

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

IN THE MATTER OF APPLICATIONS 81425,)
81426 AND 81427 FILED TO CHANGE THE)
POINT OF DIVERSION AND PLACE OF USE OF)
AN UNDERGROUND SOURCE PREVIOUSLY)
APPROPRIATED UNDER PERMITS 69156, 69157)
AND 69158, AND OF APPLICATION 81428)
FILED FOR DIVERSION RATE ONLY WITHIN)
THE RALSTON VALLEY HYDROGRAPHIC)
BASIN (141), NYE COUNTY, NEVADA.)

RULING
#6183

GENERAL

I.

Application 81425 was filed on January 13, 2012, by the Tonopah Public Utilities to change the point of diversion and place of use of 1.88 cubic feet per second (cfs), not to exceed 856 acre-feet annually (afa), of water previously appropriated under Permit 69156 from an underground source for quasi-municipal purposes. The proposed place of use is the Tonopah service area and encompasses 30 townships from T.1N. through T.6N. and R.41E. through R.45E., M.D.B.&M. The proposed point of diversion is described as being located within the SW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 16, T.5N., R.44E., M.D.B.&M. The existing point of diversion is described as being located within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 1, T.2N., R.43E., M.D.B.&M.¹

II.

Application 81426 was filed on January 13, 2012, by the Tonopah Public Utilities to change the point of diversion and place of use of 1.88 cfs, not to exceed 856 afa, of water previously appropriated under Permit 69157 from an underground source for quasi-municipal purposes. The proposed place of use is the same as indicated under Application 81425. The proposed point of diversion is described as being located within the SW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 16, T.5N., R.44E., M.D.B.&M. The existing point of diversion is described as being located within the SW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 36, T.3N., R.43E., M.D.B.&M.²

¹ File No. 81425, official records in the Office of the State Engineer.

² File No. 81426, official records in the Office of the State Engineer.

III.

Application 81427 was filed on January 13, 2012, by the Tonopah Public Utilities to change the point of diversion and place of use of 1.88 cfs, not to exceed 856 afa, of water previously appropriated under Permit 69158 from an underground source for quasi-municipal purposes. The proposed place of use is the same as indicated under Application 81425. The proposed point of diversion is described as being located within the SW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 16, T.5N., R.44E., M.D.B.&M. The existing point of diversion is described as being located within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 31, T.3N., R.44E., M.D.B.&M.³

IV.

Application 81428 was filed on January 13, 2012, by the Tonopah Public Utilities to provide for an additional point of diversion for the water previously appropriated under Permits 69156, 69157 and 69158 at a maximum diversion of 6.0 cfs. The total combined duty of Applications 81425, 81426, 81427 and 81428 shall not exceed 2,568 afa. The proposed place of use is the same as indicated under Application 81425. The proposed point of diversion is described as being located within the SW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 16, T.5N., R.44E., M.D.B.&M.⁴

V.

Applications 81425 through 81428 were protested by Wayne N. Hage, Executor of Estate of E. Wayne Hage on the grounds as summarized below:

1. The applications will affect the vested water rights belonging to the Estate of E. Wayne Hage.
2. The granting of the applications will interfere with 3 vested and certificated surface and underground rights situated in hydrographic basin 141.
3. NRS 533.370 § 5 states, "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, the State Engineer shall reject the application and refuse to issue the requested permit.

³ File No. 81427, official records in the Office of the State Engineer.

⁴ File No. 81428, official records in the Office of the State Engineer.

4. The vested waters of the Estate are located upon wells for livestock and may be dried up by the applications.
5. If the applications are granted the water table will be lowered and the Estate will be forced to deepen its wells, which will increase pumping costs.
6. The Estate is extremely concerned since the Applicant has pumped water at Rye Patch Channel and has dried up water that naturally arose and flowed down the channel. The Estate has rights to water at the Rye Patch Channel and is unable to use its rights due to use of water by the Applicant. The Applicant has not satisfied the Estate's prior water right, which they have interfered with and are aware of. Therefore, there is no reassurance that they will remedy any affect from these applications.
7. The Estate demands a hearing before any application is granted unless the Applicant 1) provides water to the Estate to satisfy prior rights at Rye Patch Channel 2) agrees to compensate and provide water for any impacts from these applications.
8. The Estate prays that the applications are only granted subject to the existing rights of the Estate and the conditions set forth above.

FINDINGS OF FACT

I.

Nevada Revised Statute (NRS) § 533.365(4) provides that it is within the State Engineer's discretion to determine whether a public administrative hearing is necessary to address the merits of a protest to an application to appropriate the public waters of Nevada. The State Engineer finds that in the case of protested Applications 81425 through 81428 there is sufficient information contained within the records of the Office of the State Engineer to gain a full understanding of the issues and a hearing on this matter is not required.

II.

The Nevada Division of Water Resources (Division) has divided the state of Nevada into 256 hydrographic basins and sub-areas, each of which is identified by a name and number. The proposed points of diversion are located within the Ralston Valley Hydrographic Basin. The proposed place of use is the complete service area of approximately 32 square miles and covers portions of five hydrographic basins including

Ralston Valley; therefore, the proposed applications are an interbasin transfer of water and subject to Nevada Revised Statute 533.370(3) in addition to all other applicable statutory criteria. The interbasin transfer criteria are discussed below.

Tonopah Public Utilities (TPU) is a municipal organization within the government system of the Town of Tonopah, Nye County, Nevada. TPU maintains the Tonopah Public Water System (water system) and provides public water and sewer services to two distinct service areas. The larger of the two is the Town of Tonopah and the other is the Airport Industrial area east of Tonopah. The total service area within Tonopah is approximately 6 square miles. The complete service area is approximately 32 square miles. The number of customers served by TPU was last estimated at 2,904 in 2009. The TPU water system is located on private land and on public land that is administered by the BLM Tonopah Field Office, Battle Mountain District.⁵

The groundwater supply delivered by the existing water system comes from eight groundwater wells situated in the Rye Patch well field in the Ralston Valley Hydrographic Area. The water is conveyed through approximately 13.5 miles of transmission main to the Tonopah service area and is boosted with two pump stations along the way. The current water supply contains an average arsenic concentration of approximately 11 to 12 parts per billion and the required drinking water maximum contaminant level (MCL) for arsenic is 10 parts per billion. Alternative water supply sources are being considered because the current well field produces water that sometimes exceeds the state and federal limits.⁶

Exploration activities have been conducted to locate sources of water that will meet the arsenic standard as either an alternative supply or for blending with water at the existing well field. The TPU commissioned two phases of data collection and hydrologic evaluations prepared by Interflow Hydrology under contract with Shaw Engineering. After all the reports were evaluated, the summary recommendation was to pursue two

⁵ *Tonopah Public Utilities Right-Of-Way Authorization Water System Improvement Project*, U.S. Department of the Interior Bureau of Land Management, Environmental Assessment DOI-BLM-NV-B020-2011-0142-EA, November 2011.

⁶ *Ibid.*

northern well sites, which were followed by the filing of Applications 81425, 81426, 81427 and 81428 in furtherance of that goal.⁷

The Applicant has explored various options for obtaining a water source that meets drinking water standards and has located a source in Ralston Valley to meet that goal. Additionally, the capacity of the existing pipeline between the Rye Patch well field and the Tonopah service area is limited and does not allow for adequate supplies to meet the fire flow requirements. While the proposed project would resolve the current arsenic issues, it would also improve the materials and structural integrity of the water system. The improvements would alleviate the water losses experienced with the existing water system. The upgrades to the segments of existing pipeline would increase the capacity of water conveyed to the service area, and would be capable of water flows that meet the fire flow requirements. The State Engineer finds that the Applicant has demonstrated a need to import water.

A review of records on file in the Office of the State Engineer shows that the TPU has filed an approved water conservation plan and there are no other municipalities or major water users within the proposed place of use. The State Engineer finds that no additional plans for conservation are necessary for any of the basins into which water is to be exported.

The State Engineer must consider whether the approval of the applications is environmentally sound as it relates to the Ralston Valley Hydrographic Basin. In this case, the Applicant is not seeking a new appropriation of water. The applications are limited to the same amount of water that could be pumped today under existing Permits 69156, 69157 and 69158.

The Applicant has also prepared two technical memorandums. First, is the predicted drawdown at nearby stockwater wells and the second is related to the

⁷ See, *Phase I Alternative Water Source Assessment*, Interflow Hydrology Inc., January 27, 2011; *Summary of Phase II Alternative Municipal Water Source Evaluations: Exploration Drilling, pumping tests, and water quality analyses, Ralston Valley, Nye County, Nevada*, Interflow Hydrology Inc., June 2011; and *Final Environmental Assessment*.

ephemeral nature of Rye Patch Wash.^{8,9} A review of the Applicant's technical memorandums, along with field work conducted by the Division as part of the basin inventory,¹⁰ support the determination that the project is environmentally sound for the basin of origin. In addition, the State Engineer will have continued regulatory control over pumping under the applications to ensure the project remains environmentally sound as it relates to groundwater influenced resources. The State Engineer finds that the proposed project is environmentally sound as it relates to the Ralston Valley Hydrographic Basin.

The State Engineer must determine whether the proposed action is an appropriate long-term use that will not unduly limit the future growth and development of the Ralston Valley Hydrographic Basin. A review of the Hydrographic Basin Summary for Ralston Valley shows that the earliest currently active groundwater rights were issued for stockwater purposes in 1944. Since that time, there has been very little activity within the basin from a water rights perspective. Besides the municipal/quasi-municipal water rights, there exists only 7.86 acre-feet of groundwater for industrial purposes, 7.16 acre-feet of groundwater for irrigation purposes, and 132.42 acre-feet of groundwater for stockwater purposes. The perennial yield of the basin is estimated at 6,000 afa versus existing groundwater rights of 4,305.55 afa. Based on the lack of development within the basin from 1944 to present, the State Engineer finds that the use of water as proposed in the applications is an appropriate long-term use and will not unduly limit the future growth and development of the Ralston Valley Hydrographic Basin.

A review of the protest grounds shows that the Protestant did not raise any interbasin transfer criteria as a protest issue. A review of the interbasin transfer criteria above shows that the project meets each of the requirements for interbasin transfer; therefore, the State Engineer finds that the applications meet the requirements of NRS 533.370(3).

⁸ Jack M. Childress and Dwight L. Smith, *Technical Memorandum on Predicted Drawdown at Nearby Stockwater Wells from the Proposed Pumping under Applications 81425 to 81428*, Interflow Hydrology, April 26, 2012.

⁹ Jack M. Childress and Dwight L. Smith, *Ephemeral Nature of Rye Patch Wash, Ralston Valley, Relative to Proposed Pumping under Applications 81425 to 81428*, Interflow Hydrology, April 26, 2012.

¹⁰ *Ralston Valley Hydrographic Basin 10-141 NRS § 533.364 Inventory*, Nevada Division of Water Resources, May 2012.

III.

Applications 81425, 81426 and 81427 are not requesting a new appropriation of water. Rather, the applications are seeking to change the existing water rights of the Applicant to two new well locations where improved water quality is sought for the Town of Tonopah. The applications are an essential component of the TPU's Arsenic Treatment Plan mandated by the Nevada Division of Environmental Protection. Additionally, Application 81428 was filed for "diversion rate only" and does not request any additional duty of water above what is currently owned by the Applicant.

The State Engineer finds that the applications before him do not seek new appropriations of water. The State Engineer finds the proposed changes will have no additional impact on the Ralston Valley Hydrographic Basin.

IV.

The two proposed wells would be drilled by a licensed Nevada driller, to an approximate depth of 350 feet below ground surface and are located near TPU test well 77A. The two proposed wells are sited 150 feet apart. The reason for two wells at this location is for redundancy and water supply assurance. The wells would be constructed to federal and state regulations, including being fitted with required casings, equipped with submersible electric pumps, and capped and locked. Each well would yield an estimated 530 gallons per minute and operate concurrent with 4 existing wells at the Rye Patch well field that would be rehabilitated as part of the proposed project. An analysis of the potential impacts to existing rights was provided by Interflow Hydrology as documented in the Technical Memorandum on Predicted Drawdown.¹¹

Three stockwatering wells, Blaire Well, Henry's Well, and Graham Well, are closest to the proposed points of diversion and each has active water rights. The water rights are identified as Permit 11659 Certificate 3133, Permit 43620 Certificate 12112, and Permit 21270 Certificate 6931, respectively. The distance from the proposed points of diversion, in order, is 2.19 miles, 2.30 miles and 3.59 miles. The wells vary in depth: Blaire Well 150 feet, Henry's Well 600 feet, and Graham Well 25 feet. It is also believed there are two domestic wells near Graham Well but no well logs are on file with the

¹¹ Jack M. Childress and Dwight L. Smith, *Technical Memorandum on Predicted Drawdown at Nearby Stockwater Wells from the Proposed Pumping under Applications 81425 to 81428*, Interflow Hydrology, April 26, 2012.

Division of Water Resources. Step-drawdown and constant rate aquifer tests were conducted on TPU test well 77A, including water level response monitored in an adjacent monitoring well. The step-drawdown testing was conducted at pumping rates between 130 and 320 gallons per minute (gpm). The maximum drawdown was 7 feet at the pumping well and 0.7 feet at the monitoring well. The constant rate aquifer test was conducted over a 2.8 day period at 320 gpm. The maximum drawdown at the pumping well was 7.9 feet and 1.4 feet at the monitoring well. Transmissivity and storage coefficients were calculated and a Theis analysis was used to determine predicted drawdown at Blaire Well, Henry's Well, and Graham Well. The Theis computations were made using AQTESOLVE computer software. Various analyses were performed using different pumping scenarios and are represented graphically in the Technical Memorandum on Predicted Drawdown.¹²

Although numerous scenarios were plotted illustrating potential drawdown, the State Engineer's focus is on the maximum pumping that would be allowed under the applications. It is recognized that initially the TPU will be pumping at much lower rates than permitted because there is no demand for the full duty of water at this time. The TPU has the additional water rights to provide for future growth and development in its service area. However, the analysis of the impact of pumping the full duty of water under the applications will be used to determine if the applications will conflict with existing water rights. The total duty requested under Applications 81425, 81426, 81427 and 81428 is 2,568 afa, which equates to about 1,600 gpm. At 1,600 gpm, the computed drawdown ranges from 4 to 25 feet after 10 years and 5 to 37 feet after 100 years.¹³ Nevada Revised Statute 534.110(5) does not prevent the granting of permits to applicants later in time on the ground that the diversions under the proposed later appropriations may cause the water level to be lowered at the point of diversion of a prior appropriator, so long as any protectable interests in existing domestic wells and the rights of holders of existing appropriations can be satisfied under such express conditions. The Theis analyses do not suggest that any mitigation will be necessary in any near-term time

¹² *Ibid.*

¹³ *Ibid.*

frame.¹⁴ The State Engineer finds that the predicted drawdown at full duty is not unreasonable and will not conflict with existing rights.

V.

The protest raises concerns about impacts to water rights on Rye Patch Wash. In response, the Applicant has prepared a Technical Memorandum to address this issue.¹⁵ The conclusion of this analysis is that there is no surface water – groundwater connection associated with flows in Rye Patch Wash. The Rye Patch Wash is ephemeral, containing flow only in response to precipitation and runoff events. Therefore, the proposed pumping will have no effect on the source of surface water.

The State Engineer finds that the granting of Applications 81425, 81426, 81427 and 81428 will not conflict with any existing water rights associated with this ephemeral drainage.

VI.

The protest asks that the applications only be granted subject to the existing rights of the Protestant and additional conditions to protect its existing water rights. The applications will be subject to this ruling and to any additional conditions imposed in the permit terms. Any approval of the applications will be subject to existing water rights and quarterly monitoring of Blaire Well, Henry's Well, and Graham Well.

The State Engineer has regulatory authority to order mitigation should any unanticipated impacts to the stockwater wells occur. Mitigation may include, but are not limited to, deepening an existing well, lowering the pump, or drilling a replacement well.

The State Engineer finds that Applications 81425, 81426, 81427 and 81428 can be approved under express conditions. The State Engineer finds that the three stockwater wells and the two domestic wells are located beyond the 2,500 foot statutory requirements in NRS § 534.110(3) and (5).

¹⁴ Ibid, p. 6.

¹⁵ Jack M. Childress and Dwight L. Smith, *Ephemeral Nature of Rye Patch Wash, Ralston Valley, Relative to Proposed Pumping under Applications 81425 to 81428*, Interflow Hydrology, April 26, 2012.

CONCLUSIONS

I.

The State Engineer has jurisdiction over the parties and the subject matter of this action and determination.¹⁶

II.

The State Engineer is prohibited by law from granting a permit to appropriate the public waters where:¹⁷

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

III.

Based on the findings contained herein, the State Engineer concludes that change Applications 81425, 81426, 81427 and 81428 will not conflict with existing rights and protectible interests in existing domestic wells, and will not threaten to prove detrimental to the public interest.

IV.

The Nevada Revised Statutes require the State Engineer to consider the following points when an interbasin transfer of water is proposed by a water right application:¹⁸

- A. Whether the applicant has justified the need to import 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 factor the State Engineer determines to be relevant.

¹⁶ NRS Chapters 533 and 534.

¹⁷ NRS § 533.370(2).

¹⁸ NRS § 533.370(3).

V.

The State Engineer concludes that based on the findings the Applicant has met the additional statutory criteria required for an interbasin transfer of water from Ralston Valley; therefore, Applications 81425, 81426, 81427 and 81428 can be considered for approval.

RULING

The protests are overruled and Applications 81425, 81426, 81427 and 81428 are hereby approved subject to:

1. Existing rights;
2. Payment of the statutory permit fees; and
3. Quarterly monitoring of Blaire Well, Henry's Well, and Graham Well.

Respectfully submitted,


JASON KING, P.E.
State Engineer

Dated this 18th day of
June, 2012.