IN THE MATTER OF APPLICATIONS 32905 AND)
32939 FILED TO APPROPRIATE THE WATERS) RULING
OF AN UNDERGROUND SOURCE IN MASON VALLEY,)
LYON COUNTY, NEVADA.)

INTRODUCTION

Applications 32905 and 32939 were filed in the State Engineer's office on July 25, 1977 and July 28, 1977 respectively, to appropriate underground water for irrigation purposes in Mason Valley, Nevada.

In 1969, Water Resources Bulletin Number 38 "Water Resources and Development in Mason Valley, Lyon and Mineral Counties, Nevada, 1948 to 1965", by C. J. Huxel, Jr., with a section on surface water by E. E. Harris, was prepared cooperatively by the Nevada Department of Conservation and Natural Resources, Division of Water Resources and U. S. Department of the Interior, Geological Survey. This report is available from the State Engineer.

FINDINGS OF FACT

Application 32905 was filed on July 25, 1977 by Donald O. Scheid for permission to appropriate 2.7 c.f.s. of water for irrigation and domestic purposes. The proposed point of diversion is located in the NE1/4 NE1/4, Section 3, T.13N., R.26E., M.D.B.& M. The proposed place of use is the E1/2 NE1/4 of said Section 3. This application was filed for permission to irrigate land applied for under Carey Act Application 1219.

Application 32939 was filed on July 28, 1977 by Ellen Joan Scheid for permission to appropriate 2.7 c.f.s. of water for irrigation and domestic purposes. The proposed point of diversion is located in the SE1/4 SE1/4, Section 33, T.14N., R.26E., M.D.B.& M. The proposed place of use is the SE1/4 NE1/4 and E1/2 SE1/4 of said Section 33. This application was filed for permission to irrigate land applied for under Carey Act Application 1236. 1/

II

In accordance with the provisions of NRS 324.130, State Registrar of Lands, Addison A. Millard, requested the State Engineer to report as to water supply feasibility, status of water rights and other data necessary to enable the State Registrar of Lands under the Carey Act to make the proper application and certification required by the Bureau of Land Management in such cases covering the Carey Act applications mentioned above and others in Mason Valley. Said request was dated August 30, 1977. 2/

III

In accordance with the provisions of NRS 324, the State Engineer submitted to the Division of Lands, a report concerning the status of water supply, feasibility of the project, the status of water rights and other data necessary. Said report was dated September 12, 1977. 3/ Due to reasons fully set forth in the State Engineer's report, the State Engineer reported adversely on the Carey Act land applications mentioned in Item I above and others in Mason Valley because of inadequate water supply. A copy of the report of the State Engineer is attached to and made a part of this ruling.

IV

The Office of the State Engineer was notified by the State Land Registrar that the Carey Act applications mentioned above were cancelled on September 22, 1977 because of inadequate water supply. 4/

RULING

Due to the facts and conditions stated in the State Engineer's report to the State Registrar of Lands concerning Carey Act Applications 1219 and 1236 and others in Mason Valley, Applications 32905 and 32939 are herewith denied on the grounds that the appropriation of additional ground water for irrigation and use of the water applied for and requested from the area described in the applications will tend to impair the value of existing rights and be otherwise detrimental to public interest and welfare.

Respectfully submitted,

Roland D. Westergard
State Engineer

RDW/BR/bl

Dated this 6th day of

February, 1978.

FOOTNOTES

1. Public Records within the Office of the State Engineer.
2. Public Records within the Office of the State Engineer.
3. Public Records within the Office of the State Engineer.
4. Public Records within the Office of the State Engineer.

REPORT OF STATE ENGINEER

Introduction

In accordance with the provisions of NRS 324.130, the State Registrar of Lands under the Carey Act shall refer all applications, prepared and submitted in accordance with the rules and regulations of the commission and of the Department of Interior, for the reclamation of lands to the State Engineer.

The State Engineer shall submit a written report thereon, which shall cover such information regarding the water supply, the feasibility of the project, the status of the water right, and other data necessary to enable the state registrar of lands under the Carey Act to make the proper application and certification required by the Bureau of Land Management in such cases.

No application on which the state engineer has reported adversely shall be approved by the commission.

The state registrar of lands under the Carey Act has referred applications for the reclamation of lands in Mason Valley, Nevada to the State Engineer, by letters of August 24, 1977 and August 30, 1977.

In 1969, Water Resources Bulletin No. 38 "Water Resources and Development in Mason Valley, Lyon and Mineral Counties, Nevada, 1948-65", by C. J. Huxel, Jr. with a section on surface water by E. E. Harris, was prepared cooperatively the the Nevada Department of Conservation and Natural Resources, Division of Water Resources, and U. S. Department of Interior, Geological Survey. This report is available from the State Engineer's office.

Findings of Fact

I

The state registrar of lands under the Carey Act has referred to the state engineer Carey Act Applications:

54	215	906	1210
161	217	941	
162	233	1219	
179	234	1236	
186	248	1201	
191	330	1202	
210	817	1209	

filed for the reclamation of lands in Mason Valley, Nevada.

II

The source of water to be used to reclaim lands under Carey Act Applications:

54	215	906	1210
161	217	941	
162	233	1219	
179	234	1236	
186	248	1201	
191	330	1202	
210	817	1209	

is water from an underground source within the Mason Valley Ground Water Basin, Lyon and Mineral Counties, Nevada as designated and described by Order of the State Engineer issued January 20, 1977.1/

III

The ground water reservoir water table has risen since the advent of farmland irrigation in Mason Valley and the water table is now substantially higher than under natural conditions prior to the initiation of irrigation in the valley. The rise in the water table has now nearly stabilized with water levels close to the surface in most of Mason Valley.2/

IV

During the period 1948 through 1965. average annual streamflow diversions in Mason Valley amounted to 140,000 acre-feet. The water from these diversions is accounted for by:

1. Consumptive use by irrigated crops.
2. Return flow to the river through canals and drain ditches
3. Seepage losses from canals and ditches.
4. Evapotranspiration by phreatophytes and open water surfaces.

Return flow to the river is rediverted to satisfy downstream users rights, both within Mason Valley and in lower sub-basins of the Walker River system.3/

V

Pumpage of ground water for irrigation was estimated to be 20,000 acre-feet in 1961, [4] 21,000 acre-feet in 1964, [4] and 46,000 acre-feet in 1976. [5] Ground water pumpage for irrigation is substantially less during years when surface water is available. In addition to irrigation pumpage, the net draft on the ground water reservoir due to pumpage for mining, municipal and domestic use is estimated to be 4,000 acre-feet per year. [6]

VI

The system yield for Mason Valley has been estimated to be 100,000 acre-feet/year. System yield is defined as the maximum amount of surface and ground water of usable chemical quality that can be obtained each year from sources within the system for an indefinite period of time. In Mason Valley, the total available water supply on the average consists of surface water inflow (216,500 acre-feet/year), local runoff (5,900 acre-feet/year, 2000 of which goes to recharge of the ground water reservoir), and ground water inflow (500 acre-feet/year).

This available supply then is used or leaves the valley through:

1. Consumptive use by crops.
2. Evapotranspiration
3. Surface water outflow
4. Ground water outflow
5. Ground water pumpage for municipal, industrial, and domestic purposes.
6. Change in ground water storage.

During drought years, much of the water used for irrigation comes from ground water pumpage, with a subsequent depletion of ground water storage. On normal and wet years, excessive surface water flows tend to recharge the ground water storage reservoir. Under this system, average ground water pumpage would be 25,000 acre-feet/year, surface water use would be 75,000 acre-feet per year, and the remaining available supply would be used to make up phreatophyte losses and surface water outflow to lower sub-basins of the system. [7]

VII

Estimated consumptive use by crops is approximately 41,000 acre-feet/year. Approximately 57,000 acre-feet of water is lost through evapotranspiration from about 53,000 acres of phreatophytes consisting of salt grass, grease wood, rabbit brush, buffaloberry, willow, cottonwood, tules and marsh plants. 8/

VIII

Ground water appropriations in Mason Valley for irrigation purposes could be used to divert as much as 117,000 acre-feet/year to irrigate 32,700 acres. Ground water appropriations for other uses may be used to appropriate an additional 30,000 acre-feet. Beneficial use has been proved and certificates of appropriation issued for a total pumpage of 106,000 acre-feet/year. Present permitted rights total an additional 41,000 acre-feet/year. 9/

IX

Surface water appropriations and rights under Decree C-125 from the Walker River System far exceed the average annual flow of 216,000 acre-feet entering Mason Valley from the East and West Walker Rivers, measured from 1948 to 1965. 10/

X

Applications to appropriate additional surface water from the Walker River Stream system have been denied on the grounds that their granting would tend to impair the value of existing rights, there is no unappropriated water in the source and the granting of the proposed appropriations would be detrimental to the public welfare. 11/

XI

Should additional water be allowed for appropriation for the reclamation of lands under Carey Act Applications

54	215	906	1210
161	217	941	
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and subsequent development of ground water pursuant thereto detrimentally affect prior ground water rights or surface water rights as set forth under Decree C-125, and appropriated rights, the State Engineer is required by law to order withdrawals be restricted to conform to priority rights. 12/

CONCLUSIONS

1. The State Engineer has jurisdiction under NRS 324.130. 13/

2. 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. 14/

3. Existing water rights on the Walker River Stream System and the Mason Valley Ground Water Basin far exceed flow in the Walker River Stream System and recharge from precipitation to the Mason Valley Ground Water Basin. To grant irrigation rights that consume large quantities of additional water would adversely affect existing rights and threaten to prove detrimental to the public welfare.

4. If subject applications were reported on favorably additional lands would be irrigated. This would result in additional consumptive use by farmland irrigation. The additional withdrawals and consumption would remove water from the ground water reservoir which:

A. Would not be replaced resulting in depletion of the ground water reservoir, or;
B. Would be replaced by infiltrating surface water that otherwise would return to the stream system.

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

5. The State Engineer is authorized and directed to designate preferred uses of water within designated ground water areas such as the Mason Valley Ground Water Basin. 15/ The consumptive use of additional ground water to irrigate additional land is not considered to be a preferred use of the limited water resources of the Mason Valley Ground Water Basin.

6. Any additional appropriation of underground water would diminish return underground and drain flow to the Walker River and so would adversely affect the prior rights as set forth in Decree C-125 and would conflict with appropriated rights on the Walker River Stream System and threaten to prove detrimental to the public welfare.

DECISION

This constitutes an adverse report on Carey Act Applications:

54	215	906	1210
161	217	941	
162	233	1219	
179	234	1236	
186	248	1201	
191	330	1202	
210	817	1209	

because of inadequate water supply.

Respectfully submitted,

Roland D. Westergard
State Engineer

RDW:TJS:jw

Dated this 12th day

of September, 1977

FOOTNOTES

1. NRS 534
2. Water Resources Bulletin #38, pp. 13, 27, 36, Figure 5
3. Water Resources Bulletin #38, pp. 34, 25
4. Water Resources Bulletin #38, Table 15
5. Estimate made in State Engineer's office
6. Water Resources Bulletin #38, p. 33
7. Water Resources Bulletin #38, pp. 54-58
8. Water Resources Bulletin #38, pp. 30, Table 14
9. Public records in the Office of the State Engineer
10. Public record in the Office of the State Engineer and United States vs. Walker River Irrigation District, et al., United States District Court for the District of Nevada, Equity No. C-125 as amended by the Order of the Honorable A. F. St. Sure, dated April 24, 1940, hereafter called Decree C-125.
11. Public records in the Office of the State Engineer. See denied Applications 24944, 24951, 25015, 25016, 25018, 25236, 30095, 30096
12. NRS 534.110 subsections 3 and 6
13. NRS 324.130
14. NRS 533.370, subsection 4
15. NRS 534.120, subsection 2