

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

IN THE MATTER OF APPLICATION 85385 FILED)
TO APPROPRIATE THE UNDERGROUND)
WATERS WITHIN THE SOUTH FORK AREA)
HYDROGRAPHIC BASIN (46), ELKO COUNTY,)
NEVADA.)

RULING

#6362

GENERAL

I.

Application 85385 was filed on August 14, 2015, by Lehi Mink Farm, L.L.C. to appropriate 4.5 cubic feet per second of groundwater for irrigation purposes from January 1 through December 31 of each year within the South Fork Area Hydrographic Basin. The proposed point of diversion is described as being located within the SW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 23, T.31N., R.56E., M.D.B.&M. The proposed place of use is described as being 260 acres located within Section 23, T.31N., R.56E., M.D.B.&M.¹

FINDINGS OF FACT

I.

Application 85385 was filed for a non-supplemental groundwater right near Rattlesnake Creek and the South Fork of 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 2,000 ft²/day and the hydraulic conductivity and specific yield for the area were estimated to be 10 ft/day and 0.15 (15%) respectively for the proposed point of diversion.³ The State Engineer finds that the

¹ File No. 85385, 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 January 28, 2016, File No. 85385, official records in the Office of the State Engineer.

Glover's analysis demonstrates that after a period of five years, reduction in stream flow caused by pumping from the proposed well under Application 85385 would be 22% 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.

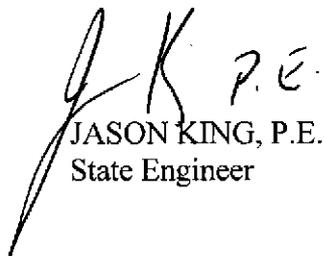
III.

Glover's analysis demonstrates that after a period of five years, a well pumped under Application 85385 would capture 22% of the pumped rate from the surface-water source, which has existing senior decreed rights; therefore, the State Engineer concludes that Application 85385 will conflict with existing rights and threaten to prove detrimental to the public interest.

RULING

Application 85385 is hereby denied on the grounds that approval of the application would conflict with existing rights and would threaten to prove detrimental to the public interest.

Respectfully submitted,


JASON KING, P.E.
State Engineer

Dated this 9th day of
September, 2016.

⁴ NRS Chapters 533 and 534.

⁵ NRS § 533.370(2).