone of depression will occur in a concentrated area, resulting in extreme levels of drawdown in that area. This results in incomplete ET capture and continuous and substantial groundwater mining.

SNWA's answer is that the parties must trust SNWA to pump only what it can without interfering with existing rights, and, if SNWA violates that trust, bring the issue to the State Engineer. But that is not consistent with Nevada law. *Ruddell v. Sixth Judicial Dist. Ct. in and for Humboldt County*, 54 Nev. 363, 367, 17 P.2d 693, 695 (1933) ("The purpose of the Water Law is perfectly obvious. It seeks not only to have the water rights adjudicated but to have them adjudicated in such a proceeding as to terminate for all time litigation between all such water users."). There is no doubt that the Applications actually filed by SNWA and at issue in these proceedings conflict with existing water rights. SNWA's professed good intentions are irrelevant. When an application conflicts with the Ranch's existing water rights, the State Engineer "shall reject" and "refuse to issue the requested permit." NRS § 533.370(5).

The State Engineer finds that the 12 protested Applications conflict with Cleveland Ranch's existing water rights.

**G. The State Engineer Is Required to Consider Only SNWA's Pending Applications and Not Any Future Well Applications**

SNWA responded to criticism of its program by admitting that it will need 50 to 100 new wells to achieve ET capture. Those alternatives are not properly before the State Engineer and cannot cure defects in the 12 Applications protested by Cleveland Ranch

At various points in this hearing, when SNWA's witnesses were challenged regarding the results of pumping under these Applications, the witnesses suggested that

the State Engineer should consider not just these Applications, but SNWA's intention to design a new well-field, to pump intermittently, or to stop pumping if interference results.

Mr. Watrus testified, for example:

Q. You indicated just a few minutes ago that you haven't settled on any of the well locations?

A. That's correct.

Q. You have 19 applications pending which have specific points of diversion, but you contemplate moving them?

A. We have 19 points of diversion that we plan on drilling and determining then if they are the best locations. If not, for example, the 54012 example I gave the other day, if that turns out not to be an appropriate location, we would look to move it, yes.<sup>102</sup>

SNWA's witnesses acknowledged that its current proposal and well-field design are defective and, without drastic changes, will result in incomplete ET capture and groundwater mining. Mr. Watrus thus explained, "If there were effects, clearly we would stop pumping, move the pumping around, do the things [sic]. It wouldn't just stay the maximum volume and continue to have these effects."<sup>103</sup>

In another candid concession that the pending 19 Applications are not adequate to reach SNWA's stated goal, Mr. Prieur testified that SNWA may need as many as 50 to 100 additional wells to accomplish its purposes.<sup>104</sup>

The Hearing Officer made it clear that the 19 Applications, and *only* those Applications, are before the State Engineer:

[SNWA has] applied for a diversion rate from specifically 19 wells, and that's all the State Engineer is considering. He's not considering a different well field.... We're talking about the applications under consideration here.... [A]nd we've had people in here arguing, Well, I'm

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<sup>102</sup> Transcript, p. 2642.

<sup>103</sup> Transcript, p. 2558 (Watrus).

<sup>104</sup> Transcript, p. 2534.

going to move the well field other places. And I have said that's not what we're considering. We're considering the applications that are before us.<sup>105</sup>

There are 19 Applications before the State Engineer for rejection or approval, each requesting a specific amount of water from a specific point of diversion, as required by statute.<sup>106</sup> NRS § 533.370(2) ("the State Engineer shall approve or reject each application"). SNWA's attempt to inject future applications and the possibility of different well locations into these proceedings, and to explain that its Applications do not reflect its intentions, is inconsistent with the applicable statutory scheme and fundamental principles of due process. "Inherent in any notice and hearing requirement are the propositions that the notice will accurately reflect the subject matter to be addressed and that the hearing will allow full consideration of it." *Public Serv. Comm'n of Nevada v. Southwest Gas Corp.*, 99 Nev. 268, 271, 662 P.2d 624, 626 (1983). The Protestants prepared for these hearings based on the content of the applications actually filed by SNWA. They would be severely prejudiced by any ruling granting some or all of SNWA's Applications based on SNWA's good intentions or the possibility of future changes. These Applications must be resolved on their face.

*Nevada Power Company v. Public Service Commission*, 91 Nev. 816, 544 P.2d 428 (1975), rejected what SNWA has attempted here. Nevada Power Company filed applications for seven rate increases which were consolidated into one proceeding. The reason given in the applications for the rate increase was the increased cost of fuel. At the hearing, however, the Company "attempted to support the rate increase" by using

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<sup>105</sup> Transcript, pp. 2607-08.

<sup>106</sup> An application to appropriate water in Nevada "shall contain," among other things, "[t]he name of the source from which appropriation is to be made," "[t]he amount of water which it is desired to appropriate," and "[a] substantially accurate description of the location of the place at which the water is to be diverted from its source." NRS § 533.335.

“numerous items that were not considered in or noticed when the seven original applications were filed.” *Id.* at 818. The Commission rejected the evidence, stating in its final order, “A person examining these applications should be able to rely on the factors stated by the Applicant” and that “were the Commission to hear and issue orders on matters not submitted by the Applicant in its application, there would to that extent be a denial of fairness and due process through inadequate Notice.” *Id.* at 819. The Nevada Supreme Court agreed and held that the hearing could not go beyond the contents of the seven applications that were filed. *Id.* at 822-23.

This is not just a matter of procedural correctness. A vested water right “is regarded and protected as property.” *Application of Filippini*, 66 Nev. 17, 22, 202 P.2d 535, 537 (1949). The “utilization of water by grazing livestock,” for example, “constitutes sufficient appropriation to establish a vested water right” in a spring that is used for this purpose. *Waters of Horse Spring v. State Engineer*, 99 Nev. 776, 778, 671 P.2d 1131, 1132 (1983) (cattle ranching operation had vested right to water of springs). Such rights are therefore entitled to the protections of due process. *Revert v. Ray*, 95 Nev. 782, 787, 603 P.2d 262, 264-265 (1979). Further, “[w]ater law proceedings are special in nature and strictly limited to the procedures provided by statute.” *In re Application No. 71860*, Slip Copy 2011 WL 1744157 \*2 (Nev. Apr. 29, 2011) citing *Filippini*,<sup>107</sup> 66 Nev. at 27, 202 Nev. at 540. “The procedural rights of parties before an

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<sup>107</sup> Water rights are treated as real property under Nevada law such that interfering, directly or indirectly, with the Ranch's water rights may invoke eminent domain claims. *Filippini*, 66 Nev. at 21-22, 202 P.2d at 537 (“the owner of a water right does not acquire a property in the water as such, at least while flowing naturally, but a right gained to use water beneficially which will be regarded and protected as real property”); *Carson City v. Estate of Lompa*, 88 Nev. 541, 542, 501 P.2d 662 (1972), citing prior version of NRS § 37.010(3) (water rights can be subject to eminent domain as a separate interest in real property); and *Dermody v. City of Reno*, 113 Nev. 207, 931 P.2d 1354 (1997), citing *Lompa* (“Nevada law is clear that appurtenant water rights are a separate stick in the bundle of rights attendant to real property. As such, they may be condemned separately”).

administrative body cannot be made to suffer for reasons of convenience or expediency.”  
*Bivens Constr. v. State Contractors' Bd.*, 107 Nev. 281, 283, 809 P.2d 1268, 1270 (1991).

The State Engineer therefore finds that he must “approve or reject” the 19 Applications filed by SNWA based on what has been applied for, not based on SNWA’s claimed intentions, its “manage, monitor and mitigate” assurances discussed below, or its future plans to change designs, add wells, pump less, and do anything other than stated in the Application.

**H. Manage, Monitor, and Mitigate Will Not Solve the Problems with the 12 Applications Protested by Cleveland Ranch**

Throughout the six weeks of hearings, SNWA frequently deflected criticism and concerns by invoking a promise of “manage, monitor and mitigate.” The heart of SNWA’s “manage, monitor and mitigate” theme is the 2006 stipulation (the “Stipulation”) entered into between SNWA and three bureaus of the Department of the Interior.<sup>108</sup> However, as pointed out by Cleveland Ranch, the Stipulation protects only SNWA and the federal government and provides no substantive protection to the Ranch or any other Protestant. Recital G of the Stipulation recites that common goals of the stipulating parties are to protect *federal* water rights and resources but it makes no reference to the protestants’ rights.<sup>109</sup>

In furtherance of the common goals of the Stipulation, SNWA presented some detailed monitoring plans such as its Exhibits 149 and 365. However, despite the sheer

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<sup>108</sup> State Engineer Exhibit 41.

<sup>109</sup> Recital H of the Stipulation is particularly interesting because it describes one of the goals of the stipulating parties as the management of “the development of groundwater by SNWA in the Spring Valley HB in order to avoid unreasonable adverse effects to wetlands, wet meadow complexes, springs, streams, and riparian and phreatophytic communities....” That common goal is remarkable because it seems completely at odds with ET salvage. ET salvage necessarily requires the elimination of phreatophytic communities and ultimately the elimination of wetlands, wet meadows and streams.

bulk of those exhibits, nothing in them expands on the rights protected, or not protected, by the Stipulation. In fact, these reports are remarkable for how little they say about key features. In Exhibit 365, which addresses biological monitoring, the entire discussion of mitigation measures consists of 33 words saying, in effect, that something undefined will be done in response to changes induced by groundwater pumping.<sup>110</sup>

In SNWA Exhibit 149, which is entitled "Hydrological Monitoring and Mitigation Plan for Spring Valley," the entire discussion of mitigation actions consists of one-half page promising to mitigate any injury to federal rights and pledging in some undefined manner to "implement management and mitigation actions relative to injury to private or non-Federal water-right holders."<sup>111</sup>

To implement the Stipulation, the parties established a Technical Review Panel ("TRP"), a Biological Working Group ("BWG") and an Executive Committee. Stipulation Sec. 2, p. 6. Exhibit A to the Stipulation outlines the plan for monitoring, managing and mitigating the development of groundwater. The common goals identified here are the protection of federal water rights and resources. Exhibit A Sec. 1A. Nothing is said about protection of State-managed wildlife such as the Sage Grouse.

In the event that any of the parties to the Stipulation are concerned about injury to federal interests, they may initiate a TRP consultation. Exhibit A Sec. 3(E)(I), p. 11. Within 30 days, the TRP must talk about the problem. If the TRP cannot make a consensus decision, then it can refer the problem to the Executive Committee, which will talk about it. Exhibit A Sec. 3(E)(I)(I)2, p. 14. If the Executive Committee does not agree, then the issue can be referred to either the Nevada State Engineer or a neutral third

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<sup>110</sup> Exhibit 365 Sec. 8.4.

<sup>111</sup> Exhibit 149 Sec. 6.0.

party. There is no requirement in the Stipulation, however, that the Nevada State Engineer will be advised of the problem. Exhibit A Sec. 3(E)(II), p. 14.

Similar provisions prevail under Exhibit B to the Stipulation concerning biological monitoring, but the outcome remains the same. In the event of any issues, all that SNWA has done is agree to talk about the problem. Missing from the plan is any protection for the Ranch or similarly situated protestants. It is important to note that there is no express requirement in the Stipulation or its exhibits that SNWA *must* report any perceived problems. There is only the provision that, if a problem is reported, then the parties will begin the long process of talking about it.

Once a problem is identified, there is no requirement that interested parties such as the Ranch be notified of the problem. All the talking sessions take place behind closed doors, away from the purview of the public and the protestants. And the problems are only revealed to the State Engineer if, and only if, the parties decide to disclose them. These potential delays can be critical. For example, when Mr. Felling examined Dr. Rowley, Mr. Felling pointed out that, when the de-watering pumping was renewed at the Ruth Mine, it was only weeks before adverse impacts were felt miles away at Murray Springs.<sup>112</sup>

The Stipulation is wholly lacking in standards, thresholds or triggers that might define a problem or might initiate corrective action if something starts to go wrong. If it becomes obvious that corrective action needs to be taken, there is no provision under the Stipulation allowing anyone to do anything. As Mr. Zane Marshall acknowledged in his testimony, if he saw a disaster looming, he does not have the authority under the

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<sup>112</sup> Transcript, p. 1352.



Stipulation to stop pumping.<sup>113</sup> All he can do, if he chooses to do so, is begin the cycle of consultations within the various committees. That is not meaningful protection.

There are no enforcement provisions. If an adverse event occurs, SNWA is obligated to discuss it through all the various committees and up to a neutral third party. But, if SNWA does not like the decision of the neutral third party, it is not obligated by the Stipulation to abide by the neutral's decision. There is no provision for enforcement of the neutral's decision.

Monitoring, no matter how carefully done, is only an expression of good intent; it is not a guarantee against damage. Tragic mistakes happen under the best of monitoring plans. Mr. Marshall testified about the manage and monitor program in place at Devil's Hole. There, despite the best intentions and the best science, a mistake was made that killed approximately one-third to one-half of the entire population of Devil's Hole pupfish. Monitoring an environmental tragedy is not the same thing as preventing it. As a result, the State Engineer finds that SNWA has not provided an adequate plan to mitigate against possible damage to existing water rights, the public interest, and the environment.

## **CONCLUSIONS OF LAW**

### **I.**

The State Engineer has jurisdiction over the parties and the subject matter of this action and determination under NRS Chapters 533 and 534.

### **II.**

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<sup>113</sup> Mr. Marshall is the SNWA Environmental Resources Department Director and previously a Senior Biologist for SNWA.

The State Engineer is prohibited by law from granting an application to appropriate public water where:

1. there is no unappropriated water at the proposed source;
2. the proposed use or change conflicts with existing rights;
3. the proposed use or change conflicts with protectable interests in existing domestic wells as set forth in NRS § 533.024; or
4. the proposed use or change threatens to prove detrimental to the public interest. NRS 533.370(5).

The applicant must also prove:

5. an intention in good faith to construct any work necessary to apply the water to the intended beneficial use with reasonable diligence;
6. its financial ability and reasonable expectation to construct the work and apply the water to the intended beneficial use with reasonable diligence;
7. as to interbasin transfers, whether the applicant has justified the need to import the water from another basin;
8. as to interbasin transfers, if the State Engineer determines that a plan for conservation of water is advisable for the basin into which the water is to be imported, whether the applicant has demonstrated that such a plan has been adopted and is being effectively carried out;
9. as to interbasin transfers, whether the proposed action is environmentally sound as it relates to the basin from which the water is exported;
10. as to interbasin transfers, whether the proposed action is an appropriate long-term use which will not unduly limit the future growth and development in the basin from which the water is exported; and
11. as to interbasin transfers, any other factors the State Engineer determines to be relevant.

### III.

Before either approving or rejecting an application, the State Engineer may require such additional information as will enable him to properly guard the public interest.<sup>114</sup>

### IV.

SNWA did not meet its statutory burden with satisfactory proof that: (1) the proposed use does not conflict with Cleveland Ranch's existing rights; (2) the proposed

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<sup>114</sup> NRS § 533.375.

use does not threaten to prove detrimental to the public or environment; (3) the proposed use does not pose unreasonable risk to the Spring Valley basin from which the water is to be exported; (4) the proposed action is an appropriate long-term use which will not unduly limit future growth and development in the Spring Valley basin from which the water is to be exported, and (5) other relevant factors. SNWA's criticisms that its own model does not accurately predict what will happen to the Spring Valley Basin in the vicinity of the Cleveland Ranch, should its Applications be granted, only serves to amplify its failure to present substantial credible evidence to support its Applications.

#### V.

Groundwater mining is against Nevada public policy and it has long been the policy of the Office of the State Engineer to deny applications to appropriate water that will result in continual groundwater mining.

#### VI.

There is unappropriated water to export from the basin. However, the amount of water available for appropriation is 26,532 AFA, far less than the 91,000 AFA SNWA has applied for. SNWA's estimate relies on the capture of ET. To the extent ET continues to be lost, it must be subtracted from the amount available for appropriation. The amount of water used by replacement wells must also be subtracted from the amount available for appropriation.

#### VII.

SNWA's proposed wells conflict with existing rights in groundwater and surface water. Specifically, the State Engineer concludes that the 12 wells protested by the CPB

on behalf of Cleveland Ranch -- Applications 54009 through 54018, 54020 and 54021 -- will interfere with the existing rights of Cleveland Ranch.

### **VIII.**

SNWA's proposed wells are not in the public interest. The proposed use will result in a massive aggregate cone of depression in the center of Spring Valley. SNWA's proposed use will destroy wetlands, fail to protect streams and springs, will have a negative impact on wildlife, and will negatively impact the economy and potentially destroy the agricultural industry in Spring Valley.

### **IX.**

The proposed action is not environmentally sound as it relates to the Spring Valley Hydrographic Basin. Specifically, it will cause the loss of wetlands, wet meadows, and springs. Water quality will be negatively affected. As the groundwater level drops, valuable grasses will be replaced by shrubs and cheatgrass. This will have a negative impact on wildlife and has the potential to create dust erosion.

### **X.**

The proposed wells will result in continual groundwater mining, which will create a significant risk of subsidence and permanent loss of storage capacity in the relevant aquifers.

### **RULING**

Applications 54009, 54010, 54011, 54012, 54013, 54014, 54015, 54016, 54017, 54018, 54020, and 54021 are hereby denied on the grounds that the Applicant has not met many statutory criteria and to issue the permits would conflict with existing rights

///

and would threaten to prove detrimental to the public interest.

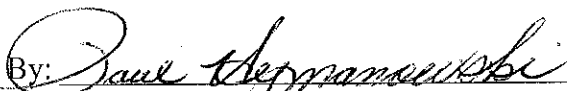
Respectfully submitted,

JASON KING, P.E.  
State Engineer

Dated this \_\_\_\_\_ day of  
\_\_\_\_\_, 2012.

Submitted by:

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**CERTIFICATE OF SERVICE**

I certify that on this 27th day of January, 2012, a true and correct copy of the foregoing Proposed Ruling Submitted by the Corporation of the Presiding Bishop on Behalf of the Cleveland Ranch was served on the following persons as follows:

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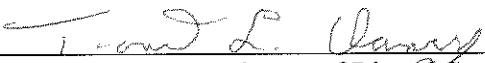
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