

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

IN THE MATTER OF APPLICATION 63479 )  
FILED TO APPROPRIATE THE PUBLIC )  
WATERS OF AN UNDERGROUND )  
SOURCE WITHIN THE MARYS RIVER )  
AREA HYDROGRAPHIC BASIN (42), )  
ELKO COUNTY, NEVADA. )

**RULING**

**#5276**

**GENERAL**

**I.**

Application 63479 was filed on October 3, 1997, by Larry W. and Linda E. Thompson to appropriate 2.5 cubic feet per second (cfs) of underground water for irrigation purposes within portions of the NW $\frac{1}{4}$  SE $\frac{1}{4}$ , NE $\frac{1}{4}$  SE $\frac{1}{4}$ , SE $\frac{1}{4}$  SE $\frac{1}{4}$  of Section 35, T.37N., R.58E., M.D.B.&M. The proposed point of diversion is described as being located within the SW $\frac{1}{4}$  SE $\frac{1}{4}$  of said Section 35.<sup>1</sup>

**FINDINGS OF FACT**

**I.**

State Engineer's Order No. 837, issued February 14, 1984, described and designated the Marys River Area Hydrographic Basin as a groundwater basin in need of additional administration under the provisions of NRS § 534.030.<sup>2</sup> The State Engineer finds that Application 63479 has a proposed point of diversion and place of use that are located within the hydrologic boundaries of the designated Marys River Area Hydrographic Basin.

**II.**

The State Engineer finds that previous applications for irrigation have been denied in the Marys River Area Hydrographic Basin.<sup>3</sup>

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<sup>1</sup> File No. 63479, official records in the Office of the State Engineer.

<sup>2</sup> State Engineer's Order No. 837, issued February 14, 1984, official records in the Office of the State Engineer.

<sup>3</sup> State Engineer's Ruling No. 3047 dated October 26, 1984, official records in the Office of the State Engineer.

### III.

The perennial yield of a hydrologic system is the maximum amount of water of usable chemical quality that can be consumed economically each year for an indefinite period of time. If the perennial yield is continually exceeded, groundwater levels will decline until the groundwater reservoir is depleted of water of a usable quality or until the pumping lifts become uneconomical to maintain. Perennial yield cannot exceed the natural replenishment to an area indefinitely and is ultimately limited to the maximum amount of natural discharge that can be salvaged for beneficial use.

Withdrawals of groundwater in excess of the perennial yield contribute to adverse conditions such as water quality degradation, storage depletion, diminishing yield of wells, increased economic pumping lifts, land subsidence, and possible reversal of groundwater gradients which could result in significant changes in the recharge-discharge relationship.<sup>4</sup>

### IV.

At the public hearing held by the State Engineer on November 17, 1983, in the matter of the consideration of the designation of the Marys River Sub-Basin as a groundwater basin in need of additional administration under the provisions of NRS chapter 534, a representative of the U. S. Geological Survey gave testimony as to their recent re-evaluation of the Marys River Sub-Basin. The re-evaluation determined the annual groundwater recharge to be 54,000 acre-feet per year with approximately 22,000 acre-feet per year leaving the basin as groundwater discharge to the Humboldt River system. The amount of ground water leaving the sub-basin as discharge to the Humboldt River system is determined by a stream flow gage at Deeth, Nevada. The remaining 32,000 acre-feet per year could be considered to be the estimated perennial yield of the groundwater system.<sup>5</sup>

A review of records in the Office of the State Engineer show the committed groundwater resources for the Marys River Area Hydrographic Basin, to be over 35,000 acre-feet annually.<sup>6</sup>

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<sup>4</sup> State Engineer's office, Water for Nevada, State of Nevada Water Planning Report No. 3, p. 13, Oct. 1971.

<sup>5</sup> State Engineer's Ruling No. 3047, dated Oct 26, 1984, official records in the Office of the State Engineer.

<sup>6</sup> Nevada Division of Water Resources Water Rights Database, Hydrographic Basin Summary for Marys River Area, April 2, 2003.

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The State Engineer finds that permits and certificates have been issued under existing rights for more than the estimated perennial yield from the groundwater system within the Marys River Area Hydrographic Basin.

### CONCLUSIONS

#### I.

The State Engineer has jurisdiction over the parties and the subject matter of this action and determination.<sup>7</sup>

#### II.

The State Engineer is prohibited by law from granting an application to appropriate the public waters where:<sup>8</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 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 have been denied for similar uses in the Marys River Area Hydrographic Basin; therefore, Application 63479 may be considered for denial.

#### IV.

The committed groundwater resources of the Marys River Area Hydrographic Basin currently exceed the groundwater basin's estimated perennial yield. The State Engineer concludes that the approval of the subject application would result in the withdrawal of substantial amounts of ground water for irrigation purposes in excess of the perennial yield of the Marys River Area Hydrographic Basin and therefore would conflict with existing rights and threaten to prove detrimental to the public interest.

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<sup>7</sup> NRS chapters 533 and 534.

<sup>8</sup> NRS § 533.370(3).

RULING

Application 63479 is hereby denied on the grounds that its approval would conflict with existing rights and threaten to prove detrimental to the public interest.

Respectfully submitted,

A handwritten signature in cursive script that reads "Hugh Ricci, P.E.".

HUGH RICCI, P.E.  
State Engineer

HR/TW/jm

Dated this 8th day of  
September, 2003.