

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

IN THE MATTER OF APPLICATION )  
73346 FILED TO APPROPRIATE THE )  
PUBLIC WATERS OF AN UNDERGROUND )  
SOURCE WITHIN THE IMLAY AREA )  
HYDROGRAPHIC BASIN (72), PERSHING )  
COUNTY, NEVADA. )

RULING  
**#5870**

GENERAL

I.

Application 73346 was filed on October 17, 2005, by Humboldt River Ranch, LLC, to appropriate 10.0 cubic feet per second (cfs) of underground water for irrigation purposes. The proposed place of use is described as being located within all of Section 21, T.30N., R.32E., M.D.B.&M. The proposed point of diversion is described as being located within the NW¼ NW¼ of said Section 21.<sup>1</sup>

II.

Application 73346 was timely protested by the Pershing County Water Conservation District on the following grounds:<sup>1</sup>

The granting of said application will affect the water table and drainage and adversely affect the decreed waters of the Humboldt River. Also, basin is already over appropriated.

FINDINGS OF FACT

I.

State Engineer's Order No. 702, issued on January 31, 1978, described and designated the Imlay Area Hydrographic

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<sup>1</sup> File No. 73346, official records in the Office of the State Engineer.

Basin as a ground-water basin in need of additional administration under the provisions of NRS § 534.030.<sup>2</sup>

All water right applications, which are filed in the Office of the State Engineer, are subjected to a simple analysis to determine the location of the proposed points of diversion. This determination is a critical part of the initial application review process and establishes which hydrographic basin the proposed points of diversion are located within. The description of the proposed point of diversion, found within Application 73346 and its supporting map, was used to plot the location of the proposed well site. This location was found to be within the Imlay Area Hydrographic Basin.

The State Engineer finds that Application 73346 has a proposed point of diversion that is located within the hydrologic boundaries of the designated Imlay Area Hydrographic Basin.

## II.

Applications that request a permanent appropriation of underground water for irrigation purposes within the Imlay Area Hydrographic Basin have been denied by the State Engineer since 1976. These denials were based on the grounds that the appropriation of underground water for irrigation purposes would conflict with and tend to impair the value of existing rights and be detrimental to the public interest and welfare.<sup>3</sup> The State Engineer finds that

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<sup>2</sup> State Engineer's Order No. 702, January 31, 1978, official record in the Office of the State Engineer.

<sup>3</sup> See, State Engineer Rulings for Applications 28473, 28474, 28475, 28480, 28485, 28486, 28487, 28488, 28489, 28490, 28491, 28493, 28494, 29083 through 29097, 30619, 30620, 30621, 30773, 30885, 31487, 31488, 31489, 31490, 31491, 31492, 31631, 31632, 31633, 31634, 61635, 61636, 32488 through 32501, 32797, 32798, 35058, 35059, 35060, 36050, 35945, 35946, 35947, 37107, 45510, 46928 and 60581.

Application 73346 has the effect of appropriating water for a similar use and within the same basin as applications that have been denied in the past.

### III.

The Nevada Revised Statutes (NRS) chapters 533 and 534 and the policies developed by the Office of the State Engineer control the appropriation of water within the State of Nevada. Under the provisions found under NRS § 533.370(5), before an application that requests a new appropriation of underground water can be considered for approval it must be determined, among other things, that there is unappropriated water available at the targeted source. The answer to the question of what amount of underground water is available for additional appropriation from the Imlay Area Hydrographic Basin can be found in an analysis of the basin's recharge-discharge relationship. Central to this equation is the concept of the perennial yield of the Imlay Area Hydrographic Basin.

Perennial yield of a ground-water reservoir may be defined as the maximum amount of ground water that can be salvaged each year over the long term without depleting the ground-water reservoir. Perennial yield is ultimately limited to the maximum amount of natural discharge that can be salvaged for beneficial use. If the perennial yield is continually exceeded ground-water levels will decline.

Withdrawals of ground water in excess of the perennial yield contribute to adverse conditions such as water quality degradation, storage depletion, diminishing yield of wells, increase in cost due to increased pumping lifts, land subsidence and possible reversal of ground-water

gradients, which could result in significant changes in the recharge-discharge relationship.<sup>4</sup>

The perennial yield of the Imlay Area Hydrographic Basin can be derived from the estimates of the basin's annual ground-water recharge and discharge. It is estimated that the perennial yield of the Imlay Area Hydrographic Basin is approximately 3,000 acre-feet annually.<sup>5</sup>

The Office of the State Engineer has for many years relied upon the United States Geological Survey's estimates of perennial yield. These estimates are critical in determining the degree of regulation, which must be placed upon a basin's limited underground water resources. The committed ground-water resource in the form of permits and certificates issued by the Office of the State Engineer and within the Imlay Area Hydrographic Basin currently exceeds 11,600 acre-feet annually.

Application 73346 requests a new appropriation of ground water from the Imlay Area Hydrographic Basin. The amount of water requested is not shown on the application; only a diversion rate of 10.0 cfs is indicated. A direct conversion of this diversion rate would result in a duty of 7,239.7 acre-feet annually of water. Although there is only a diversion rate specified, additional information contained in the application file indicates that the Applicant is requesting sufficient water for the irrigation of about 600 acres of land. The standard duty assigned for irrigation permits in this area is 4.0 acre-feet per acre.

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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> Thomas E. Eakin, *Ground-Water Resources - Reconnaissance Series Report 5, Ground-water Appraisal of the Imlay Area, Humboldt River Basin, Pershing County, Nevada*. Department of Conservation and Natural Resources in Cooperation with the U.S. Geological Survey, p. 37, (1962).

Therefore, the duty of water can also be calculated by multiplying the number of acres by the standard duty per acre. The result is 2,400 acre-feet annually.

The State Engineer finds that the estimated perennial of the Imlay Area Hydrographic Basin is 3,000 acre-feet annually. The State Engineer finds that Application 73346 requests a permanent appropriation of underground water for irrigation purposes in the amount of 2,400 acre-feet annually.

### CONCLUSIONS

#### I.

The State Engineer has jurisdiction over the parties and the subject matter of this action and determination.<sup>6</sup>

#### II.

The State Engineer is prohibited by law from granting an application to appropriate the public waters where:<sup>7</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 to appropriate water for the same manner of use as Application 73346 were denied in the Imlay Area Hydrographic Basin; therefore, Application 73346 may be considered for denial.

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<sup>6</sup> NRS chapters 533 and 534.

<sup>7</sup> NRS § 533.370(5).

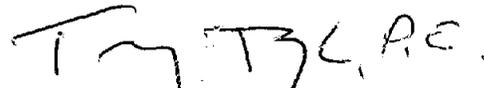
IV.

The State Engineer concludes that approval of the subject application would result in the permanent withdrawal of ground water in excess of the perennial yield of the Imlay Area Hydrographic Basin and therefore, would adversely affect existing rights and would threaten to prove detrimental to the public interest.

RULING

The protest is upheld in part and Application 73346 is hereby denied on the grounds that its approval would conflict with existing rights and would threaten to prove detrimental to the public interest.

Respectfully submitted,



TRACY TAYLOR, P.E.  
State Engineer

TT/TW/jm

Dated this 30th day of

June, 2008.