

IN THE OFFICE OF THE STATE ENGINEER

IN THE MATTER OF APPLICATIONS 34024,)
40746, 40747, 40748, 40749, 40750, 40751,)
40752, 40753, 44239 AND 46254 FILED TO)
APPROPRIATE THE PUBLIC WATERS OF AN)
UNDERGROUND SOURCE IN DESERT)
VALLEY, HUMBOLDT COUNTY, NEVADA.)

RULING

GENERAL

I.

Application 34024 was filed on October 6, 1977, by Bottle Creek Ranch Co. to appropriate 10.0 c.f.s. of water from an underground source for irrigation purposes on 600 acres of land within the SE1/4 SE1/4 Section 22, S1/2 S1/2 Section 23, N1/2 Section 26, E1/2 NE1/4 Section 27, all in T.40N., R.33E., M.D.B.&M. The point of diversion is described as being within the NE1/4 NE1/4 Section 27, T.40N., R.33E., M.D.B.&M.¹

Application 40746 was filed on February 25, 1980, by D.J. Nelson to appropriate 6.0 c.f.s. of water from an underground source for irrigation purposes on 320 acres of land within the S1/2 Section 10, T.37N., R.34E., M.D.B.&M. The point of diversion is described as being within the SE1/4 SW1/4 Section 10, T.37N., R.34E., M.D.B.&M.¹

Application 40747 was filed on February 25, 1980, by D.J. Nelson to appropriate 6.0 c.f.s. of water from an underground source for irrigation purposes on 320 acres of land within the N1/2 Section 10, T.37N., R.34E., M.D.B.&M. The point of diversion is described as being within the NW1/4 NE1/4 Section 10, T.37N., R.34E., M.D.B.&M.¹

Application 40748 was filed on February 25, 1980, by D.J. Nelson to appropriate 6.0 c.f.s. of water from an underground source for irrigation purposes on 320 acres of land within the S1/2 Section 32, T.37N., R.34E., M.D.B.&M. The point of diversion is described as being within the SE1/4 SW1/4 Section 32, T.37N., R.34E., M.D.B.&M.¹

Application 40749 was filed on February 25, 1980, by D.J. Nelson to appropriate 6.0 c.f.s. of water from an underground source for irrigation purposes on 320 acres of land within the N1/2 Section 32, T.37N., R.34E., M.D.B.&M. The point of diversion is described as being within the NW1/4 NE1/4 Section 32, T.37N., R.34E., M.D.B.&M.¹

Application 40750 was filed on February 25, 1980, by D.J. Nelson to appropriate 6.0 c.f.s. of water from an underground source for irrigation purposes on 320 acres of land within the N1/2 Section 32, T.38N., R.35E., M.D.B.&M. The point of diversion is described as being within the NW1/4 NE1/4 Section 32, T.38N., R.35E., M.D.B.&M.¹

¹ Public record in the office of the State Engineer filed under Applications 34024, 40746, 40747, 40748, 40749, 40750, 40751, 40752, 40753, 44239 and 46254.

Application 40751 was filed on February 25, 1980, by D.J. Nelson to appropriate 6.0 c.f.s. of water from an underground source for irrigation purposes on 320 acres of land within the S1/2 Section 32, T.38N., R.35E., M.D.B.&M. The point of diversion is described as being within the SE1/4 SW1/4 Section 32, T.38N., R.35E., M.D.B.&M.¹

Application 40752 was filed on February 25, 1980, by D.J. Nelson to appropriate 6.0 c.f.s. of water from an underground source for irrigation purposes on 309.58 acres of land within the N1/2 Section 32, T.36N., R.34E., M.D.B.&M. The point of diversion is described as being within the SE1/4 NW1/4 Section 32, T.36N., R.34E., M.D.B.&M.¹

Application 40753 was filed on February 25, 1980, by D.J. Nelson to appropriate 6.0 c.f.s. of water from an underground source for irrigation purposes on 279.42 acres of land within the N1/2 Section 30, T.36N., R.34E., M.D.B.&M. The point of diversion is described as being within the SE1/4 NW1/4 Section 30, T.36N., R.34E., M.D.B.&M.¹

Application 44239 was filed on August 6, 1981, by Bottle Creek Ranch Co. to appropriate 2.228 c.f.s. of water from an underground source for irrigation purposes on 240 acres of land within the NW1/4, N1/2 SW1/4 Section 22, T.40N., R.33E., M.D.B.&M. The point of diversion is described as being within the NW1/4 SW1/4 Section 22, T.40N., R.33E., M.D.B.&M.¹

Application 46254 was filed on October 21, 1982, by DeLong Ranches, Inc., to appropriate 6.0 c.f.s. of water from an underground source for irrigation purposes on 800 acres of land within the SE1/4 NW1/4, NW1/4 SE1/4, S1/2 SE1/4 Section 17; SW1/4 SW1/4 Section 16; NW1/4 NE1/4, E1/2 E1/2 Section 20; W1/2 NW1/4, SE1/4 NW1/4, SW1/4, SW1/4 NE1/4, N1/2 SE1/4 Section 21; all in T.38N., R.32E., M.D.B.&M. The point of diversion is described as being within the NW1/4 SE1/4 Section 21, T.38N., R.32E., M.D.B.&M.¹

II.

Water Resources-Reconnaissance Series Report No. 7 titled "Ground-Water Resources of Desert Valley, Humboldt and Pershing Counties, Nevada", was prepared cooperatively by the Geological Survey, U.S. Department of the Interior and State of Nevada, Department of Conservation and Natural Resources.

FINDINGS OF FACT

I.

The estimated average annual recharge for Desert Valley from precipitation is 5,000 acre-feet annually.² Perennial yield is estimated to be 9,000 acre-feet annually.³

² Water Resources-Reconnaissance Series Report No. 7, Geological Survey, U.S. Department of the Interior, and State of Nevada, Department of Conservation and Natural Resources, April 1962, p. 1.

³ Water for Nevada, Report No. 3, "Nevada's Water Resources", State of Nevada, Department of Conservation and Natural Resources, Division of Water Resources, October 1971, p. 16.

II.

Permits and certificates of appropriation have been issued under existing rights for the withdrawal of approximately 26,800 acre-feet of ground water annually from the Desert Valley Ground Water Basin.⁴

III.

The Desert Valley Ground Water Basin was designated and described in Order No. 535 issued by the State Engineer on May 9, 1975.⁵

IV.

Prior Applications 27788, 29024, 29025, 29026, 29027, 29032, 29033, 29034, 29035, 29753, 29803, 29804, 31330, 33009 and 34940 to appropriate water for irrigation purposes from underground sources have been denied in Desert Valley.⁶

V.

Should additional water be allowed for appropriation under new applications and subsequent development of ground water pursuant thereto detrimentally affect prior ground water rights, the State Engineer is required by law to order withdrawals be restricted to conform to priority rights.⁷

VI.

The approval of Applications 40746 through 40753, inclusive, and 46254 would authorize the additional withdrawal of 14,196 acre-feet of ground water which would substantially exceed the perennial yield of the ground water basin. Applications 34024 and 44239 are supplemental to lands having existing rights and would not, therefore, increase the total amount of water withdrawn from the ground water basin, but these applications seek to increase the total permitted diversion rate from the basin.

V.

The perennial yield of a ground water reservoir may be defined as the maximum amount of water of adequate quality that can be withdrawn and consumed economically each year for an indefinite period. If perennial yield is exceeded on a continual basis, water levels will decline until adverse conditions develop including but not limited to:

⁴ Public record in the office of the State Engineer.

⁵ State Engineer's Order No. 535, May 9, 1975, public record in the office of the State Engineer.

⁶ See State Engineer's Rulings 1951, 2049, 2130, 2131, 2132, 2326, 2337 and 2371.

⁷ NRS 534.110.

- a. cones of depression,
- b. declining water tables,
- c. increased economic pumping lifts,
- d. reversal of ground water gradients which may cause migration of poor quality water into good quality zones,
- e. land subsidence,
- f. decreased flows at surface discharge areas (springs, seeps, etc.),
- g. water quality deterioration.

These conditions are well documented in several ground water basins in the State of Nevada where withdrawals have exceeded recharge or perennial yield.⁸

CONCLUSIONS

I.

The State Engineer has jurisdiction of the parties and the subject matter of this action.⁹

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.¹⁰

III.

Existing rights within the Desert Valley Ground Water Basin exceed the estimated perennial yield of the ground water system. Approval of additional appropriations would impair the value of existing rights and be detrimental to the public welfare.

⁸ See Appendix of References.

⁹ NRS 533.025 and NRS 533.030.

¹⁰ NRS 533.370, subsection 3.

RULING

Applications 34024, 40746, 40747, 40748, 40749, 40750, 40751, 40752, 40753, 44239 and 46254 are hereby denied on the grounds that their granting would tend to impair the value of existing rights and would be detrimental to the public welfare.

Respectfully submitted



Peter G. Morros
State Engineer

PGM/KN/bl

Dated this 8th day of
November, 1984.

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.

Hydrologic Response to Irrigation Pumping in Diamond Valley, Eureka and Elko Counties, Nevada, 1950-65, J.R. Harrill, Water Resources Bulletin No. 35, United States Geological Survey and State of Nevada, State Engineer's Office, Division of Water Resources, Department of Conservation and Natural Resources, 1968.

Effects of Irrigation Development on the Water Supply Quinn River Valley area, Nevada and Oregon, 1950-1964, C.J. Huxel, Jr., Water Resource Bulletin No. 34, United States Geological Survey and State of Nevada, State Engineer's Office, Division of Water Resources, Department of Conservation and Natural Resources, 1966.

Hydrologic Response to Irrigation Pumping in Hualapai Flat, Washoe, Pershing and Humboldt Counties, Nevada, 1960-1967, J.R. Harrill, Water Resource Bulletin No. 37, United States Geological Survey and State of Nevada, State Engineer's Office, Division of Water Resources, Department of Conservation and Natural Resources, 1969.

The Effects of Pumping on the Hydrology of Kings River Valley, Humboldt County, Nevada, 1957-1964, G.T. Malmberg and G.F. Worts, Jr., Water Resource Bulletin No. 31, United States Geological Survey and State of Nevada, State Engineer's Office, Division of Water Resources, Department of Conservation and Natural Resources, 1966.

Effects of Ground-Water Development on the Water Regimen of Paradise Valley, Humboldt County, Nevada, 1948-1968, and Hydrologic Reconnaissance of the Tributary Areas, J.R. Harrill and D.O. Moore, Water Resource Bulletin No. 39, United States Geological Survey, 1970.

Ground-Water Storage Depletion in Pahrump Valley, Nevada-California, 1962-75, J.R. Harrill, Open File Report 81-635, United States Geological Survey, 1982, prepared in cooperation with Nevada Division of Water Resources.

Development of a Relation for Steady State Pumping Rate for Eagle Valley Ground-Water Basin, Nevada, F.E. Arteaga, T.J. Durbin, United States Geological Survey, 1978, prepared in cooperation with Nevada Division of Water Resources.

Basic Ground-Water Hydrology, Ralph C. Heath, U.S. Geological Survey Water Supply Paper 2220, 1983.

Methods of Determining Permeability, Transmissibility and Drawdown, U.S. Geological Survey Water Supply Paper 1536-1, R.H. Brown, J.G. Ferris, C.E. Jacob, D.B. Knowles, R.R. Meyer, H.E. Skibitzke and C.F. Theis, 1963.

Subsidence in Las Vegas Valley, John w. Bell, Nevada Bureau of Mines and Geology Bulletin 95.

Subsidence in United States due to Ground-Water Overdraft - A Review, J.F. Poland, Proceedings of the Irrigation and Drainage Division Specialty Conference, April 1973, American Society of Civil Engineers.