

IN THE MATTER OF APPLICATIONS 34733)
AND 34734 TO APPROPRIATE WATER FROM)
AN UNDERGROUND SOURCE IN WASHOE VAL-)
LEY, WASHOE COUNTY, NEVADA.)

R U L I N G

INTRODUCTION

Applications 34733 and 34734 were filed to appropriate water from an underground source in Washoe Valley.

In 1967, Water Resources-Reconnaissance Series Report 41, "Water Resources Appraisal of Washoe Valley, Nevada," by F. Eugene Rush, was prepared cooperatively by the Department of Conservation and Natural Resources, Division of Water Resources and the U. S. Department of Interior, Geological Survey. This report is available from the Office of the State Engineer.

In 1973, Water Resources-Reconnaissance Series Report 57, "A Brief Water-Resources Appraisal of the Truckee River Basin, Western Nevada, by A. S. VanDenburgh, R. D. Lamke and J. L. Hughes was prepared cooperatively by the Department of Conservation and Natural Resources, Division of Water Resources and the U. S. Department of Interior, Geological Survey. This report is available from the Office of the State Engineer.

FINDINGS OF FACT

I

Application 34733 was filed on December 14, 1977 by John Serpa to appropriate 0.80 c.f.s. of the waters of an underground source to be diverted within the SW1/4 SE1/4 Section 5, T.16N., R.20E., M.D.B.&M., and to be used for quasi-municipal purposes within the SW1/4 and W1/2 SE1/4 Section 5, T.16N., R.20E., M.D.B.&M.

Application 34734 was filed on December 14, 1977 by John Serpa to appropriate 0.80 c.f.s. of the waters of an underground source to be diverted within the NW1/4, SE1/4 Section 5, T.16N., R.20E., M.D.B.&M., and to be used for quasi-municipal purposes within the SW1/4 and W1/2 SE1/4 Section 5, T.16N., R.20E., M.D.B.&M. 1/

II

Applications 34733 and 34734 were filed to appropriate water from an underground source in the Washoe Valley Ground Water Basin, Washoe County and Carson City, Nevada. 2/

III

By an order dated March 1, 1978, the State Engineer designated and described the Washoe Valley Ground Water Basin as a ground water basin coming under the provisions of NRS 534. 3/

IV

It is estimated that the potential annual recharge to the Washoe Valley Ground Water Basin is 15,000 acre-feet. Nearly 90 percent of the estimated potential recharge is from the Carson Range on the West side of Washoe Valley. The Virginia Range, on the East side of Washoe Valley, provides 1,000 acre-feet of this estimated potential recharge, and precipitation on the valley floor (excluding lake surface) provides an additional 1,100 acre-feet. 4/ About 1/3 of the valley floor is on the East side 5/ of Washoe Valley. Thus, the estimated potential annual recharge on the East side of Washoe Valley is nearly 1,400 (1,000 plus 1/3 of 1,100) acre-feet. Any consumptive withdrawal in excess of this natural recharge will either deplete the ground water reservoir or cause additional surface water to percolate into the ground water reservoir. Consumptive withdrawals in excess of natural recharge will adversely affect the resource and existing rights.

V

Existing certificated and permitted ground water rights in the East side of Washoe Valley Ground Water Basin now exceed estimates of potential annual recharge to the East side of Washoe Valley Ground Water Reservoir. 6/ The potential exists for additional pumpage under existing ground water rights which have not yet been developed.

VI

There have been more than 500 individual domestic wells drilled in the East side of Washoe Valley, with a potential, legal withdrawal per well of 2 acre-feet annually. Thus, existing, individual domestic wells, taken separately from existing certificated and permitted ground water rights, could legally consume 1,000 acre-feet annually of the nearly 1,400 acre-feet of potential annual recharge plus the fraction of domestic use returned underground as artificial recharge---all in the East side of Washoe Valley. In the area of the proposed place of use of water under Applications 34733 and 34734, in the East side of Washoe Valley, the Regional Planning Commission of Reno, Sparks and Washoe County reports a total of 1,111 lots approved in subdivisions with approximately one-half of the lots developed. 7/

If the remaining one-half of the approved lots were developed with individual domestic wells, the potential, legal, consumptive withdrawal resulting from domestic wells could considerably exceed the potential annual recharge of nearly 1,400 acre-feet.

VII

Applications 34733 and 34734 propose to drill two wells to serve water to up to 400 homes 8/ on 400 lots adjacent to an existing concentration of individual domestic wells.

To grant additional rights as applied for from the limited ground water resource on the East side of Washoe Valley would adversely affect existing rights and threaten to prove detrimental to the public interest.

VII (Continued)

Pumpage and consumptive use applied for would tend to have an adverse effect on the existing concentration of domestic wells in this area of limited natural recharge by declines in the water table and a potential deterioration of water quality by artificial recharge from septic tank discharges, and would tend to impair the value of existing rights and be detrimental to the public welfare.

VIII

Applications 34733 and 34734 propose to serve water to a 400 lot subdivision on the same property as a previously denied 182 lot subdivision known as Palos Verde Estates, with water supply previously proposed as an individual domestic well on each of the 182 lots. Grounds for previous denied were, "---that the additional demand for ground water in this area of concentration would be detrimental to the public welfare." 9/

Well log numbers 16245 and 16343 reported test date for two wells. 10/ The wells were drilled within the same property as the previously denied Palos Verde Estates subdivision and the proposed place of use under Applications 34733 and 34734. Well log 16245 indicated a test yield of 16 gallons per minute of 75 feet depth from a well 98 feet deep with casing perforations from 77 feet to 98 feet and a static water level of 51 feet. Well log 16343 indicated a test yield of 12 gallons per minute at 65 feet depth from a well 76 feet deep with casing perforations from 60 feet to 76 feet and a static water level of 25 feet. The average of the low yields from these two wells indicates that about 20 such wells would be required to pump continuously to serve 400 lots at 1,000 gallons per day for each lot.

The adverse effect upon the existing concentration of individual domestic wells from pumping 20 wells to serve water to 400 lots would be at least as great as, or greater than; the adverse effect of pumping 182 wells to serve water to 182 lots. The additional demand for ground water for 400 lots in this area of concentration and limited recharge would be detrimental to the public welfare, just as it was for the previously proposed 182 lots.

IX

Hearings in the matter of forfeiture and pending applications to divert water from the Washoe Valley Ground Water Basin were held by the State Engineer:

- A. On May 11, 1978
- B. On June 20, 1978. 11/

There was no substantial evidence presented at these hearings that would indicate that there was sufficient ground water available to satisfy the proposed diversions under Applications 34733 and 34734 without creating an adverse effect upon prior existing rights and/or an adverse effect upon the existing concentration of domestic wells.

X

Should Applications 34733 and 34734 be granted and should subsequent development affect prior ground water rights or prior surface water rights, the State Engineer is required by law to order withdrawals be restricted to conform to priority rights. 12/

CONCLUSIONS

I

The State Engineer has jurisdiction of the parties and the subject matter of this action. 13/

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 welfare.
- D. The proposed use tends to impair the value of existing rights, or to be otherwise detrimental to the public welfare. 14/

III

Existing ground water rights on the East side of the Washoe Valley Ground Water Basin exceed estimates of potential annual recharge to the East side of the Washoe Valley Ground Water Reservoir. The potential exists for additional pumpage under existing ground water rights that have not been developed. To grant additional rights as applied for under Applications 34733 and 34734, from the limited ground water resource on the East side of Washoe Valley, would adversely affect existing rights and threaten to prove detrimental to the public interest.

IV

In the area of the 400 lots proposed to be served with water under Applications 34733 and 34734, in the East side of Washoe Valley, there is a total of 1,111 lots approved in subdivisions with approximately one-half of the lots developed. To grant additional rights under Applications 34733 and 34734 for a subdivision (400 lots) would tend to have an adverse effect on the existing concentration of domestic wells in this area of limited natural recharge by declines in the water table and a potential deterioration of water quality by artificial recharge from septic tank discharges, and would tend to impair the value of existing rights and be detrimental to the public welfare.

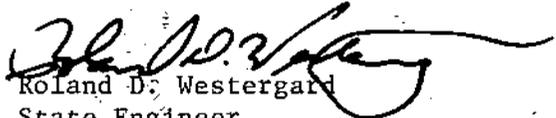
V

Applications 34733 and 34734 propose to serve water to a 400 lot subdivision on the same property as a previously denied 182 lot subdivision known as Palos Verde Estates. The additional demand for ground water for 400 lots in this area of concentration and limited recharge would be detrimental to the public welfare, just as it was for the previously proposed 182 lots.

RULING

Applications 34733 and 34734 are herewith denied on the grounds that the proposed appropriation of additional ground water on the East side of Washoe Valley would conflict with existing rights, threaten to prove detrimental to the public interest, impair the value of existing rights and be detrimental to the public welfare.

Respectfully submitted,


Roland D. Westergard
State Engineer

RDW/VRH/b1

Dated this 7th day
of NOVEMBER, 1978.

FOOTNOTES

1. Public records in the Office of the State Engineer.
2. Public records in the Office of the State Engineer.
3. Public records in the office of the State Engineer.
4. Water Resources-Reconnaissance Series Report 41, pages 13 and 14; Report 57, page 41.
5. Water Resources-Reconnaissance Series Report 41; estimated from map, "Figure 7.-Generalized Land Status of the Valley Floor, April 1966". Surface of the valley fill reservoir that will drain by gravity in response to pumping, between the mountain front and the average lake shoreline, was taken as the valley floor. The valley floor was then divided into two parts, West and East, for purposes of estimation. Since portions of the valley floor on the East side of Washoe Valley are undeveloped, some fraction of the natural recharge must move westward underground toward the Washoe Lakes without being intercepted by pumping. Escape to the surface water system of some portion of the natural ground water recharge makes less of this recharge available for pumping within areas of concentrated development. Thus there is even less ground water potentially available in areas of existing and potential development than has been estimated herein as nearly 1,400 acre-feet annually.
6. Public records in the Office of the State Engineer.
7. Public records in the Office of the State Engineer. NRS 534.180. About 2 acre-feet annually is the withdrawal resulting from a daily pumpage of 1,800 gallons. The figure of 1,111 lots, with approximately one-half developed using individual domestic wells, is as of August 1977.
8. The 400 homes proposed would be on 400 lots in addition to the 1,111 lots previously approved, making a potential total of 1,511 lots capable of requiring a water supply upon development.
9. Public records in the Office of the State Engineer. Subdivision Review No. 782T of August 16, 1977, recommending denial of the Palos Verde Estates Subdivision in a portion of the S1/2 Section 5, T.16N., R.20E., M.D.B.&M.
10. Public records in the Office of the State Engineer. Transcripts of hearings of May 11, 1978 and June 20, 1978, and previously listed subdivision Review No. 782T.
11. Public records in the Office of the State Engineer. Transcripts of hearings of May 11, 1978 and June 20, 1978.
12. NRS 534.110, subsections 3 and 6.
13. NRS 533.025 and NRS 533.030, subsection 1.
14. NRS 533.370, subsections 1 and 4.