

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

IN THE MATTER OF APPLICATIONS)
71174, 71175, 71176, 71177, 71178, 71179)
AND 71180 FILED TO APPROPRIATE)
THE PUBLIC WATERS OF AN)
UNDERGROUND SOURCE WITHIN THE)
AMARGOSA DESERT HYDROGRAPHIC)
BASIN (230), NYE COUNTY, NEVADA.)

RULING
5971

GENERAL

I.

Application 71174 was filed on May 6, 2004, by Hidden Ridge, LLC / Vidler Water Company, Inc., to appropriate 1.7 cubic feet per second (cfs), of underground water for municipal purposes within the Pahrump Valley Hydrographic Basin. The proposed point of diversion is described as being located within the SE $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 24, T.16S., R.53E., M.D.B.&M.¹

II.

Application 71175 was filed on May 6, 2004, by Hidden Ridge, LLC / Vidler Water Company, Inc., to appropriate 1.7 cfs of underground water for municipal purposes within the Pahrump Valley Hydrographic Basin. The proposed point of diversion is described as being located within the NW $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 23, T.16S., R.53E., M.D.B.&M.²

III.

Application 71176 was filed on May 6, 2004, by Hidden Ridge, LLC / Vidler Water Company, Inc., to appropriate 1.7 cfs of underground water for municipal purposes within the Pahrump Valley Hydrographic Basin. The proposed point of diversion is described as being located within the SW $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 12, T.16S., R.53E., M.D.B.&M.³

IV.

Application 71177 was filed on May 6, 2004, by Hidden Ridge, LLC / Vidler Water Company, Inc., to appropriate 1.7 cfs of underground water for municipal purposes

¹ File No. 71174, official records in the Office of the State Engineer.

² File No. 71175, official records in the Office of the State Engineer.

³ File No. 71176, official records in the Office of the State Engineer.

within the Pahrump Valley Hydrographic Basin. The proposed point of diversion is described as being located within the SE¼ NE¼ of Section 1, T.16S., R.53E., M.D.B.&M.⁴

V.

Application 71178 was filed on May 6, 2004, by Hidden Ridge, LLC / Vidler Water Company, Inc., to appropriate 1.7 cfs, of underground water for municipal purposes within the Pahrump Valley Hydrographic Basin. The proposed point of diversion is described as being located within the SE¼ NW¼ of Section 16, T.16S., R.53E., M.D.B.&M.⁵

VI.

Application 71179 was filed on May 6, 2004, by Hidden Ridge, LLC / Vidler Water Company, Inc., to appropriate 1.7 cfs, of underground water for municipal purposes within the Pahrump Valley Hydrographic Basin. The proposed point of diversion is described as being located within the SW¼ NW¼ of Section 9, T.16S., R.53E., M.D.B.&M.⁶

VII.

Application 71180 was filed on May 6, 2004, by Hidden Ridge, LLC / Vidler Water Company, Inc., to appropriate 1.7 cfs, of underground water for municipal purposes within the Pahrump Valley Hydrographic Basin. The proposed point of diversion is described as being located within the SE¼ NE¼ of Section 4, T.16S., R.53E., M.D.B.&M.⁷

VIII.

Application 71174 was timely protested by the Funeral Mountain Ranch on grounds that will not be considered in this ruling.¹

IX.

Application Nos. 71174, 71175, 71176, 71177, 71178, 71179 and 71180 were timely protested by the Nevada Water Committee on the following grounds as summarized:^{1,2,3,4,5,6,7}

⁴ File No. 71177, official records in the Office of the State Engineer.

⁵ File No. 71178, official records in the Office of the State Engineer.

⁶ File No. 71179, official records in the Office of the State Engineer.

⁷ File No. 71180, official records in the Office of the State Engineer.

- There is no unappropriated water at the proposed source.
- The approval and development of the applications would adversely impact the water resources of the Amargosa Valley.
- The approval of the applications would sanction water mining, which is contrary to Nevada law.
- The approval of the applications is detrimental to the public welfare and interest.
- The Applicant has not obtained a legal interest in the public lands needed to extract, develop, transport and apply water from the proposed points of diversion to proposed place of use.
- The applications were filed for speculative purposes.
- Similar water right applications have been previously denied by the State Engineer.
- The approval of the applications would have an adverse impact on the area's economy.
- The Applicant has shown no need for such a quantity of water.

X.

Application Nos. 71174, 71175, 71176, 71177, 71178, 71179 and 71180 were timely protested by the U.S. National Park Service on the following grounds as summarized:^{1,2,3,4,5,6,7}

- There is no unappropriated water at the proposed source.
- The approval and development of these applications will impair the senior water rights of the United States.
- The public interest would not be served by granting these permits because the water and water-related resources of the Death Valley National Park would be diminished or impaired, the aesthetic value of the park would be reduced.

XI.

Application Nos. 71174, 71175, 71176, 71177, 71178, 71179 and 71180 were timely protested by the U.S. Fish and Wildlife Service on the following grounds as summarized:^{1,2,3,4,5,6,7}

- Water may not be available to appropriate in the manner described.
- Granting of these applications may cause injury to Service-owned senior water rights for water on the Ash Meadows NWR.
- Granting of these applications may threaten or damage habitat for species that are endangered, threatened, or considered for future listing under the Endangered Species Act and, therefore, may not be in the public interest.

FINDINGS OF FACT

I.

State Engineer's Order No. 724, issued May 14, 1979, described and designated the majority of the Amargosa Desert Hydrographic Basin as a ground-water basin in need of additional administration under the provisions of NRS § 534.030.⁸ In the Memorandum of Decision and Order in Civil Case No. 8801, Marville Stewart et al. v. William J. Newman, State Engineer, in the District Court of the Fifth Judicial District of the State of Nevada, in and for the County of Nye, the Order dated May 14, 1979, designating a portion of the Amargosa Desert Hydrographic Basin, was affirmed.

All water right applications that are filed in the Office of the State Engineer are subjected to a simple analysis to determine the locations of the proposed points of diversion. The description of the proposed points of diversion found within Applications 71174, 71175, 71176, 71177, 71178, 71179 and 71180 and their supporting maps were used to plot the locations of the proposed well sites. These locations were found to be within the designation portion of the Amargosa Desert Hydrographic Basin.

The State Engineer finds that Applications 71174, 71175, 71176, 71177, 71178, 71179 and 71180 all have proposed points of diversion that are located within the hydrologic boundaries of the designated portion of the Amargosa Desert Hydrographic Basin.

II.

An examination of the records of the Office of the State Engineer identified numerous water right applications with proposed points of diversion located within the Amargosa Desert Hydrographic Basin that have been denied. Amongst this group of denied applications are several, which requested new appropriations of underground water for municipal purposes.⁹ The State Engineer finds that previous applications to appropriate additional underground water for municipal purposes have been denied in the Amargosa Desert Hydrographic Basin.

⁸ State Engineer's Order No. 724, issued May 14, 1979, official records in the Office of the State Engineer.

⁹ State Engineer's Ruling Nos. 4548 and 5750 issued July 25, 1997, and July 16, 2007, respectively, official records in the Office of the State Engineer.

III.

The Nevada Revised Statutes (NRS) chapters 533 and 534 and the policies developed by the Office of the State Engineer control the appropriation of water within the State of Nevada. Under the provisions found under NRS § 533.370(5), before an application that requests a new appropriation of underground water can be considered for approval it must be determined, amongst other things, that there is unappropriated water available at the targeted source. The answer to the question of what amount of underground water is available for additional appropriation from the Amargosa Desert Hydrographic Basin can be found in an analysis of the basin's recharge-discharge relationship. Central to this equation is the concept of the perennial yield of the Amargosa Desert Hydrographic Basin.

The perennial yield of a ground-water reservoir may be defined as the maximum amount of ground water that can be salvaged each year over the long term without depleting the ground-water reservoir. Perennial yield is ultimately limited to the maximum amount of natural discharge that can be salvaged for beneficial use. The perennial yield cannot be more than the natural recharge to a ground-water basin and in some cases is less. If the perennial yield is exceeded, ground-water levels will decline and steady-state conditions will not be achieved, a situation commonly referred to as ground-water mining. Additionally, withdrawals of ground water in excess of the perennial yield may contribute to adverse conditions such as water quality degradation, storage depletion, diminishing yield of wells, increased economic pumping lifts, and land subsidence.¹⁰

The United States Geological Survey (USGS) estimates the perennial yield of the Amargosa Desert Hydrographic Basin as follows:¹¹

The physical conditions in Amargosa Desert suggest that the estimate of discharge is the better basis on which to estimate perennial yield in the light of present information. Thus, the tentative perennial yield may be about 24,000 acre-feet per year. Of this, about 17,000 acre-feet can be obtained by full development of the springs in Ash Meadows. The remaining amount would be available for development by wells largely in the area northwest and northeast of the springs. Unused discharge from

¹⁰ Office of the State Engineer, *Water for Nevada, State of Nevada Water Planning Report No. 3*, p. 13, Oct. 1971.

¹¹ George E. Walker and Thomas E. Eakin, *Geology and Groundwater of Amargosa Desert, Nevada-California*, Ground-Water Resources – Reconnaissance Series Report 14, (Department of Conservation and Natural Resources and the U.S. Geological Survey), p. 29, 1963.

the springs that is returned to the ground-water reservoir downgradient from the springs toward Death Valley Junction could be withdrawn for use. However, the chemical quality generally becomes progressively poorer by this recycling and the suitability for the intended use should be evaluated carefully.

The Office of the State Engineer has for many years relied upon the USGS' estimates of perennial yield. These estimates are critical in determining the degree of regulation, which must be placed upon a ground-water basin's limited underground water resources. An examination of records on file in the Office of the State Engineer indicates that the Amargosa Desert Hydrographic Basin ground-water recharge from precipitation is 600 acre-feet per year (afa), ground-water inflow from Mercury Valley, Rock Valley, Jackass Flats, and Crater Flat totals 44,000 afa, ground-water evapotranspiration (ET) is 24,000 afa, and subsurface outflow is 19,000 afa to the Death Valley area.¹² The State Engineer finds the perennial yield of the Amargosa Desert Hydrographic Basin is currently estimated at 24,000 afa.

IV.

Under NRS § 533.370(5), the first criteria that must be considered in the issuance of any new water appropriation is a determination of whether water is available at the source. The State Engineer has previously ruled in 2007, that there was no unappropriated water in the Amargosa Desert Hydrographic Basin.¹³ While this fact remains true, it is useful to revisit the committed resource – perennial yield issue, as it relates to this new set of applications.

It has already been accepted that the perennial yield of the Amargosa Hydrographic Basin is approximately 24,000 afa. To determine whether water is available for additional appropriations, the combined annual duties of all of the active water right permits and certificates that have been issued for all manners of use within the valley must be subtracted from the perennial yield. In addition, consideration must be given to the amount of underground water that is appropriated by the ground-water basin's domestic well users each year.

¹² State Engineer's office, *Water for Nevada, State of Nevada Water Planning Report No. 3*, p. 50, Oct. 1971.

¹³ State Engineers Ruling No. 5750, issued July 16, 2007, official records in the Office of the State Engineer.

The following table illustrates the imbalance that exists between committed resources and the perennial yield within the Amargosa Desert Hydrographic Basin and also illustrates the potential increase in this imbalance created by Applications 71174, 71175, 71176, 71177, 71178, 71179 and 71180.

	Committed Resources (afa)	Perennial Yield (afa)	Imbalance (afa)
Existing Ground-water Rights	27,636	-----	-----
Existing Domestic Wells	962	-----	-----
Total Committed Ground Water	28,598	24,000*	-4,598
Applicants' total requested appropriations	8,615	-----	-8,615
Totals	-----	-----	-13,213

*Combined 7,000 acre-feet annually potentially available for pumping from the underground water in Amargosa Desert and 17,000 acre-feet annually discharged by the springs in Ash Meadows.¹⁴ Note, the 17,000 acre-feet annually discharged by springs in Ash Meadows is used to satisfy the certificated rights of the United States Fish and Wildlife Service for wildlife purposes.

Based upon the information presented in the above table, two findings can be made by the State Engineer, these being:

1. There is no unappropriated underground water remaining in the Amargosa Valley Hydrographic Basin to support the subject applications.
2. The approval of Applications 71174, 71175, 71176, 71177, 71178, 71179 and 71180 would increase the imbalance that exists between the ground-water basin's perennial yield and its committed ground-water resource.

V.

On November 11, 2008, the State Engineer signed Order No. 1197, which established a new set of criteria regarding the transfer and appropriation of underground water within the Amargosa Desert Hydrographic Basin.¹⁵ Under the provisions of this order, all water right applications that requested more than 2.0 acre feet of underground water from within a 25 mile radius from Devil's Hole would be denied. An exception

¹⁴ George E. Walker and Thomas E. Eakin, *Geology and Groundwater of Amargosa Desert, Nevada-California* Ground-Water Resources – Reconnaissance Series Report 14, (Department of Conservation and Natural Resources and the U.S. Geological Survey), Foreword and p. 29, 1963.

¹⁵ State Engineer's Order No. 1197, issued November 4, 2008, official records in the Office of the State Engineer.

was made for environmental applications that were filed under NRS § 533.437 through NRS § 533.4377.

If the proposed points of diversion of the subject applications are plotted on the appropriate map, it can be determined that all of them fall within the 25 mile radius described under State Engineer's Order No. 1197. Being subject to State Engineer's Order No. 1197, the State Engineer finds that the amount of water and the manner of use requested by the Applicant does not meet the guidelines set forth by the order.

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 an application 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.

The State Engineer concludes that previous applications, similar to Applications 71174, 71175, 71176, 71177, 71178, 71179 and 71180 have been denied for municipal purposes in the Amargosa Desert Hydrographic Basin; therefore, these applications may be considered for denial.

IV.

The State Engineer concludes 27,636 afa is currently committed in the form of existing ground-water rights and an additional 962 afa is necessary to meet the potential demand for existing domestic wells. The estimated perennial yield is only 24,000 afa and includes 17,000 afa of discharge from springs in Ash Meadows. The committed ground-water resources of the Amargosa Desert Hydrographic Basin currently exceed the ground-water basin's estimated perennial yield. Applications 71174, 71175, 71176,

¹⁶ NRS chapters 533 and 534.

¹⁷ NRS § 533.370(5).

71177, 71178, 71179 and 71180 would increase the demand on the Amargosa Desert Hydrographic Basin's ground-water resources by 8,615 afa. The State Engineer concludes that the approval of any of the subject applications would result in the withdrawal of substantial amounts of ground water in excess of the perennial yield of the Amargosa Desert Hydrographic Basin and therefore, would adversely affect existing rights and would threaten to prove detrimental to the public interest.

V.

The State Engineer concludes that to grant permits on the applications in an over-appropriated ground-water basin would interfere with the existing water rights of the Protestants; thus, mandating under Nevada law that the State Engineer deny said applications.

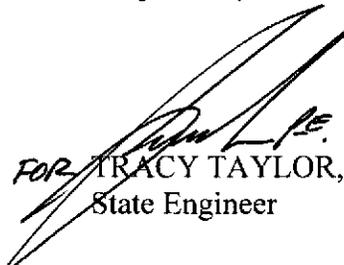
VI.

The State Engineer concludes that the approval of the subject applications would violate State Engineer's Order No. 1197.

RULING

The protests to Applications 71174, 71175, 71176, 71177, 71178, 71179 and 71180 are hereby upheld in part, and Applications 71174, 71175, 71176, 71177, 71178, 71179 and 71180 are hereby denied on the grounds that there is no unappropriated underground water at the source; their approval would conflict with existing rights and would threaten to prove detrimental to the public interest.

Respectfully submitted,


FOR TRACY TAYLOR, P.E.
State Engineer

TT/MB/jm

Dated this 17th day of
April, 2009.