

IN THE MATTER OF APPLICATIONS)
 36891, 36892, 36893, 36894, 37115,)
 37116, 37192, 37193, 37197, 37787,)
 37788, 37789, 37790, 37791, 37792,)
 37873, 37927, 38551, 38649, 38854,)
 38855, 38873, 39048, 39049, 39913,)
 39928, 39930, 39931, 41597, 41598,)
 41932 AND 43448 FILED TO)
 APPROPRIATE THE PUBLIC WATERS OF AN)
 UNDERGROUND SOURCE IN DIXIE CREEK -)
 TENMILE CREEK AREA, ELKO COUNTY,)
 NEVADA.)

RULING

GENERAL

I.

Application 36891¹ was filed on March 5, 1979, by Alfred G. Maxwell to appropriate 5.4 c.f.s. of water from an underground source for irrigation and domestic purposes on 320 acres of land within the N1/2 Section 20, T.33N., R.56E., M.D.B.&M. The point of diversion is described as being within the SW1/4 NE1/4 Section 20, T.33N., R.56E., M.D.B.&M.

Application 36892¹ was filed on March 5, 1979, by Arvid D. Craig to appropriate 5.4 c.f.s. of water from an underground source for irrigation and domestic purposes on 320 acres of land within the S1/2 Section 20, T.33N., R.56E., M.D.B.&M. The point of diversion is described as being within the NW1/4 SE1/4 Section 20, T.33N., R.56E., M.D.B.&M.

Application 36893¹ was filed on March 5, 1979, by Lonnie Ray Todd to appropriate 5.4 c.f.s. of water from an underground source for irrigation and domestic purposes on 320 acres of land within the S1/2 S1/2 Section 16, and the N1/2 N1/2 Section 21, T.33N., R.56E., M.D.B.&M. The point of diversion is described as being within the SE1/4 SE1/4 Section 16, T.33N., R.56E., M.D.B.&M.

Application 36894¹ was filed on March 5, 1979, by Leon R. Maxwell to appropriate 5.4 c.f.s. of water from an underground source for irrigation and domestic purposes on 320 acres of land within the S1/2 Section 17, T.33N., R.56E., M.D.B.&M. The point of diversion is described as being within the SW1/4 SE1/4 Section 17, T.33N., R.56E., M.D.B.&M.

Application 37115¹ was filed on March 21, 1979, by Dolores M. Ringdahl to appropriate 5.4 c.f.s. of water from an underground source for irrigation purposes on 320 acres of land within the S1/2 Section 2, T.32N., R.55E., M.D.B.&M. The point of diversion is described as being within the NE1/4 SW1/4 Section 2, T.32N., R.55E., M.D.B.&M.

¹ Public record in the office of the Nevada State Engineer.

Application 37116¹ was filed on March 21, 1979, by William R. Ringdahl to appropriate 5.4 c.f.s. of water from an underground source for irrigation purposes on 320 acres of land within the N1/2 Section 2, T.32N., R.55E., M.D.B.&M. The point of diversion is described as being within the NE1/4 NW1/4 Section 2, T.32N., R.55E., M.D.B.&M.

Application 37192¹ was filed on March 26, 1979, by Walter B. Carter to appropriate 5.4 c.f.s. of water from an underground source for irrigation and domestic purposes on 320 acres of land within the S1/2 Section 32, T.34N., R.56E., M.D.B.&M. The point of diversion is described as being within the NW1/4 SW1/4 Section 32, T.34N., R.56E., M.D.B.&M.

Application 37193¹ was filed on March 26, 1979, by Anita M. Carter to appropriate 5.4 c.f.s. of water from an underground source for irrigation and domestic purposes on 320 acres of land within the N1/2 Section 5, T.33N., R.56E., M.D.B.&M. The point of diversion is described as being within the SE1/4 NE1/4 Section 5, T.33N., R.56E., M.D.B.&M.

Application 37197¹ was filed on March 26, 1979, by David Arrillaga to appropriate 5.4 c.f.s. of water from an underground source for irrigation and domestic purposes on 320 acres of land within the N1/2 NE1/4, N1/2 NW1/4, SW1/4 NW1/4 and SE1/4 NW1/4 Section 8 and NE1/4 NE1/4, SE1/4 NE1/4, NE1/4 SE1/4 Section 7, all in T.33N., R.56E., M.D.B.&M. The point of diversion is described as being within the NE1/4 NE1/4 Section 8, T.33N., R.56E., M.D.B.&M.

Application 37787¹ was filed on April 9, 1979, by Audrey J. Powell to appropriate 5.4 c.f.s. of water from an underground source for irrigation and domestic purposes on 320 acres of land within the N1/2 Section 32, T.33N., R.56E., M.D.B.&M. The point of diversion is described as being within the SE1/4 NE1/4 Section 32, T.33N., R.56E., M.D.B.&M.

Application 37788¹ was filed on April 9, 1979, by Wayne H. Powell to appropriate 5.4 c.f.s. of water from an underground source for irrigation and domestic purposes on 320 acres of land within the S1/2 Section 32, T.33N., R.56E., M.D.B.&M. The point of diversion is described as being within the SW1/4 SE1/4 Section 32, T.33N., R.56E., M.D.B.&M.

Application 37789¹ was filed on April 9, 1979, by Joy E. Butler to appropriate 5.4 c.f.s. of water from an underground source for irrigation and domestic purposes on 320 acres of land within the NE1/4 Section 29, and the NW1/4 Section 28, T.33N., R.56E., M.D.B.&M. The point of diversion is described as being within the NE1/4 NE1/4 Section 29, T.33N., R.56E., M.D.B.&M.

Application 37790¹ was filed on April 9, 1979, by Dennis A. Powell to appropriate 5.4 c.f.s. of water from an underground source for irrigation and domestic purposes on 320 acres of land within the S1/2 Section 29, T.33N., R.56E., M.D.B.&M. The point of diversion is described as being within the SE1/4 SE1/4 Section 29, T.33N., R.56E., M.D.B.&M.

Application 37791¹ was filed on April 9, 1979, by Coy G. Powell to appropriate 5.4 c.f.s. of water from an underground source for irrigation and domestic purposes on 320 acres of land within the NW1/4 Section 26, and NE1/4 Section 27, T.33N., R.56E., M.D.B.&M. The point of diversion is described as being within the SW1/4 NW1/4 Section 26, T.33N., R.56E., M.D.B.&M.

Application 37792¹ was filed on April 9, 1979, by Alton E. Powell to appropriate 5.4 c.f.s. of water from an underground source for irrigation and domestic purposes on 320 acres of land within the E1/2 Section 26, T.33N., R.56E., M.D.B.&M. The point of diversion is described as being within the SW1/4 NE1/4 Section 26, T.33N., R.56E., M.D.B.&M.

Application 37873¹ was filed on April 10, 1979, by David E. Powell to appropriate 5.4 c.f.s. of water from an underground source for irrigation and domestic purposes on 320 acres of land within the E1/2 Section 30, T.33N., R.56E., M.D.B.&M. The point of diversion is described as being within the NE1/4 NE1/4 Section 30, T.33N., R.56E., M.D.B.&M.

Application 37927¹ was filed on April 16, 1979, by Melvin L. Gibson to appropriate 5.4 c.f.s. of water from an underground source for irrigation and domestic purposes on 320 acres of land within the W1/2 Section 36, T.33N., R.55E., M.D.B.&M. The point of diversion is described as being within the NW1/4 NW1/4 Section 36, T.33N., R.55E., M.D.B.&M.

Application 38551¹ was filed on July 13, 1979, by Keith R. Jones to appropriate 2.0 c.f.s. of water from an underground source for irrigation and domestic purposes on 80 acres of land within the W1/2 SW1/4 and E1/2 SW1/4 Section 5, T.33N., R.56E., M.D.B.&M. The point of diversion is described as being within the NW1/4 SW1/4 Section 5, T.33N., R.56E., M.D.B.&M.

Application 38649¹ was filed on July 23, 1979, by Jack L. Lute and/or Margaret Ann Lute to appropriate 5.4 c.f.s. of water from an underground source for irrigation and domestic purposes on 320 acres of land within the N1/2 Section 32, T.33N., R.56E., M.D.B.&M. The point of diversion is described as being within the SE1/4 NW1/4 Section 32, T.33N., R.56E., M.D.B.&M.

Application 38854¹ was filed on August 23, 1979, by George H. Franklin to appropriate 5.4 c.f.s. of water from an underground source for irrigation and domestic purposes on 320 acres of land within the W1/2 Section 30, T.33N., R.56E., M.D.B.&M. The point of diversion is described as being within the SE1/4 SW1/4 Section 30, T.33N., R.56E., M.D.B.&M.

Application 38855¹ was filed on August 23, 1979, by Timothy A. Closner to appropriate 5.4 c.f.s. of water from an underground source for irrigation and domestic purposes on 320 acres of land within the E1/2 Section 12, T.32N., R.56E., M.D.B.&M. The point of diversion is described as being within the SE1/4 SE1/4 Section 12, T.32N., R.56E., M.D.B.&M.

Application 38873¹ was filed on August 28, 1979, by Margaret M. Powell to appropriate 5.4 c.f.s. of water from an underground source for irrigation and domestic purposes on 320 acres of land within the S1/2 Section 27, T.33N., R.56E., M.D.B.&M. The point of diversion is described as being within the SW1/4 SE1/4 Section 27, T.33N., R.56E., M.D.B.&M.

Application 39048¹ was filed on September 13, 1979, by Arpee Jones to appropriate 5.4 c.f.s. of water from an underground source for irrigation and domestic purposes on 320 acres of land within the SW1/4 NW1/4, W1/2 SW1/4 Section 4 and E1/2 SW1/4 and SE1/4 Section 5, all within T.33N., R.56E., M.D.B.&M. The point of diversion is described as being within the SW1/4 SE1/4 Section 5, T.33N., R.56E., M.D.B.&M.

Application 39049¹ was filed on September 13, 1979, by Keith R. Jones to appropriate 2.7 c.f.s. of water from an underground source for irrigation and domestic purposes on 160 acres of land within the NW1/4 NW1/4, NE1/4 NW1/4, SE1/4 NW1/4 and NW1/4 NE1/4 all within Section 4, T.33N., R.56E., M.D.B.&M. The point of diversion is described as being within the NW1/4 NW1/4 Section 4, T.33N., R.56E., M.D.B.&M.

Application 39913¹ was filed on December 7, 1979, by Robert T. Rosenbaum to appropriate 4.0 c.f.s. of water from an underground source for irrigation and domestic purposes on 240 acres of land within the NW1/4 Section 27 and E1/2 NE1/4 Section 28, all within T.33N., R.56E., M.D.B.&M. The point of diversion is described as being within the SE1/4 NE1/4 Section 28, T.33N., R.56E., M.D.B.&M.

Application 39928¹ was filed on December 10, 1979, by Karin A. Sterud to appropriate 6.0 c.f.s. of water from an underground source for irrigation and domestic purposes on 320 acres of land within the S1/2 Section 32, T.33N., R.56E., M.D.B.&M. The point of diversion is described as being within the SE1/4 SW1/4 Section 32, T.33N., R.56E., M.D.B.&M.

Application 39930¹ was filed on December 10, 1979, by Margaret J. Sterud to appropriate 6.0 c.f.s. of water from an underground source for irrigation and domestic purposes on 320 acres of land within the N1/2 Section 32, T.33N., R.56E., M.D.B.&M. The point of diversion is described as being within the NE1/4 NW1/4 Section 32, T.33N., R.56E., M.D.B.&M.

Application 39931¹ was filed on December 10, 1979, by P. Edgar Sterud to appropriate 6.0 c.f.s. of water from an underground source for irrigation and domestic purposes on 320 acres of land within the S1/2 Section 29, T.33N., R.56E., M.D.B.&M. The point of diversion is described as being within the NW1/4 SW1/4 Section 29, T.33N., R.56E., M.D.B.&M.

Application 41597¹ was filed on June 26, 1980, by Byron E. Elmer to appropriate 2.7 c.f.s. of water from an underground source for irrigation and domestic purposes on 160 acres of land within the SW1/4 Section 27, T.33N., R.56E., M.D.B.&M. The point of diversion is described as being within the SW1/4 SW1/4 Section 27, T.33N., R.56E., M.D.B.&M.

Application 41598¹ was filed on June 26, 1980, by Byron E. Elmer to appropriate 2.7 c.f.s. of water from an underground source for irrigation and domestic purposes on 160 acres of land within the S1/2 SE1/4 Section 27 and N1/2 NE1/4 Section 34, all within T.33N., R.56E., M.D.B.&M. The point of diversion is described as being within the NW1/4 NE1/4 Section 34, T.33N., R.56E., M.D.B.&M.

Application 41932¹ was filed on July 28, 1980, by Roberta D. Powell to appropriate 5.4 c.f.s. of water from an underground source for irrigation and domestic purposes on 320 acres of land within the N1/2 Section 13, T.32N., R.56E., M.D.B.&M. The point of diversion is described as being within the SE1/4 NW1/4 Section 13, T.32N., R.56E., M.D.B.&M.

Application 43448¹ was filed on April 2, 1981, by Leland J. Miller to appropriate 4.0 c.f.s. of water from an underground source for irrigation purposes on 120 acres of land within the S1/2 SW1/4 and NE1/4 SW1/4 Section 32, T.33N., R.57E., M.D.B.&M. The point of diversion is described as being within the SE1/4 SW1/4 Section 32, T.33N., R.57E., M.D.B.&M.

II.

Water Resources-Reconnaissance Series Report 35 titled "Water-Resources Appraisal of the Huntington Valley Area, Elko and White Pine Counties, Nevada", was prepared cooperatively by the Geological Survey, U.S. Department of Interior and State of Nevada, Department of Conservation and Natural Resources. For the purposes of that report, the Huntington Valley Area was divided into three hydrologic subareas; the Huntington Creek Drainage Area, the South Fork Humboldt River Drainage Area and the Dixie Creek - Tenmile Creek Drainage Area.

Water Resources Bulletin No. 32 titled "Hydrologic Reconnaissance of the Humboldt River Basin, Nevada", was prepared cooperatively by the Geological Survey, U.S. Department of Interior and State of Nevada, Department of Conservation and Natural Resources.

FINDINGS

I.

The estimated average annual recharge to and discharge from the ground water reservoir in Huntington Valley is computed to be equal to the sum of the estimated discharge by evapotranspiration of 21,000 acre-feet per year and by subsurface outflow of 9,000 acre-feet per year for a total of 30,000 acre-feet per year. Of this total, about 14,000 acre-feet is discharged in the Huntington Creek area, 3,000 acre-feet in the South Fork Humboldt River area and 13,000 acre-feet in the Dixie Creek - Tenmile Creek area.²

Surface water runoff contributes approximately 18,000 acre-feet to the yearly ground water recharge with the remaining 12,000 acre-feet recharge supplied by underflow from the mountain areas.²

Only a small amount of underflow beneath the flood plain of the South Fork Humboldt River enters the Dixie Creek - Tenmile Creek drainage area from the two upstream drainage areas. The underflow, based on estimates of transmissibility and water table gradients, is estimated to be approximately 1000 acre-feet per year - 400 acre-feet from the Huntington Creek area and 600 acre-feet from the South Fork Humboldt River area.²

A large increase in flow of the South Fork Humboldt River, on the order of 9,000 acre-feet per year, occurs when it flows out of the Dixie Creek - Tenmile Creek area. This increase is due to ground water contribution.²

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.³

Based on information available to the State Engineer, any further increase in ground water pumpage would tend to reduce ground water inflow into the south fork of the Humboldt River.³

² Water Resources-Reconnaissance Series Report 35.

³ Information available in the office of the State Engineer and the U.S. Geological Survey.

II.

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. If the perennial yield is continually exceeded, ground water levels will decline until the ground water reservoir is depleted of water of usable quality or until the pumping lifts become uneconomical to maintain. Perennial yield cannot exceed the natural replenishment to an area indefinitely and ultimately is limited to the maximum amount of natural discharge that can be salvaged for beneficial use.⁴

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.⁴

III.

Permits and certificates have been issued under existing rights for more than 16,000 acre-feet annually of ground water within the Dixie Creek - Tenmile Creek area.¹

IV.

Should additional water be allowed for appropriation under new applications and subsequent development of ground water pursuant thereto detrimentally affect prior existing rights, the State Engineer is required by law to order withdrawals be restricted to conform to priority rights.⁵

V.

Information available to the State Engineer indicates that Applications 36891, 36892, 36893, 36894, 37115, 37116, 37192, 37193, 37197, 37787, 37788, 37789, 37790, 37791, 37792, 37873, 37927, 38551, 38649, 38854, 38855, 38873, 39048, 39049, 39913, 39928, 39930, 39931, 41597, 41598, 41932 and 43448 were filed in support of Desert Land Entry applications.¹ NRS 533.357 establishes the order of priority the State Engineer must consider in acting on applications for irrigation use within the same basin.

⁴ See attached Appendix of References.

⁵ NRS 534.100(6).

VI.

The approval of the above referenced applications would authorize the additional withdrawal of 29,160 acre-feet of ground water which would substantially exceed the perennial yield of the ground water basin.¹

CONCLUSIONS

I.

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

II.

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

- A. there is no unappropriated water at the proposed source,
- B. the proposed use conflicts with existing rights,
- C. the proposed use threatens to prove detrimental to the public welfare.⁶

III.

The granting of permits under Applications 36891, 36892, 36893, 36894, 37115, 37116, 37192, 37193, 37197, 37787, 37788, 37789, 37790, 37791, 37792, 37873, 37927, 38551, 38649, 38854, 38855, 38873, 39048, 39049, 39913, 39928, 39930, 39931, 41597, 41598, 41932 and 43448 would result in the withdrawal of substantial amounts of ground-water in excess of the perennial yield of the ground-water basin and would therefore adversely affect existing rights and be detrimental to the public interest and welfare.

⁶ NRS 533.370.

RULING

Applications 36891, 36892, 36893, 36894, 37115, 37116, 37192, 37193, 37197, 37787, 37788, 37789, 37790, 37791, 37792, 37873, 37927, 38551, 38649, 38854, 38855, 38873, 39048, 39049, 39913, 39928, 39930, 39931, 41597, 41598, 41932 and 43448 are herewith denied on the grounds that the granting thereof would adversely affect existing rights and would be detrimental to the public interest and welfare.

Respectfully submitted,



Peter G. Morros
State Engineer

PGM/CT/bl

Dated this 21st day of
MAY, 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.

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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.

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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.

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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.