REVIEW OF
AGREEMENT FOR MANAGEMENET OF THE
SNAKE VALLEY GROUND WATER SYSTEM
AND
SNAKE VALLEY ENVIRONMENTAL MONITORING
AND MANAGEMENT AGREEMENT

BY

STEVEN E. CLYDE, ESQ.

DALLIN W. JENSEN, ESQ.

WARREN H. PETERSON, ESQ.

At the request of Governor Herbert, we have reviewed the Agreement for Management of the Snake Valley Groundwater System (Snake Valley Agreement or Agreement) and the companion Snake Valley Environmental Monitoring and Management Agreement (Monitoring Agreement), and provide our perspectives on three specific questions posed by the Governor. These questions are:

1. Does the Snake Valley Agreement provide an equitable division of water between Utah and Nevada?

2. Does the Snake Valley Agreement provide adequate protections for Utah Water Rights?

3. Do the Agreements provide protections for contingent Utah concerns?

The following is a summary of our responses followed by more detailed discussion of the Snake Valley Agreement and the Monitoring Agreement.

SUMMARY RESPONSES:

1. DOES THE SNAKE VALLEY AGREEMENT PROVIDE AN EQUITABLE DIVISION OF WATER BETWEEN UTAH AND NEVADA?

The Agreement allocates this shared ground water resource on an equal 50-50 basis. Through a tiered development approach, the Agreement protects existing Utah appropriated water rights for uses including irrigation, stock water, and domestic use and for habitat protection at Fish Springs. It allows for additional water development in both States, but that additional development is conditioned upon protecting existing rights from interference. Any new development must comply with a standard of Maximization of Sustainable Beneficial Use while avoiding over-drafting or mining of the groundwater resource, protecting against degradation of water quality, and protecting the physical integrity of the aquifer. If withdrawals exceed the Available Groundwater Supply[1], the States are required to reduce diversions or withdrawals so that Consumptive Use[2] is limited to the Available Groundwater Supply that can safely and sustainably be developed and used in each State.

2. DOES THE SNAKE VALLEY AGREEMENT PROVIDE ADEQUATE PROTECTIONS FOR UTAH WATER RIGHTS?

The Agreement, especially when coupled with the companion Monitoring Agreement, provides adequate protection for existing and future Utah water rights. The Agreement requires on-going ground water monitoring and data collection, and continual refinement of the *Basin and Range Carbonate Aquifer System Study* (BARCASS), designed by the United States Geological Service (USGS). The BARCASS study provides a framework for further groundwater allocations, including the continual monitoring of effects of current and additional groundwater withdrawals from the Snake Valley hydrologic system.

Further development of the Available Water Supply in both States is conditioned upon continual gathering and sharing of data. The States have obligated themselves to work cooperatively to resolve any present or future conflict. Steps will be taken to assure the quantity and quality of the Available Groundwater Supply is maintained, to minimize adverse impacts to existing uses, and to minimize environmental impacts. Additionally the parties have agreed to take steps to prevent the need to list potential endangered species that might require water to be

[1] Available Ground Water Supply means that total amount of Groundwater Available for appropriation and use on an annual basis from the Snake Valley Groundwater Basin as determined by this Agreement or subsequently through further study and agreement of the State Engineers of Utah and Nevada.

[2] Consumptive Use means the amount of water permanently removed from the Snake Valley Groundwater Basis for the permitted Beneficial Use. Consumptive Use is equivalent to depletion.

dedicated to species protection and no longer available for beneficial use by water rights holders. It also seeks to maximize development of Available Groundwater Supply; and, to manage the hydrologic basin as a whole even though individual State water rights will be administered in accordance with the laws and procedures of the respective States.

Where adverse impacts may occur the Agreement requires the States to implement mitigation measures (including the funding of a mitigation fund to accomplish required mitigation) to prevent harm to existing permitted uses of water. The Agreement preserves the right of individual water users to bring claims for interference with their individual water rights. Additionally, the approval of any new appropriation for interbasin transfer in excess of 1000 ac-ft per year must include the monitoring requirements of the Monitoring Agreement so that each new withdrawal of groundwater is required to provide detailed monitoring, reporting and mitigation where required to off-set the effects of additional ground water development.

3. **DOES THE SNAKE VALLEY AGREEMENT PROVIDE PROTECTIONS FOR CONTINGENT UTAH CONCERNS?**

The Agreement, when coupled with the Monitoring Agreement, provides adequate protection for contingent concerns of Utahans, including degradation of air quality, desertification of Snake Valley, and environmental degradation in general. Further, development of Southern Nevada Water Authority's (SNWA) pending applications to appropriate water from the Snake Valley hydrologic system are to be held in abeyance by the Nevada State Engineer until September 1, 2019. This added time will enable the parties to gather additional data, conduct further studies of hydrologic and biologic conditions and impacts, as mandated by the Agreement and the Monitoring Agreement to see if this additional groundwater development is even feasible within the goals of the Agreement. Additionally, SNWA must provide a $3,000,000.00 Mitigation Fund if any of its Snake Valley applications are ultimately approved, which funds are to be used to assist in mitigation and remediation of any adverse impacts caused by these new withdrawals.

While the agreements are not perfect, they do provide a process designed to allow incremental development of additional ground water but only if the on-going studies indicate that the additional water in fact exists and that it can be safely and sustainably developed without

causing unreasonable impacts to existing water users and to the overall environment of both States. For these reasons, signing these two agreements appears to be in the best interest of the citizens of the State of Utah. We offer no opinion, however, on the timing for signing the agreement. That decision should be left exclusively to the executives of the two states.

DETAILED DISCUSSION:

At the request of Governor Herbert, we have reviewed the Agreement for Management of the Snake Valley Groundwater System (Snake Valley Agreement) and its companion agreement, Snake Valley Environmental Monitoring and Management Agreement (Monitoring Agreement). Based upon our review, it appears that entering into these agreements is in the best interests of the citizens of the State of Utah. In the absence of these agreements, Nevada, because of its more pressing need for water, may simply appropriate the remaining available water in the Snake Valley Groundwater System to the exclusion of Utah's needs for future water supplies. The Snake Valley Agreement ensures that Utah will have an equal share of this limited but shared ground water resource, regardless of the relative pace of development in both states, while providing a process to identify and mitigate potential harms both to water users, as well as to the environment.

There are really two discrete but related issues involving the further development of the groundwater supply of the Snake Valley Groundwater System. The first is how to allocate this shared interstate groundwater resource in a way that provides both Utah and Nevada with an equitable share of this available water supply. The second is how to allow further groundwater development while protecting existing water users against unreasonable interference, and minimizing environmental degradation caused by additional water development.

The solution to both of these issues is contained in the two agreements; recognizing that both States have the right to appropriate and develop this limited water supply, and that without the agreements, it would simply be a race to development. Nevada's current needs for water will all but guarantee that it beats Utah to the water supply. The agreements protect Nevada and Utah's right and ability to develop future ground water supplies, but only if further development can be done on a sustainable basis while protect existing water users and the environment.

Both Utah and Nevada allocate both surface and groundwater under doctrine of prior appropriation. One of the basic tenets of the doctrine is first in time is first in right. That insures those who develop first a preferential right of use protected by their priority and the non-interference doctrine that insulates prior users from unreasonable interference from all those who come afterwards.

The United States Supreme Court has held that water of interstate streams should be divided on the basis of equitable apportionment[3], and where both states apply the same method of water allocation the Court will apply local law in making an equitable allocation of water[4]. That essentially means that the prior appropriation doctrine will be given interstate effect on an interstate water resource such as the Snake Valley Groundwater System across or without regard to State lines. The practical effect of that is that Nevada, whose existing need for water and projected growth will drive earlier appropriation and development of water than Utah's potential future needs for water in the west desert, would have priority over later Utah appropriations. In an equitable apportionment action, those existing Nevada appropriated rights would be protected from interference, potentially precluding Utah from further development of this shared water resource.

This is the same dilemma the seven Colorado River Basin States faced in 1922, when they entered into the Colorado River Compact, an interstate compact authorized by the Compact Clause of the United States Constitution. The lower basin states, particularly California and Arizona were developing far more rapidly than the upper basin. Because they were appropriating the available water, if the upper basin states did not act to appropriate for the future and at that time somewhat speculative purposes, the bulk of the water supply would have been appropriated by the lower basin and the upper basin states would have been deprived of this vital water supply.

The basin states had two options. First they could pursue an equitable apportionment action before the U. S. Supreme Court, where the Court would make an equitable division of the water while protecting existing appropriated rights, as all seven states are appropriation doctrine states. The second and better option was an to enter into an Interstate Compact, essentially an

[3] Kansas v. Colorado, 206 U.S. 46 (1907).
[4] Wyoming v. Colorado, 259 U.S. 419 ((1922).

agreement negotiated among the seven states and ratified by Congress, that would insure not only a secured allocation of water, but an allocation that could not be lost regardless of how quickly they developed their respective allocations of water. That is what the Snake Valley Agreement will do for Utah and Nevada.

That same analysis that fostered the Colorado River Compact compels Utah and Nevada to enter into this Snake Valley Agreement. It is preferable for the States to agree on how the shared resource should be allocated, and to impose by contract, consistent with federal law, Public Law 108-424, steps to protect existing and future water uses in both states. The Agreement can dictate the manner in which water is developed, to insure that development is consistent with the goal of maximum sustainable development of the available water resources.

Absent this agreement, Nevada will probably initiate an equitable apportionment action before the U. S. Supreme Court, where Utah is may end up in a less favorable position than assured by these agreements. The result would simply be the allocation of the water without imposing or implementing any of the protections included within the Snake Valley Agreement. The Agreement, coupled with the Monitoring Agreement, enables the States to protect existing water rights and water uses in both States. They require the development and implementation of a careful on-going monitoring program to better detect the beginnings of any adverse impacts to the water rights, water supply and the environment early in the process thereby providing the best opportunity to avoid, minimize or mitigate any such harm.

In short, the Snake Valley Agreement is Utah's best protection of both its ability to have an assured quantity of additional groundwater to develop in Snake Valley as its demands dictate without fear that the available water would be appropriated first by Nevada to the exclusion of Utah. It is also the best opportunity Utah has to put protections in place other than simply private interference litigation to protect existing water rights and against future environmental degradation.

The existing hydrologic data demonstrates that most of the water supply available in Snake Valley originates in the mountains of Nevada, and then flows to the north-east into Utah towards the Great Salt Lake. Currently the majority of the appropriated water rights are in Utah,

and Utah has a significantly larger quantity of water under existing appropriations than Nevada. However that could quickly change if the pending applications of the SNWA are all approved.

To insure that both states have an equal right to develop this shared water resources, the agreement proposes to allocate the water equally between the states. Current hydrologic modeling suggests that 132,000 ac-ft per year on average of groundwater may be available for consumptive us in the Snake Valley Groundwater System. Of that quantity, the states have agreed that only 108,000 ac-ft per year is currently available for development. The remaining 24,000 ac-ft per year is reserved for future development or for use in mitigating demonstrated harm, subject to many conditions to ensure that existing water rights and uses are protected, and that no adverse environmental harm occurs.

The water is divided into three tiers: Allocated (currently appropriated water rights in each state); Unallocated (available water for further development); and, Reserved (water that can only be developed in the future if certain conditions are satisfied).

Within those categories or tiers, Utah's currently Allocated water equals 55,000 ac-ft per year of existing appropriated water rights for consumptive use. Nevada has only 12,000 ac-ft per year under current appropriations. Because Utah's more immediate needs are projected to be less than Nevada's, the States have agreed that within the second tier of Unallocated water, Nevada would be allowed to develop and additional 35,000 ac-ft per year, and Utah 6,000 ac-ft per year, giving Utah a total of 61,000 ac-ft per year and Nevada 47,000 ac-ft per year. Only after this additional available but currently Unallocated water has been safely and sustainably developed may the States begin to develop the third tier of water. Utah is limited to an additional 5,000 ac-ft per year, and Nevada an additional 19,000 ac-ft per year. In this way both states end up with a total of 66,000 ac-ft of water each from the 132,000 ac-ft of water available annually on average for use.

This last tier of Reserved groundwater, consisting of 24,000 ac-ft per year, can be developed only by mutual agreement of the state engineers of each State, following an analysis of peer-reviewed data that demonstrates that the additional groundwater can safely and sustainable be withdrawn, while protecting existing uses of water against unreasonable interference and avoiding environmental degradation.

The Snake Valley Agreement further imposes many protections for existing users of water. Ongoing data collection and review is required so that as additional data about the performance of the aquifer is obtained and analyzed, it can be incorporated into the determination of whether additional water can be sustainably developed. All groundwater withdrawals in excess of 100 ac-ft are to be metered and monitored. Areas of developing concern are to be identified and studied. The States agree to work cooperatively to resolve conflicts, to assure that water quantity and quality are protected, to minimize injury to other existing water users, to impose mitigation obligations if harm does occur. Additionally they will continuously monitor and take appropriate steps to minimize adverse environmental impacts. The ultimate goal is to maximize the use of the safely and sustainably available resource and to manage it as an integrated hydrologic system. If the collected data demonstrates that withdrawals are exceeding available supplies, the States have obligated themselves, and by extension their citizens, to reduce diversions to a level that is sustainable and that avoids the mining or over drafting the annual recharge to the basin and where necessary to prohibit further ground water development.

Any new appropriations in excess of 1,000 ac-ft per year for an interbasin transfer from Snake Valley must include an Environmental Monitoring and Management Agreement Plan similar to the Monitoring Agreement required between the States. The States must establish a process to protect existing water uses, and to require that all new wells be equipped so that water levels can be easily monitored in the wells.

Further an existing water user may require the above monitoring effort to be implemented if he feels his water right is at risk. The process must provide for mitigation where unreasonable impacts are demonstrated, and the appropriator of the 1,000 ac-ft per year or more interbasin transfer appropriation from Snake Valley must establish and maintain a mitigation fund where the funds can be used to help mitigate any unreasonable adverse impact.

To help further insulate existing water users, the Snake Valley Agreement provides that the SNWA pending applications to appropriate groundwater from Snake Valley are to be held without action until September 1, 2019 by the Nevada State Engineer. This delay is to allow time to see how further water development by water users in both states affect the groundwater

system, as well as hydrologic, biologic and environmental conditions before allowing the SNWA applications for interbasin transfer to proceed with additional groundwater withdrawals.

If any of the SNWA exportation applications are approved, SNWA must establish a procedure to solicit claims from water users who believe the export of water has caused an adverse impact to their water right. If through the established process an adverse impact is documented, then SNWA is required to take steps to mitigate the harm. The range of possible mitigation measures include but are not limited to a redistributing of the withdrawals among the SNWA wells to lessen a localized impact. Where necessary, withdrawals may have to be reduced or stopped completely to prevent interference. Mitigation can also include SNWA working with the affected water user to deepen his well, replace pumps, cover increased pumping costs incurred from having to draw water from deeper zones, provide alternate water supplies and other measures as agreed by the parties. SNWA must also establish and maintain a permanent mitigation fund of $3,000,000.00 for use in implementing any required mitigation measures.

Finally, where disputes exist between the States under the Snake Valley Agreement, the States agree to mediate rather than litigate, as this will provide a less expensive and timelier resolution of any such dispute.

The companion Monitoring Agreement is largely a process-oriented agreement designed to complement the States' obligations under the Snake Valley Agreement, and to define certain monitoring and management obligations for both States. The primary intent of the Monitoring Agreement is to establish monitoring plans designed to determine the hydrologic, biologic and air resources in Utah that may be affected by SNWA's development of groundwater rights in Snake Valley. The Monitoring Agreement establishes a process whereby early warning of harm to these systems can be detected allowing the implementation of reasoned and effective management response plans to counter these effects of additional groundwater development. The emphasis will first be on avoidance of harm, second through minimizing identified impacts, and third through mitigation to off-set the effects if they cannot be avoided or minimized.

The Monitoring Agreement establishes a Management Committee comprised of representatives from both States. It also creates a multidisciplinary Technical Working Group to

advise the Management Committee on management and response actions to address issues as they arise.

A comprehensive monitoring program will be created to collect, assemble and analyze biological, hydrological and air-quality data enabling the Management Committee and Technical Working Group to continuously monitor impacts of SNWA's water withdrawals from Snake Valley. Data collected will support assessments of groundwater influenced ecosystems inhabited by sensitive or special status species; monitor ground water levels, recharge and discharge and changes caused by additional withdrawals from within Snake Valley; monitor water quality continuously to see if any changes occur; and monitor air quality impacts that may be caused by further groundwater development. Further the Technical Working Group must devise an operating plan that will include early warning indicators, a defined range of specific management responses to first avoid, second minimize and third mitigate any adverse impacts.

Finally, if Utah permits any groundwater to be exported from the Snake Valley hydrologic basin, it must require the appropriator to implement a similar management and monitoring program to determine any adverse impacts caused by a Utah export project.

The Monitoring Agreement is not perfect in the sense that it may only be capable of detecting harm rather than preventing it from occurring at all. As is often the case with ground water development, adverse impacts are often not manifested until many years after the harm has occurred, and depending upon the nature of the harm, it may be irreversible. However, the requirement of mitigation and the establishment of a perpetual mitigation fund to address more permanent harm and the conditioning of further development on studies demonstrating that no impairment or environmental damages will occur, will help resolve these issues. The process will help establish base line data so that changes can be detected early, and enable the States and the parties to take steps to minimize the impacts before mitigation is required. It is preferable to the usual approach to ground water interference of waiting until harm is present, and then filing suit attempting to enjoin the interference and recover damages. This Monitoring Agreement may not resolve all issues early on, but through continuous monitoring, data collection and analysis, the States as well as the public will be better informed and be able to access and use the available data to assess impacts. The availability of a perpetual mitigation fund will go a long way towards assisting any required mitigation efforts if they are ultimately required.

Both States are entitled to develop their water resources. In the absence of these agreements, development would occur first in Nevada whose needs for additional water currently are more pressing than Utah's need for additional water in the west desert. The burden to protect individual water rights and the environment would largely fall on individuals and public interest groups. The agreement changes that traditional and largely ineffective approach. It assures each State and an equal division of the available water supply, while implementing significant steps to monitor and provide protection for existing water users and the environment.

The agreements recognize that issues may change as additional data is collected, and new scientific methods for analyzing and predicting impacts are developed. The agreements contemplate and require continued refinement of the monitoring and management obligations in response to these changes in science and technology.

The agreements, while not perfect, provide a framework to protect the interests of water users and the citizens as a whole in each State and provide a process to address adverse impacts early on if detected to avoid significant harm to anyone. Response steps can require the stoppage of water diversions altogether if necessary to eliminate an adverse effect that cannot otherwise be mitigated. None of this would be possible through equitable apportionment litigation before the U. S. Supreme Court, as such litigation is only designed to apportion the water and not address these broader concerns. For these reasons, it is our collective view that the agreements offer the best protection for Utah and its citizens. For the foregoing reasons, we encourage the Governor to sign the agreements and to get these protections in place.

In offering this review and perspective, we are not acting in a representative capacity to the State of Utah and specifically we are not providing the State or the Governor with legal advice or a legal opinion regarding these two agreements. Instead, we are providing our perspectives on these two agreements based on our many years of having practiced water and environmental law in Utah. We believe these agreements offer the States a reasonable and frankly a preferable alternative to equitable apportionment litigation between Utah and Nevada.