

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

IN THE MATTER OF APPLICATION 85349)
FILED TO APPROPRIATE THE)
UNDERGROUND WATERS WITHIN THE)
LAMOILLE VALLEY HYDROGRAPHIC)
BASIN (45), ELKO COUNTY, NEVADA.)

RULING

#6357

GENERAL

I.

Application 85349 was filed on July 27, 2015, by The Kenneth Lee Hirst and Susan Kennedy Revocable Living Trust, Susan Kennedy, Trustee to appropriate 1.0 cubic foot per second of groundwater for irrigation purposes from January 1 through December 31 of each year within the Lamoille 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 24, T.33N., R.57E., M.D.B.&M. The proposed place of use is described as being 22 acres located within portions of the NW $\frac{1}{4}$ of said Section 24.¹

FINDINGS OF FACT

I.

The proposed point of diversion is located within 1,800 feet east of Rabbit Creek and 5,000 feet west of Lamoille Creek in the Lamoille Valley, which are tributary to the Humboldt River, a fully decreed surface-water source.

Pumping from wells located near a surface-water source can induce recharge in excess of naturally occurring stream infiltration by increasing the hydraulic gradient between the stream channel and the well. This occurs regardless of when the stream is flowing, because groundwater storage depletion caused by pumping in one season will be replaced by enhanced recharge in the following season.

The proposed point of diversion is located close to surface-water sources that are tributary to the Humboldt River; therefore, the amount of any water that may be captured from the stream was estimated using Glover's solution.² For this analysis, transmissivity was estimated to be between 300 and 700 ft²/day and the storage coefficient was estimated to be 0.15 for the proposed point of diversion.³ The State Engineer finds that the Glover's analysis demonstrates that after a period of five years, reduction in

¹ File No. 85349, official records in the Office of the State Engineer.

² Glover, R. E., and C.G. Balmer, 1954, *River depletion resulting from pumping a well near a river*. Am. Geophysical Union Trans. v. 35; no. 3: 468-470; and see also, Jenkins, C.T., 1968, *Techniques of water-resources investigations of the United State Geological Survey* (Computation of rate and volume of stream depletion by wells). United States Geological Survey. Book 4, ch. D1; p. 17.

³ See Memorandum to file dated May 27, 2016, File No. 85349, official records in the Office of the State Engineer.

stream flow caused by pumping from the proposed well under Application 85349 would be 50-65% of the pumped rate.

CONCLUSIONS OF LAW

I.

The State Engineer has jurisdiction over the parties and the subject matter of this action and determination.⁴

II.

The State Engineer is prohibited by law from granting a permit under an application to appropriate the public waters where:⁵

- 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.

Glover's analysis demonstrates that after a period of five years, Application 85349 would capture between 50-65% of the pumped rate from the surface-water source, which has existing senior decreed rights; therefore, the State Engineer concludes that Application 85349 will conflict with existing rights.

RULING

Application 85349 is hereby denied on the grounds that approval of the application would conflict with existing rights and that the use of water under the application would threaten to prove detrimental to the public interest.

Respectfully submitted,

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

Dated this 18th day of
August, 2016.

⁴ NRS Chapters 533 and 534.

⁵ NRS § 533.370(2).