

IN THE OFFICE OF THE STATE ENGINEER

IN THE MATTER OF APPLICATION 47764)  
FILED TO APPROPRIATE THE PUBLIC)  
WATERS OF AN UNDERGROUND SOURCE IN)  
PILOT CREEK VALLEY, ELKO COUNTY,)  
NEVADA. )

RULING

GENERAL

I.

Application 47764 was filed on March 9, 1984, by Robert B. Henrichsen to appropriate 4.0 acre-feet annually of water from an underground source for irrigation purposes on 305 acres of land within the W1/2 Section 34, T.35N., R.69E., M.D.B.&M. The point of diversion is described as being within the SW1/4 NW1/4 Section 35, T.35N., R.69E., M.D.B.&M.<sup>1</sup>

II.

Water Resources-Reconnaissance Series Report 56, titled "Water-Resources Appraisal of the Pilot Creek Valley Area, Elko and White Pine Counties, Nevada", was prepared cooperatively by the Geological Survey, U.S. Department of the Interior, and the State of Nevada, Department of Conservation and Natural Resources, 1971.<sup>1</sup>

FINDINGS OF FACT

I.

The State Engineer issued Order No. 841 on April 30, 1984, designating and describing Pilot Creek Valley as a ground water basin coming under the provisions of Chapter 534 NRS (Conservancy and Distribution of Underground Water).<sup>2</sup>

II.

Pilot Creek Valley has a comparatively flat valley floor and is a well defined ephemeral drainage area that drains south and east to the Great Salt Lake Desert. However, in 1969, this outflow was blocked by road fill and ponds in parts of Sections 31 and 32, T.35N., R.70E., M.D.B.&M. Precipitation comprises a major portion of the inflow into the basin with subsurface inflow from Goshute Valley contributing.

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<sup>1</sup> Public record in the office of the State Engineer.

<sup>2</sup> Order No. 841, dated April 30, 1984, public record in the office of the State Engineer.

III.

Average annual precipitation within Pilot Creek Valley Hydrologic Basin ranges from more than 20 inches on the mountain peaks to 6 to 8 inches on the valley floor. Two percent of the average annual precipitation of 130,000 acre-feet recharges Pilot Creek Valley, yielding an annual recharge to the ground water system of 2,400 acre-feet per year.

IV.

Subsurface inflow from Goshute Valley occurs in consolidated rocks in the Loana Range and northern Goshute Mountains, where sufficiently permeable, on the order of 1,000 acre-feet per year.

V.

Over the long term, inflow and outflow from a ground water system are equal. The total inflow to the Pilot Creek Valley is approximately 3,400 acre-feet annually: 2,400 acre-feet from precipitation and 1,000 acre-feet from inflow from Goshute Valley. The total outflow from the Pilot Creek Valley is approximately 4,900 acre-feet annually: 4,600 acre-feet from evapotranspiration and 300 acre-feet from subsurface outflow to Great Salt Lake Desert.

VI.

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. In Pilot Creek Valley, the perennial yield is estimated to be 4,500 acre-feet annually. A value of 4,500 acre-feet per year was selected to represent natural inflow and outflow because the discharge estimate is considered more accurate than the recharge estimate.

VII.

Permits and certificates have been issued under existing rights for more than 8,700 acre-feet annually of ground water within the Pilot Creek Valley Hydrologic Basin.<sup>1</sup>

VIII.

Information available to the State Engineer indicates that Application 47764 was filed in support of a Desert Land Entry application.<sup>1</sup>

IX.

The approval of Application 47764 would result in the additional withdrawal of 1,220 acre-feet annually, and when added to existing rights, exceeds the perennial yield of 4,500 acre-feet annually.<sup>1</sup>

X.

If the perennial yield of a hydrologic system is continually exceeded, ground water levels will decline until the ground water reservoir is depleted of water of usable quality or until the pumping lifts become uneconomical to maintain. Perennial yield cannot exceed the natural replenishment to an area indefinitely, and ultimately is limited to the maximum amount of natural discharge that can be salvaged for beneficial use.<sup>3</sup>

XI.

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, increased economic pumping lifts, land subsidence and possible reversal of ground water gradients which could result in significant changes in the recharge-discharge relationship. These conditions have developed in several other ground water basins within the State of Nevada where storage depletion and declining water tables have been recorded and documented.<sup>3</sup>

XII.

Should additional water be allowed for appropriation under new applications and subsequent development of ground water pursuant thereto detrimentally affect prior existing rights, the State Engineer is required by law to order withdrawals be restricted to conform to prior rights.<sup>4</sup>

XIII.

Previous applications to appropriate water for irrigation purposes from an underground source in Pilot Creek Valley have been denied.<sup>5</sup>

CONCLUSIONS

I.

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

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<sup>3</sup> See attached Appendix of References.

<sup>4</sup> NRS 534.100(c).

<sup>5</sup> See Ruling No. 3306 dated January 29, 1986, public record in the office of the State Engineer.

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

II.

The State Engineer is prohibited by law from granting a permit under an application to appropriate the public waters where:<sup>7</sup>

- A. There is no unappropriated water at the proposed source, or
- B. The proposed use conflicts with existing rights, or
- C. The proposed use threatens to prove detrimental to the public interest.

III.

The granting of a permit under Application 47764 would result in the withdrawal of additional ground water in excess of the perennial yield of the Pilot Creek Valley and would, therefore, adversely affect existing rights and be detrimental to the public interest and welfare.

IV.

The State Engineer is authorized to deny applications prior to publication, when a previous application for a similar use of water within the basin has been rejected.<sup>7</sup>

**RULING**

Application 47764 is herewith denied on the grounds that the granting thereof would adversely affect existing rights and would be detrimental to the public interest and welfare.

Respectfully submitted,

  
PETER G. MORROS  
State Engineer

PGM/JO/bl

Dated this 10th day of  
February, 1986.

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<sup>7</sup> NRS 533.370(3).

## APPENDIX OF REFERENCES

Land Subsidence in Las Vegas Valley, 1935-63, Information Series No. 5 U.S.G.S.

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