

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

IN THE MATTER OF APPLICATIONS 77492, )  
77493, 77494 AND 77495 FILED TO )  
APPROPRIATE THE PUBLIC WATERS OF )  
AN UNDERGROUND SOURCE WITHIN THE )  
WALKER LAKE VALLEY HYDROGRAPHIC )  
BASIN, WHISKEY FLAT - HAWTHORNE )  
SUBAREA (110C), MINERAL COUNTY, )  
NEVADA. )

**RULING**  
**#6170**

**GENERAL**

**I.**

Application 77492 was filed on October 15, 2008, by Hawthorne Geothermal, LLC to appropriate 3.34 cubic feet per second (cfs) of water from an underground source for industrial purposes. The proposed place of use is described as being located within portions of the E $\frac{1}{2}$  of Section 12, E $\frac{1}{2}$ , SE $\frac{1}{4}$  NW $\frac{1}{4}$ , E $\frac{1}{2}$  SW $\frac{1}{4}$  of Section 13, all of Sections 24 and 25, E $\frac{1}{2}$  E $\frac{1}{2}$  of Section 26, T.5N., R.30E., M.D.B.&M., all of Sections 16 through 21, and Sections 29 and 30, T.5N., R.31E., M.D.B.&M. The proposed point of diversion is described as being located within the NE $\frac{1}{4}$  NE $\frac{1}{4}$  of Section 18, T.5N., R.31E., M.D.B.&M.<sup>1</sup>

**II.**

Application 77493 was filed on October 15, 2008, by Hawthorne Geothermal, LLC to appropriate 3.34 cfs of water from an underground source for industrial purposes. The proposed place of use is described as being located within portions of the E $\frac{1}{2}$  of Section 12, E $\frac{1}{2}$ , SE $\frac{1}{4}$  NW $\frac{1}{4}$ , E $\frac{1}{2}$  SW $\frac{1}{4}$  of Section 13, all of Sections 24 and 25, E $\frac{1}{2}$  E $\frac{1}{2}$  of Section 26, T.5N., R.30E., M.D.B.&M., all of Sections 16 through 21, and Sections 29 and 30, T.5N., R.31E., M.D.B.&M. The proposed point of diversion is described as being located within the SE $\frac{1}{4}$  NE $\frac{1}{4}$  of Section 18, T.5N., R.31E., M.D.B.&M.<sup>2</sup>

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<sup>1</sup> File No. 77492, official records in the Office of the State Engineer.

<sup>2</sup> File No. 77493, official records in the Office of the State Engineer.

### III.

Application 77494 was filed on October 15, 2008, by Hawthorne Geothermal, LLC to appropriate 3.34 cfs of water from an underground source for industrial purposes. The proposed place of use is described as being located within portions of the E½ of Section 12, E½, SE¼ NW¼, E½ SW¼ of Section 13, all of Sections 24 and 25, E½ E½ of Section 26, T.5N., R.30E., M.D.B.&M., all of Sections 16 through 21, and Sections 29 and 30, T.5N., R.31E., M.D.B.&M. The proposed point of diversion is described as being located within the NE¼ SE¼ of Section 18, T.5N., R.31E., M.D.B.&M.<sup>3</sup>

### IV.

Application 77495 was filed on October 15, 2008, by Hawthorne Geothermal, LLC to appropriate 3.34 cfs of water from an underground source for industrial purposes. The proposed place of use is described as being located within portions of the E½ of Section 12, E½, SE¼ NW¼, E½ SW¼ of Section 13, all of Sections 24 and 25, E½ E½ of Section 26, T.5N., R.30E., M.D.B.&M., all of Sections 16 through 21, and Sections 29 and 30, T.5N., R.31E., M.D.B.&M. The proposed point of diversion is described as being located within the SE¼ SE¼ of Section 18, T.5N., R.31E., M.D.B.&M.<sup>4</sup>

## **FINDINGS OF FACT**

### I.

The State Engineer finds that Order No. 823 was issued on September 9, 1983, designating and describing the Walker Lake Valley, Whiskey Flat – Hawthorne Subarea Hydrographic Basin (Whiskey Flat – Hawthorne Subarea) as a groundwater basin in need of additional administration coming under the provision of Nevada Revised Statutes (NRS) § 534.120.<sup>5</sup> The State Engineer finds that Applications 77492, 77493, 77494 and 77495 have proposed points of diversion located within the hydrologic boundaries of this designated basin.

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<sup>3</sup> File No. 77494, official records in the Office of the State Engineer.

<sup>4</sup> File No. 77495, official records in the Office of the State Engineer.

<sup>5</sup> See, State Engineer's Order No. 823, September 9, 1983, official records in the Office of the State Engineer.

### III.

An examination of the records of the Office of the State Engineer identified water rights applications with proposed points of diversion located within the Whiskey Flat – Hawthorne Subarea that have been denied, in part, on the basis that existing water rights exceed the estimated perennial yield of the groundwater basin.<sup>6</sup> In State Engineer’s Ruling No. 3364, then Protestant Sweetwater Ranch Company, protested the appropriation of additional groundwater, in part, on the basis that there was no unappropriated groundwater in the proposed source of supply. The State Engineer upheld the protest of the Sweetwater Ranch Company and denied Applications 32090, 32421, 32423, 32578, 32595, 32596, 32930 and 34639 within the Whiskey Flat – Hawthorne Subarea. Under Applications 77492, 77493, 77494 and 77495, Applicant Hawthorne Geothermal, LLC, seeks to appropriate a total of 13.36 cfs of water (4,585 acre-feet annually (afa)) from the same groundwater source.

The State Engineer finds that previous applications to appropriate additional water within the Whiskey Flat – Hawthorne Subarea have been denied.

### III.

The perennial yield of a groundwater reservoir may be defined as the maximum amount of groundwater that can be salvaged each year over the long term without depleting the groundwater reservoir. 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 groundwater basin and in some cases is less. If the perennial yield is exceeded, groundwater levels will decline and steady-state conditions will not be achieved, a situation commonly referred to as groundwater mining. Additionally, withdrawals of groundwater 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.<sup>7</sup>

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<sup>6</sup> State Engineer’s Ruling No. 3364, July 10, 1986, official record in the Office of the State Engineer.

<sup>7</sup> Office of the State Engineer, *Water for Nevada, State of Nevada Water Planning Report No. 3*, p. 13, Oct. 1971.

The Division of Water Resources estimates the perennial yield of the Whiskey Flat – Hawthorne Subarea is approximately 5,000 afa.<sup>8</sup> The committed groundwater resource in the form of permits and certificates issued by the State Engineer to appropriate underground water from the Whiskey Flat – Hawthorne Subarea currently totals about 12,709 afa, which reduces to 11,189 afa,<sup>9</sup> less 1,520 afa of geothermal water under Permit 48897.<sup>10</sup> The State Engineer finds that existing groundwater rights in the Whiskey Flat – Hawthorne Subarea exceed the perennial yield of the groundwater basin, excluding any domestic wells.

### CONCLUSIONS

#### I.

The State Engineer has jurisdiction over the parties and the subject matter of this action and determination.<sup>11</sup>

#### II.

The State Engineer is prohibited by law from granting a permit under an application to appropriate the public waters where:<sup>12</sup>

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

#### III.

The committed groundwater resource of the Whiskey Flat – Hawthorne Subarea exceeds the groundwater basin's estimated perennial yield. The State Engineer concludes that the approval of Applications 77492, 77493, 77494 and 77495 would add to this

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<sup>8</sup> D.E. Everett and F. Eugene Rush, *A Brief Appraisal of the Water Resources of the Walker Lake Area, Mineral, Lyon and Churchill Counties, Nevada*, Water Resources-Reconnaissance Series Report 40 (Department of Conservation and Natural Resources and U.S. Department of Interior, Geological Survey), p. 27, February 1967.

<sup>9</sup> Special Hydrographic Basin Abstract, Water Rights Database, Whiskey Flat – Hawthorne Subarea (110C), March 24, 2011, official records in the Office of the State Engineer.

<sup>10</sup> File No. 48897, official records in the Office of the State Engineer.

<sup>11</sup> NRS Chapters 533 and 534.

<sup>12</sup> NRS § 533.370(5).

imbalance and conflict with existing permits, which appropriate underground water from the Whiskey Flat – Hawthorne Subarea.

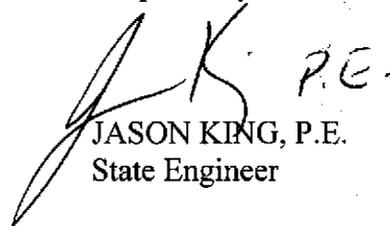
**IV.**

The State Engineer concludes that the approval of Applications 77492, 77493, 77494 and 77495 would result in the withdrawal of groundwater in excess of the perennial yield; therefore, to grant the application would conflict with existing water rights and would threaten to prove detrimental to the public interest.

**RULING**

Applications 77492, 77493, 77494 and 77495 are hereby denied on the grounds that there is no unappropriated water at the proposed source in quantities available to support the applications and their approval would conflict with existing water rights and would threaten to prove detrimental to the public interest.

Respectfully submitted,

 P.E.  
JASON KING, P.E.  
State Engineer

Dated this 27th day of  
April, 2012.