

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

IN THE MATTER OF APPLICATION 56824 FILED))
TO CHANGE THE PLACE OF USE AND THE)
MANNER OF USE HERETOFORE APPROPRIATED)
UNDER PERMIT 47526 CERTIFICATE 12959, OF))
THE WATER OF AN UNDERGROUND SOURCE IN)
THE DAYTON VALLEY GROUNDWATER BASIN,)
LYON COUNTY, NEVADA.)

RULING

3908

GENERAL

I.

Application 56824 was filed on October 10, 1991, by Hughes Development Corporation to change the place of use and the manner of use of 0.35 c.f.s., heretofore appropriated under Permit 47526, Certificate 12959. The proposed place of use is 36.24 acres within the SE1/4 NW1/4 and the SW1/4 NE1/4 of Section 5, T.16N., R.22E., M.D.B.&M. The proposed manner of use is to be quasi-municipal. The existing place of use is described as portions within the SE1/4 NW1/4 and the SW1/4 NE1/4 of Section 5, T.16N., R.22E., M.D.B.&M. The existing manner of use is mining and milling.¹

II.

Water Resources-Reconnaissance Series Report #59 titled "Water Resources Appraisal of the Carson River Basin, Western Nevada", was prepared cooperatively by the Geological Survey, U.S. Department of the Interior and State of Nevada, Department of Conservation and Natural Resources. For the purposes of that report, the Carson River Basin was divided into seven hydrologic subareas; Carson Valley (Nevada Part Only), Eagle Valley, Dayton Valley, Churchill Valley, Carson Desert, Packard Valley and White Plains.²

1 Public record in the office of the State Engineer.

2 Water Resources-Reconnaissance Series Report #59, public record in the office of the State Engineer.

FINDINGS OF FACT

I.

The Geological Survey, U.S. Department of Interior, in cooperation with the State of Nevada, Department of Conservation and Natural Resources, is currently conducting an ongoing study of the effects of ground water flow on surface water by use of a modular three-dimensional finite difference ground water flow model. The information developed for the model has assisted in the identification and quantification of the effects of ground water pumpage on surface water flow.

II.

The potential estimated ground water recharge to Dayton Valley by precipitation is 7,900 acre-feet per year. An additional 1545 acre-feet is added from subsurface inflow through alluvium from Eagle Valley and Carson Valley.² Therefore, the perennial yield of Dayton Valley is 9,445 acre-feet per year.

III.

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. Perennial yield cannot 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, ground water levels will decline until the ground water reservoir is depleted. 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.

IV.

Estimates of pumpage of ground water in Dayton Valley have been made by the division in 1977, 1979 and 1984. These years represent a below average water year, an average water year and a good water year, respectively.

The 1977 inventory estimated total pumpage to be 14,300 acre-feet in Dayton Valley while the 1979 inventory estimated that pumpage to be 15,930 acre-feet. The methodology used in deriving the estimates consisted of well power readings supplied by Sierra Pacific Power Company converted to pumpage of water.

The 1984 pumpage of ground water in Dayton Valley excluding the Stagecoach Sub-Basin was determined to be approximately 6,000 acre-feet. This estimate was based on a survey of the houses, mining activity, water systems, and irrigated acreage in Dayton Valley. The Stagecoach Sub-Basin is more difficult to estimate because of the rapid change over from agricultural use to quasi-municipal use taking place. An estimate of the water use in the Stagecoach Sub-Area is 1600 acre-feet per year. Therefore, the total pumpage in Dayton Valley in 1984 is estimated to be 7600 acre-feet. This figure is almost 50% less than was estimated in the average water year of 1979, due to decreased amount of groundwater pumpage used for irrigation.

V.

The State Engineer finds that permits and certificates have been issued under existing rights for more than 30,000 acre-feet annually of ground water within Dayton Valley.¹

VI.

The State Engineer finds that approved ground water appropriations in the Dayton Valley Ground Water Basin exceeds the perennial yield of the basin.

VII.

Should additional water be allowed for appropriation development under new applications and subsequent detrimental effects occur, the State Engineer is required by law to order withdrawals be restricted to conform to priority rights.³

VIII.

The State Engineer has previously denied applications to appropriate ground water from Dayton Valley for irrigation, quasi-municipal and municipal uses on the grounds that

³ NRS 534.110(6).

"Withdrawals of additional ground water in a basin in which appropriations of ground water substantially exceed the perennial yield of the basin would, therefore, adversely affect existing rights and be detrimental to the public interest and welfare."⁴

These denials were for applications filed between May 1, 1973 through November 16, 1983, which was before Application 47526 was approved since they requested permanent use of the water resource within Dayton Valley.

IX.

Permit 47526, Certificate 12959 was issued a permit on August 8, 1984 with the understanding that;

"The manner of use of water under this permit is by nature of its activity a temporary use and any application to change the manner of use granted under this permit will be subject to additional determination and evaluation with respect to the permanent effects on existing rights and the resource within the ground water basin."¹

X.

In accordance with NRS 512.160(3), Alhambra Mines properly notified the Administrator of the Division of Mine Inspection upon permanent closure of the mine on January 1, 1986. To this date Alhambra Mines has not notified the Administrator that the mine will reopen.⁵

CONCLUSIONS

I.

The State Engineer has jurisdiction under the provisions of NRS Chapters 533 and 534.

⁴ See Rulings for Permits 27441, 27557, 27765, 29238, 30719, 36130, 36131, 38449, 38450, 38451, 38452, 38453, 38454, 38455, 38456, 38457, 38458, 38459, 40364, 40762, 41541, 41542, 44238 and 47429, public record in the office of the State Engineer.

⁵ Information available in the office of the Administrator of the Division of Mine Inspection.

II.

The State Engineer is prohibited by law from granting a permit where:

- 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.⁶

III.

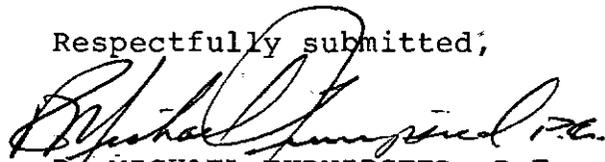
Permit 47526 was issued with the understanding that the approved use, mining and milling, was a temporary use and any permanent use of the water would have to be evaluated as to the effect on existing rights. The use proposed in application to change 56824 is a permanent use of quasi-municipal.

The granting of a permit under Application 56824 would result in the withdrawal of additional ground water in a basin in which appropriations of ground water substantially exceeds the perennial yield and would, therefore, adversely affect existing rights and be detrimental to the public interest.

RULING

Application 56824 is hereby denied on the grounds that the granting thereof would adversely affect existing rights and would be detrimental to the public interest.

Respectfully submitted,



R. MICHAEL TURNIPSEED, P.E.
State Engineer

RMT/TEG/pm

Dated this 10th day of
November, 1992.

⁶ NRS Chapter 533.370.