

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

IN THE MATTER OF APPLICATION 83205)
FILED TO APPROPRIATE THE PUBLIC)
WATERS OF AN UNDERGROUND)
SOURCE WITHIN THE HUNTINGTON)
VALLEY HYDROGRAPHIC BASIN (47),)
ELKO COUNTY, NEVADA.)

RULING

#6345

GENERAL

I.

Application 83205 was filed on October 24, 2013, by David M. Little, Jr. and Bonnie Little to appropriate 1.5 cubic feet per second, of groundwater for irrigation purposes. The proposed point of diversion is described as being located within the NE $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 1, T.28N., R.56E., M.D.B.&M. The proposed place of use is described as being located within the E $\frac{1}{2}$ NW $\frac{1}{4}$, W $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NE $\frac{1}{4}$ and E $\frac{1}{2}$ SE $\frac{1}{4}$ of Section 35, S $\frac{1}{2}$ S $\frac{1}{2}$ of Section 36, T.29N., R.56E., M.D.B.&M.; and the N $\frac{1}{2}$ N $\frac{1}{2}$ of Section 1, NE $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 2, T.28N., R.56E., M.D.B.&M. On the application under item #12, the Applicant states that the water sought to be appropriated will be used as a supplemental groundwater right to the Humboldt River Decree Proof No. 00664.¹

FINDINGS OF FACT

I.

Application 83205 was filed for a supplemental groundwater right to the South Fork of Smith Creek, Claim No. 00664 of the Bartlett Decree (Claim No. 00664).² The proposed point of diversion is located within 100 feet of the South Fork of Smith Creek a.k.a. Toyn Creek.

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

¹ File No. 83205, official records in the Office of the State Engineer.

² Claim No. 00664, Bartlett Decree, incorporated as Section 1 into the Decree entered in *In the Matter of the Determination of the Relative Rights of the Waters of the Humboldt River Stream System and Tributaries*, Case No. 2804, Sixth Judicial District Court of the State of Nevada, In and For the County of Humboldt (October 20, 1931).

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 a decreed surface-water source; therefore, the amount of any water which may be captured from the stream was estimated using Glover's solution.³ For this analysis, transmissivity was estimated to be 1,000 ft²/day and the storage coefficient was estimated to be 0.15 for the proposed point of diversion.¹ The State Engineer finds that the Glover's analysis demonstrates that over a period of 5 years, reduction in stream flow caused by pumping from the proposed well under Application 83205 would be over 90% of the volume pumped.

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 over a period of 5 years, Application 83205 would capture over 90% of the volume pumped from the surface-water source, which has existing

³ 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*, Book 4, ch. D1, Computation of rate and volume of stream depletion by wells, United States Geological Survey, p. 17.

⁴ NRS Chapter 533.

⁵ NRS § 533.370(2).

senior decreed rights; therefore, the State Engineer concludes that Application 83205 will conflict with existing rights.

RULING

Application 83205 is hereby denied on the grounds that approval of the application would conflict with existing rights and that it threatens to prove detrimental to the public interest.

Respectfully submitted,



JASON KING, P.E.
State Engineer

Dated this 6th day of
May, 2016.