

IN THE OFFICE OF THE STATE ENGINEER

IN THE MATTER OF APPLICATION 53332)
FILED TO APPROPRIATE THE PUBLIC)
WATERS OF AN UNDERGROUND SOURCE)
WITHIN THE COLORADO RIVER VALLEY)
GROUNDWATER BASIN, CLARK COUNTY,))
NEVADA.)

RULING

GENERAL

I.

Application 53332 was filed on May 31, 1989, by Crystal Palace Gambling Hall Inc., AKA Mark Twain Industries, Inc. to appropriate water from an underground source for commercial purposes within portions of Government Lot 2 and N $\frac{1}{2}$ NW $\frac{1}{4}$ Section 13, T.32S., R.66E., M.D.B.&M. The point of diversion is described as being within the SE $\frac{1}{4}$ NW $\frac{1}{4}$ Section 13, T.32S., R.66E., M.D.B.&M.¹

In 1966, Water Resources Reconnaissance Series Report 36, "Ground Water Appraisal of the Eldorado-Piute Valley Area, Nevada and California", by F. Eugene Rush and Charles J. Huxel, Jr., was prepared cooperatively by the Nevada Department of Conservation and Natural Resources, Division of Water Resources, and the U.S. Department of the Interior, Geological Survey. This report may be viewed at the office of the State Engineer.²

FINDINGS OF FACT

I.

By an Order dated July 8, 1982, the State Engineer designated and described the Colorado River Valley Groundwater Basin under the provisions of NRS Chapter 534 as a basin in need of additional administration.³

¹ Public record in the office of the State Engineer.

² Water Resources Reconnaissance Series Report 36 and USGS Open File Report 82-115, public record in the office of the State Engineer.

³ See State Engineer's Order No. 790 dated July 8, 1982, public record in the office of the State Engineer.

II.

It is estimated that the potential annual recharge to the Colorado River Valley Groundwater Basin from precipitation is 200 acre-feet.⁴ 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, groundwater levels will decline until the groundwater 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.⁵

Withdrawals of groundwater 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 groundwater gradients which could result in significant changes in the recharge-discharge relationship. These conditions have developed in several other groundwater basins within the State of Nevada where storage depletion and declining water tables have been recorded and documented.⁵

III.

Certificates of Appropriation from the Colorado River Valley Groundwater Basin have been issued for over 700 acre-feet per year. Additionally, the State Engineer has issued permits which would allow the diversion of over 950 acre-feet per year when fully developed. Therefore, a total of approximately 1,650 acre-feet per year of water right is currently appropriated from the Colorado River Valley Groundwater Basin.¹

IV.

A public administrative hearing in the matter of the applications to appropriate water from the Colorado River Valley Groundwater Basin was held on June 11, 1982. Although testimony was presented at the hearing, there was no evidence presented that would indicate that there was sufficient groundwater available to supply the proposed diversions without creating an adverse effect on prior existing water rights. A transcript

⁴ Water Resources Reconnaissance Series Report 36, page 19.

⁵ See attached Appendix of References.

of the hearing may be viewed at the office of the State Engineer.⁶

V.

The points of diversion and places of use under the subject applications lie in a developed area at the base of a small alluvial fan which descends to a narrow flood plain along the Colorado River, including what is generally referred to as the Laughlin area. The alluvial fan emanates from the Newberry Mountains which border to the west and northwest. The alluvial fan and flood plain are composed of unconsolidated to semi-consolidated sediments which form lenticular beds of sand, gravel, silt and clay. Groundwater occurrence and movement are contained to fractures in the severely altered and faulted bedrock of the Newberry Mountains. Recharge from precipitations is very limited and groundwater movement through the Newberry Mountains from adjacent Piute Valley is also very limited. There also may be some recharge to the groundwater reservoir from cooling water infiltration and the coal slurry ponds at the Mohave Generating Plant.²

CONCLUSIONS

I.

The State Engineer has jurisdiction of the parties and the subject matter of this action and determination.⁷

II.

The State Engineer is prohibited by law from granting a permit under an application to appropriate the public waters where:⁸

- A. There is no unappropriated water at the proposed source, or
- B. The proposed use conflicts with existing rights, or

⁶ See State Engineer's Ruling No. 2763, dated July 9, 1982.

⁷ NRS Chapters 533 and 534.

⁸ NRS 533.370(3).

- C. The proposed use threatens to prove detrimental to the public interest.

III.

Should Application 53332 be granted, the additional withdrawals and consumption from irrigation would remove water from the groundwater basin which:

- A. Would not be replaced resulting in depletion of the groundwater reservoir, or
- B. Would be replaced by infiltrating surface water that would otherwise remain in or return to the stream system which would constitute interference with existing rights.

The subject application to appropriate could require an appropriation up to 724 acre-feet of groundwater annually.

The additional withdrawal and consumption of underground water would, therefore, conflict with existing rights and threaten to prove detrimental to the public welfare.

IV.

Should additional water be allowed for appropriation under new applications and subsequent development of groundwater, pursuant thereto, detrimentally affect prior and existing rights, the State Engineer is required by law to order withdrawals be restricted to conform to priority rights.⁹

V.

Previous applications filed with the State Engineer's office to appropriate additional groundwater within the Colorado River Valley have been denied; these include previous application Nos. 45273, 45652, 45980, 46012, 46013, 46159, 46407, 46408, 46409, 46472, 46567, 46568, 46569 and 46613 filed for quasi-municipal purposes;¹⁰ 32073, 32074, 32075, 32076, 32077, 32078, 32079, 32080, 32914, 36470, 36471 and 36529 filed for

⁹ NRS 534.110.

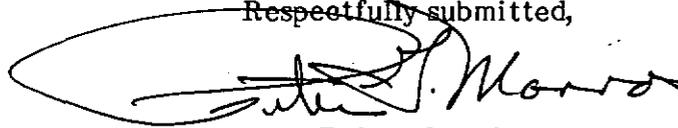
¹⁰ See State Engineer's Ruling No. 3353 dated May 27, 1986.

irrigation and domestic purposes;¹¹ and 46424, 46425 and 46843 filed for commercial and domestic purposes.¹⁰

RULING

Application 53332 is herewith denied on the grounds 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/HR/bk

Dated this 9th day of
November, 1989.

¹¹ See State Engineer's Ruling No. 3617 dated June 20, 1989.

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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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.

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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.

Appendix of References

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.

Ground-Water Hydraulics, S.W. Lohman, U.S. Geological Survey Professional Paper 708, 1979.