

IN THE OFFICE OF THE STATE ENGINEER

IN THE MATTER OF APPLICATION 48842)
FILED TO APPROPRIATE THE PUBLIC)
WATERS OF AN UNDERGROUND SOURCE IN)
LEMMON VALLEY, WASHOE COUNTY,)
NEVADA.)

RULING

INTRODUCTION

In 1967, Water Resources - Reconnaissance Series Report No. 43, Water Resources Appraisal of the Warm Springs - Lemmon Valley Area, Washoe County, Nevada, by F. Eugene Rush and Patrick Glancy, was prepared cooperatively by the Nevada Department of Conservation and Natural Resources, Division of Water Resources and the Geological Survey, U.S. Department of the Interior. This report is available from the office of the State Engineer.

In 1973, Water Resources Bulletin No. 42, Evaluation of the Water Resources of Lemmon Valley, Washoe County, Nevada, with Emphasis on Effects of Ground Water Development to 1971, by James R. Harrill, was prepared cooperatively by the Nevada Department of Conservation and Natural Resources, Division of Water Resources; the United States Department of the Interior, Geological Survey; Washoe County; and the City of Reno. This report is available from the office of the State Engineer.

In 1981, Open-File Report 80-1123, a Water Resources investigation titled Geophysical Reconnaissance of Lemmon Valley, Washoe County, Nevada, by Donald H. Schaefer and Douglas K. Maurer, was prepared cooperatively by the Nevada Division of Water Resources and the Geological Survey, U.S. Department of Interior. This report is available at the office of the State Engineer.

FINDINGS OF FACT

I.

Application 48842 was filed on February 14, 1985, by Alfred Kingham to appropriate 0.30 c.f.s. of water from an underground source for irrigation purposes within portions of the N1/2 of Section 18, T.22N., R.19E., M.D.B.&M. The point of diversion is described as being within the NW1/4 NW1/4 Section 18, T.22N., R.19E., M.D.B.&M.¹

II.

On July 14, 1971, pursuant to the authority granted under Chapter 534 of the Nevada Revised Statutes, the State Engineer designated and described the Lemmon Valley Ground Water Basin as coming under the provisions of NRS 534 (conservation and distribution of underground waters).²

¹ Public record in the office of the State Engineer under Application 48842.

² Public record in the office of the State Engineer, State Engineer's Order No. 391.

III.

It is estimated that the perennial yield of the Lemmon Valley ground water reservoir is 1,300 acre-feet per year. Allowing for additional recharge from imported water, an augmented yield estimate is 1,600 acre-feet per year.³

IV.

The proposed point of diversion under Application 48842 lies within the western part of the Lemmon Valley Ground Water Basin, commonly referred to as the Silver Lake sub-basin, and further defined hydrologically and geologically in relation to the eastern part of Lemmon Valley.⁴

V.

The estimated perennial yield of the Silver Lake sub-basin is 900 acre-feet. The primary source of ground water recharge to the Silver Lake sub-basin is from precipitation on and runoff generated in the 8 small watersheds tributary to the Silver Lake sub-basin, located on the northeast slope of Peavine Mountain. The total estimated recharge to the Silver Lake sub-basin, including secondary recharge generated from imported water, is estimated to be 1000 acre-feet annually.

Nearly all of this recharge to the Silver Lake Ground Water sub-basin probably occurs in areas south of Silver Lake.⁵

VI.

Beneficial use under certificated rights has been shown for a total of 1,419 acre-feet per year of underground water within Lemmon Valley and 1,385 acre-feet per year are pending under permitted water rights. Total existing water rights are 2,804 acre-feet per year excluding domestic wells.⁶

VII.

In 1971, an estimated 920 acre-feet of ground water was pumped from the Lemmon Valley Ground Water Basin; in 1978 an estimated 2,350 acre-feet of ground water was pumped from the Lemmon Valley Ground Water Basin. Of this 2,350 acre-feet, 1,800 acre-feet was pumped from the East Lemmon sub-area and 550 acre-feet was pumped from the Silver Lake sub-area. In 1983, an estimated 2,197 acre-feet was pumped from the East Lemmon sub-area and an estimated 916 acre-feet was pumped from the Silver Lake sub-area for a total of 3,113 acre-feet. These estimates include pumpage from domestic wells.⁷

³ Water Resources Bulletin No. 42, pp. 2, 77 and 78.

⁴ Reconnaissance Series Report No. 43 and Water Resources Bulletin No. 42.

⁵ Estimates and field inspections by the office of the State Engineer.
Water Resources Bulletin No. 42, p. 36.

⁶ Public records in the office of the State Engineer.

⁷ Estimates made from pumpage inventories and field inspections by the office of the State Engineer.

VIII.

Approximately 4,800 lots have been formed by subdivision and parceling in Lemmon Valley. Residences have been established on approximately 2,700 of these lots leaving over 2,000 potential lots to be developed.⁸

IX.

Static water levels have been measured since 1971 in a monitor well net of over 30 wells in Lemmon Valley. Declining static water levels have occurred in Golden Valley, the eastern side of the playa in East Lemmon Valley, and west of Black Springs. Rising static water levels have been shown to the south and west of the playa in East Lemmon Valley in areas recharged by effluent from sewage treatment plants and septic systems.⁹

X.

Existing certificated and permitted ground water rights in the Silver Lake sub-basin total approximately 1235 acre-feet per year. Of this amount, 335 acre-feet per year is located south of the Silver Lake (playa). The remaining 900 acre-feet of ground water rights are for wells located north of the playa.⁹

XI.

In addition to existing ground water rights in the Silver Lake sub-basin, approximately 300 domestic wells exist in the Silver Knolls area and represent an appropriation of up to 600 acre-feet per year. Due to the present subdivision and/or parceling of land north of Silver Lake, the potential exists for an additional 300 domestic wells.

With buildout of existing lots, the future domestic wells north of Silver Lake represent potential withdrawal of 1200 acre-feet of ground water annually.¹⁰

XII.

The combined total potential withdrawal of ground water, with all legal water rights perfected in full and buildout of existing lots upon which domestic wells may be drilled, will amount to 2100 (900 + 1200) acre-feet annually, all north of Silver Lake.¹¹

⁸ Estimates made in the office of the State Engineer partly from data received from the Regional Planning commission, Reno, Sparks and Washoe County and the office of the Washoe County Engineer and including the Lemmon Valley Comprehensive Plan, Phase I - Inventory and analysis of the Regional Planning Commission, Reno, Sparks and Washoe County.

⁹ Public record in the office of the State Engineer.

¹⁰ See footnote 8, and NRS 534.180.

¹¹ See footnote 8, and public record in the office of the State Engineer.

XIII.

The State Engineer has collected static water level data from wells in the Silver Lake sub-basin for more than ten years to date. The data from one unused deep well, at the north end of Silver Knolls area, indicates a springtime static water level decline of approximately 5 feet from March 1974 to April 1984. The data from another unused deep observation well, west of Silver Knolls, indicates a springtime static water level decline of approximately 9 feet from March 1974 to April 1984. These declines represent substantial evidence of depletion of ground water in storage greater than the rate that ground water is being replenished through the natural recharge processes.⁶

XIV.

The perennial yield of a ground water reservoir is the maximum rate of which ground water of suitable chemical quality is available and can be withdrawn economically for an indefinite period of time. If the perennial yield is exceeded, water will be withdrawn from storage and 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, 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 and provide substantial evidence of the adverse effect of these conditions.¹²

XV.

Ground water pumpage in the northern part of the Silver Lake sub-basin was estimated to be 600 acre-feet in 1983. The total legal appropriation of ground water in this area may be as high as 2100 acre-feet annually, upon future buildout.

XVI.

Recognizing the critical nature of the ground water resource development, the State Engineer has initiated and pursued a policy of strict regulation of water rights in the designated Lemmon Valley Basin.

¹³ Since 1971, over 50 applications to appropriate ground water have been denied.¹³

¹² See Appendix of References.

¹³ Public record in the office of the State Engineer. See denied Applications: 22201, 22202, 22203, 26173, 27190, 26194, 26211, 26405, 26406, 27422, 28589, 28590, 29502, 29503, 30088, 30089, 30090, 30091, 30092, 30093, 30094, 30356, 30357, 30535, 30536, 30608, 30777, 30778, 30807, 30808, 30809, 30810, 31006, 31007, 31340, 32312, 32825, 33620, 36387, 36398, 36399, 36904, 38305, 38472, 38473, 38474, 38475, 40964, 40965, 41451, 42178, 42681, 43719, 43720, 43807 and 48009. Based on substantial evidence the State Engineer has denied various applications to appropriate ground water in the Lemmon Valley Ground Water Basin which have been subject to judicial review under the provisions of NRS 533.450. See Emerson J. Wilson v. State Engineer, Case No. 323027, Second Judicial District Court of the State of Nevada in and for Washoe County.

2. The State Engineer has recommended to Washoe County and to the City of Reno that no additional parcel maps or subdivision of land be allowed in any part of the Lemmon Valley Basin without existing rights or water service commitments.⁹

3. Meters have been required on wells with water rights.⁹

4. A notice, Order 388, was issued on May 18, 1971, declaring a moratorium on the issuance of permits to appropriate underground water in Lemmon Valley.⁹

5. Extensions of time for proving beneficial use have not been granted since 1971 except under the most extenuating circumstances.⁹

CONCLUSIONS

I.

The State Engineer has jurisdiction of the parties and the subject matter of this action.¹⁴

II.

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

- A. there is no unappropriated water in 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.¹⁵

III.

Existing water rights for ground water in Lemmon Valley exceed the estimated perennial yield and the estimated augmented perennial yield for the Lemmon Valley ground water reservoir. Beneficial use has been shown for water rights in excess of the estimated perennial yield in both the East Lemmon and Silver Lake sub-areas of Lemmon Valley.

In 1978, pumpage from the ground water reservoir in the Lemmon Valley Basin exceeded the estimated augmented yield. Pumpage has increased since 1978.

To grant additional water rights under the subject application would adversely affect existing rights and threaten to prove detrimental to the public welfare.

¹⁴ NRS Chapters 533 and 534.

¹⁵ NRS 533.370(4).

IV.

The potential exists for additional development and pumpage from the Lemmon Valley ground water reservoir. Rapid urbanization of the area indicates pumpage will continue to increase.

To grant additional water rights from the Lemmon Valley ground water reservoir under the subject application would overcommit this limited natural resource, conflict with existing rights, and threaten to prove detrimental to the public welfare.

V.

Water levels in monitor wells have shown declines in parts of Lemmon Valley. To appropriate more ground water for development would tend to accelerate water level declines and thereby conflict with existing rights and threaten to prove detrimental to the public welfare.

RULING

Application 48842 is hereby denied on the grounds of substantial evidence that the granting thereof would conflict with existing rights and be detrimental to the public interest and welfare.

Respectfully submitted



Peter G. Morros
State Engineer

PGM/TKG/bl

Dated this 22nd day of

April, 1985.

APPENDIX OF REFERENCES

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

State of Nevada, Department of Highways, Report on Land Subsidence in Las Vegas Valley.

Evaluation of the Water Resources of Lemmon Valley with Emphasis on Effects of Ground-Water Development to 1971, J.R. Harrill, Water Resources Bulletin No. 42, United States Geological Survey and State of Nevada, State Engineer's Office, Division of Water Resources, Department of Conservation and Natural Resources, 1972.

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