

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

IN THE MATTER OF APPLICATION 63482 )  
FILED TO APPROPRIATE THE PUBLIC )  
WATERS OF AN UNDERGROUND SOURCE )  
FROM THE OASIS VALLEY GROUNDWATER )  
BASIN (228), NYE COUNTY, NEVADA. )

RULING

# 4669

GENERAL

I.

Application 63482 was filed on October 6, 1997, by George and Larene Younghans to appropriate 0.4 cubic feet per second (cfs) of underground water. The proposed manner and place of use is for the irrigation of forty acres of land located within the W $\frac{1}{4}$  E $\frac{1}{4}$  of Section 33, T.10S., R.47E., M.D.B.&M. and domestic use. The proposed point of diversion is described as being within the SW $\frac{1}{4}$  NE $\frac{1}{4}$  of said Section 33.<sup>1</sup>

FINDINGS OF FACT

I.

The perennial yield of a hydrologic basin is the maximum amount of water of usable chemical quantity that can be consumed economically each year for an indefinite period of time. The perennial yield can not exceed the natural replenishment to an area indefinitely, and ultimately is limited to the maximum amount of natural recharge that can be salvaged for beneficial use. If the perennial yield is continually exceeded groundwater levels will decline until

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<sup>1</sup> File No. 63482, official records in the office of the State Engineer.

the groundwater reservoir is depleted. Withdrawals of groundwater 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 groundwater gradients which could result in significant changes in the recharge-discharge relationship.<sup>2</sup>

The findings of the hydrologic study which are specific to the Oasis Valley Groundwater Basin are found within Water Resources Reconnaissance Series Report 10, Ground-Water Appraisal of Sarcobatus Flat and Oasis Valley, Nye and Esmeralda Counties, Nevada (Report 10) which describes the sources and amounts of ground water available for appropriation from within the Oasis Valley. An estimate of the perennial yield of the Oasis Valley Groundwater Basin which was derived by a quantitative analysis of the groundwater basin's inflow, outflow, and recharge amounts was calculated by Malmberg and Eakin and is found within Report 10.<sup>3</sup>

Malmberg and Eakin estimated the potential groundwater recharge to the Oasis Valley Groundwater Basin by precipitation was 250 acre-feet annually. An additional 1,800 acre-feet annually was added from subsurface

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<sup>2</sup> State Engineer's Office, Water for Nevada, State of Nevada Water Planning Report No. 3, p. 13, October 1971.

<sup>3</sup> Malmberg, G.T., Eakin, T.E., Ground-Water Appraisal of Sarcobatus Flat and Oasis Valley, Nye and Esmeralda Counties, Nevada, Water Resources Reconnaissance Series Report 10, pp. 24, 25, State of Nevada, Department of Conservation and Natural Resources, Geological Survey, U.S. Department of Interior, 1962.

groundwater inflow through the alluvial units from the adjacent Gold Flat Groundwater Basin. Therefore, the estimated perennial yield of the Oasis Valley Groundwater Basin was calculated by Malmberg and Eakin to be 2,050 acre-feet.

Due to the high degree of interaction between the surface water and ground water resources of the Oasis Valley Groundwater Basin, the State Engineer considers them a single major source of water. A general estimate of the combined committed water resource can be calculated by tabulating the annual water duties assigned to each permit and certificate issued by the State Engineer to appropriate underground and surface waters. Currently approximately 1,250 acre-feet of underground water and in excess of 1,900 acre-feet of surface water is committed by existing water rights within the Oasis Valley Groundwater Basin.<sup>4</sup> The State Engineer finds that the Report 10 estimate of the Oasis Valley Groundwater Basin's perennial yield is significantly exceeded by the basin's combined committed water resources.

## II.

Applications which requested a permanent appropriation of underground water for irrigation purposes within the Oasis Valley Groundwater Basin have been denied by the State

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<sup>4</sup> Nevada Division of Water Resources Water Rights Database, Special Hydrographic Basin Abstract, Basin 228, September 16, 1998, official records in the office of the State Engineer.

Engineer since 1978.<sup>5</sup> These denials were based on the grounds that, "withdrawals of additional groundwater substantially exceed the perennial yield of the basin would, therefore, adversely affect existing rights and be detrimental to the public interest and welfare." The State Engineer finds that Application 63482 was filed to appropriate underground water for a similar use and in the same hydrologic basin as applications which have been denied in the past.

### III.

The applicants currently hold ownership of Permit 54200, Permit 60196, and Permit 24460, Certificate 7015 which were issued to appropriate spring water for the irrigation of land which is contained within the place of use described under Application 63482.<sup>6,7,8</sup> This common or supplemental acreage allows the underground water requested under Application 63482 to be utilized as a back-up source of irrigation water for those periods of time when insufficient flow is produced by the spring sources.

While the supplemental nature of Application 63482 represents an occasional use of water, it does not protect

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<sup>5</sup> State Engineer's Ruling No. 2346, May 30, 1978, official records in the office of the State Engineer.

<sup>6</sup> File No. 54200, official records in the office of the State Engineer.

<sup>7</sup> File No. 60196, official records in the office of the State Engineer.

<sup>8</sup> File No. 24460, official records in the office of the State Engineer.

the groundwater basin's limited water resources from the adverse affects of any additional pumpage. A scenario where diminished flows occur at the springs would signify a depletion of the underlying groundwater table of which the springs are the surface expression. This reduction in spring flow would only be increased by the pumpage of any nearby supplemental underground water rights. The State Engineer finds that the approval of Application 63482 would adversely affect the surface and underground water resources of the Oasis Valley Groundwater Basin.

CONCLUSIONS

I.

The State Engineer has jurisdiction over the parties and the subject matter of this action and determination.<sup>9</sup>

II.

The State Engineer is prohibited by law from granting an application to appropriate the public waters where:<sup>10</sup>

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

III.

Application 63482 proposed to appropriate underground water from a portion of the Oasis Valley Groundwater Basin which relies heavily upon water generated by numerous

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<sup>9</sup> NRS Chapters 533 & 534.

<sup>10</sup> NRS 533.370(3).

springs. It is generally accepted that the groundwater and surface water resources of this area are closely related; therefore, any adverse effects caused by additional pumpage of underground water would ultimately effect the areas spring flows. The State Engineer concludes that the additional pumpage represented by Application 63482, if approved, would create an adverse affect on the underground and surface water rights of the groundwater basin.

IV.

The State Engineer concludes that to grant a permit under Application 63482 in a groundwater basin where the quantity of water under existing appropriations exceeds the perennial yield would conflict with existing rights and be detrimental to the public interest.

RULING

Application 63482 is hereby denied on the grounds that granting the application would adversely effect existing rights and be detrimental to the public interest.

Respectfully submitted,



R. MICHAEL TURNIPSEED, P.E.

State Engineer

RMT/MDB/cl

Dated this 23rd day of  
October, 1998.