STUDY OF POTENTIAL USES OF WASHOE LAKE



Bulletin No. 87-12

LEGISLATIVE COMMISSION

OF THE

LEGISLATIVE COUNSEL BUREAU

STATE OF NEVADA

August 1986

STUDY OF POTENTIAL USES OF WASHOE LAKE

BULLETIN NO. 87-12

LEGISLATIVE COMMISSION
LEGISLATIVE COUNSEL BUREAU
STATE OF NEVADA

AUGUST 1986

TABLE OF CONTENTS

		<u>Page</u>
Assemb (File	bly Concurrent Resolution No. 39 No. 101, Statutes of Nevada, 1985)	iii
Member	t Of The Legislative Commission To The rs Of The 64th Session Of The a Legislature	v
		vii
Legis1 Subcon	t To The 64th Session Of The Nevada lature By The Legislative Commission's nmittee Studying Potential Uses	
Of Was	shoe Lake	1
I.	Introduction	1
II.	Description And Location Of Washoe Lake	1
III.	General Water Issues	2
	A. Water Level	2
	B. High Water Level Problems	3
	C. Water Storage Management	3
	D. Washoe Lake Outlet Structure Ownership	3
IV.	Land Ownership	4
٧.	Possible Land Transfers	4
	A. Little Washoe Lake	4
	B. Bellevue Interchange	4
	C. Washoe County Boat Ramp And Picnic Area	5
VI.	Management And Planning Of State-Owned Lands	5
VII.	Final Issues And Recommendations	7
	A. Water Level	7
	B. Land Ownership And Management	7
	C. Development On Privately Owned Land	10

		Page
	D. Commercial Development On State-Owned Land And Dredging Washoe Lake	10
VIII.	Bibliography	11
IX.	Appendices	13
	Appendix A - Vicinity Map	15
	Appendix B - Geographic Setting Map	19
	Appendix C - Page 75 Of The Orr Ditch Decree	23
	Appendix D - Land Ownership Map	27
	Appendix E - Memoranda From Legislative Counsel Bureau And Division Of State Lands.	31

Assembly Concurrent Resolution No. 39—Assemblymen Bogaert, Kerns, Price, Humke, Jeffrey and Roberts

FILE NUMBER 101

ASSEMBLY CONCURRENT RESOLUTION—Directing the legislative commission to study the potential uses of Washoe Lake.

WHEREAS, Washoe Lake is an important natural resource for this state, partly because of its unique location between Carson City and Reno; and

WHEREAS. The public has an interest in ensuring that Washoe Lake's resources and ecology are preserved while encouraging its use for the benefit of the people of this state; now, therefore, be it

RESOLVED BY THE ASSEMBLY OF THE STATE OF NEVADA. THE SENATE CONCURRING, That the legislative commission is hereby directed to conduct an interim study of the potential uses of Washoe Lake, including the control of floods, storage of water, recreational needs and conservation of wildlife and open space; and be it further

RESOLVED. That the legislative commission report the results of its study and any recommended legislation to the 64th session of the Nevada legislature.

19 - 85

REPORT OF THE LEGISLATIVE COMMISSION

TO THE MEMBERS OF THE 64TH SESSION OF THE NEVADA LEGISLATURE:

This report is submitted in compliance with Assembly Concurrent Resolution No. 39 of the 63rd session of the Nevada legislature which directed the legislative commission to study the potential uses of Washoe Lake, including the control of floods, storage of water, recreational needs and conservation of wildlife and open space.

The members of the subcommittee appointed by the legislative commission, under the auspices of the joint committee on natural resources, to conduct the study were:

Assemblyman Bruce R. Bogaert, Chairman Senator Randolph J. Townsend, Vice Chairman Senator Thomas R.C. Wilson

In this report, the subcommittee has attempted to present its findings and recommendations in a concise form. A great deal of data and information was gathered in the course of the study. All of the supporting documents and minutes of the subcommittee's hearings are on file with the research library of the legislative counsel bureau and are available for review.

This report is transmitted to the members of the 64th session of the Nevada legislature for their consideration and appropriate action.

Respectfully submitted,

Legislative Commission Legislative Counsel Bureau State of Nevada

Carson City, Nevada August 1986

LEGISLATIVE COMMISSION

Assemblyman Louis W. Bergevin, Chairman Assemblyman Bob L. Kerns, Vice Chairman

Senator James H. Bilbray Senator Helen A. Foley Senator Lawrence E. Jacobsen Assemblyman Danny L. Thompson Senator Kenneth K. Redelsperger Assemblyman Barbara A. Zimmer Senator Sue Wagner

Assemblyman Robert M. Sader Assemblyman James W. Schofield

SUMMARY OF RECOMMENDATIONS

The legislative commission's subcommittee studying potential uses of Washoe Lake recommends for the consideration of the 64th session of the Nevada legislature that:

- It is recognized that most issues pertaining to water at Washoe Lake are subject to a water decree issued by the United States District Court. However, legal staff of the legislative counsel bureau and affected state agencies are directed to compile and prepare information on issues concerning:
 - a. The high water level of Washoe Lake; and
 - b. Ownership and responsibility for the outlet structure (dam) and flow gate at the north end of Little Washoe Lake.
- 2. Before developing or improving state-owned lands at the Bellevue Interchange, located just east of United States Highway 395, the State of Nevada should first acquire privately owned lands located in this same immediate area.
- 3. The department of transportation is encouraged to assist the state department of conservation and natural resources in the appraisal of private properties located in the Bellevue Interchange area which should be acquired by the state (see Recommendation No. 2). If additional money is required to perform these appraisals, the agencies involved should present a request to the interim finance committee.
- 4. After state acquisition of private lands as discussed in Recommendations No. 2 and 3, surplus lands now under the jurisdiction of Nevada's department of transportation located on the east side of the Bellevue Interchange should be transferred to the division of state parks, state department of conservation and natural resources. The division of state parks should manage these lands in accordance with the agency's master plan for Washoe Lake, with emphasis on public recreation uses.
- 5. Lands at Little Washoe Lake located north of the east/west section line at the lake's southern neck (or collar) should be transferred from the department of wildlife to the division of state parks, state department of conservation and natural resources. Recreational uses should be restricted south of the neck, and the wetlands and island areas should be protected. Assistance on required land appraisals is

requested from the department of transportation. If additional money is required to perform these appraisals, the agencies involved should present a request to the interim finance committee. The agencies also are requested to determine the amount of money needed to accomplish this transfer considering the required repayment to the Federal Government of funds provided under the Pittman-Robertson Act.

- 6. It is recognized that both recreational uses and wildlife habitat at Washoe Lake are important but sometimes are not mutually compatible. Therefore, both the division of state parks of the state department of conservation and natural resources and the department of wildlife are urged to work together cooperatively on the update of the Washoe Lake master plan now being prepared by the division of state parks. The department of wildlife should take an active role in the plan update instead of merely ratifying the recommendations of the division of state parks. The plan, among other things, should delineate restricted areas and buffers which are needed to protect sensitive wildlife habitat.
- 7. The State of Nevada does not have jurisdiction concerning, nor does the subcommittee have any interest in, private development on privately owned lands at Washoe Lake. Issues of this type are under the jurisdiction of local government. The subcommittee also opposes any further discussion of dredging Washoe Lake or commercial development on state-owned lands at Washoe Lake.

REPORT TO THE 64TH SESION OF THE NEVADA LEGISLATURE
BY THE LEGISLATIVE COMMISSION'S SUBCOMMITTEE
STUDYING POTENTIAL USES OF WASHOE LAKE

I. INTRODUCTION

The population of western Nevada has continued to grow at a rapid rate for many years. Washoe Lake is located near the center of the populated area which extends from the valleys located north of Reno and Sparks south through Washoe Valley and Carson City to those developments located south of Minden and Gardnerville in Douglas County. Over a quarter of a million people now live in this area.

Opportunities for water-based recreation are prized in Nevada because of the state's general lack of water resources. In western Nevada, water-based recreation is concentrated at or along the Carson, Truckee and Walker Rivers; Lahontan Reservoir; Lake Tahoe; Pyramid Lake; Topaz Lake; Walker Lake and Washoe Lake. Because of its central location and accessibility by United States Highway 395, Washoe Lake has experienced a growth in recreational pressure and usage which has exceeded the provision of public recreation facilities.

Because of the recreation issue and the fact that most of the shoreline around Washoe Lake is owned and managed by agencies of the State of Nevada, the 1985 legislature authorized an interim study by the legislative commission of potential uses of Washoe Lake. The resolution which directed this study (A.C.R. No. 39, File No. 101) specifies examination of certain potential uses at Washoe Lake, including control of floods, storage of water, recreational needs and conservation of wildlife and open space. The report which follows is provided in response to this directive.

II. DESCRIPTION AND LOCATION OF WASHOE LAKE

Washoe Lake is a natural lake which is located in western Nevada between Carson City and Reno. The lake, which for the purposes of this report includes Washoe Lake (or Big Washoe Lake) and Little Washoe Lake, occupies nearly 25 percent, or 7 square miles, of the floor of Washoe Valley. (See Appendix A - Vicinity Map.)

Washoe Valley, which is approximately 84 square miles in size, is bounded by the Carson Range of the Sierra Nevada mountains on the west and the Virginia Range on the south

and east. The valley and lake are surrounded by the neighboring mountains except for a narrow canyon on the north side through which Steamboat Creek drains the lake to the Truckee River, almost 13 miles to the north. (See Appendix B - Geographic Setting Map.)

The principal source of water for Washoe Lake is snow melt from the nearby mountains. The majority of the water is transported to the lake from Franktown and Ophir Creeks in the Carson Range. In addition, small quantities of water are imported from Browns, Galena and Third Creeks. The shallow lake waters are usually turbid or muddy-looking due to the soft silty lake bottom that is stirred up by wind and wave action. A constant inflow of silt and sediment enters the lake through its tributary streams. The rate at which sediment is being added will result in a gradual reduction in the size and usefulness of the lake.

For the last 100 years, the lake has also served as a reservoir for the Washoe Lake Reservoir and Galena Creek Irrigation Company. Runoff water is stored in the lake during the fall and winter months and is released at a controlled rate in the spring and summer for the downstream agricultural users. During normal water years, the water level fluctuates from season to season, with the lake reaching its high point following the spring runoff and reaching its annual low point during late summer and early fall.

The lake is principally used for recreation activities, wildlife management and nesting, and its waters continue to be utilized for irrigation by downstream agricultural users.

III. GENERAL WATER ISSUES

A. WATER LEVEL

The level of Washoe Lake varies widely from year to year. These fluctuations are directly linked to the amount of precipitation received annually or over a several year period. The lake level is also controlled by an outlet structure (dam and gates), which is located at the north end of Little Washoe Lake. The outlet structure is used to control the release of irrigation water for the downstream users during the spring and summer and to store the irrigation water during the fall and winter. The lake has completely dried up at times since 1900 while at other times, as in 1983 and 1986, the lake was completely full.

B. HIGH WATER LEVEL PROBLEMS

The problem during high water level periods involves several low-lying residential properties around the lake. When the lake is full behind the existing outlet structure, flooding, high water tables and related problems affect these low-lying properties.

C. WATER STORAGE MANAGEMENT

The storage and release of irrigation water for downstream users is managed under the guidelines that were established in the 1944 United States District Court, Orr Ditch Decree.

According to the Orr Ditch Decree, also referred to as the Truckee River Decree (United States of America, plaintiff v. Orr Water Ditch Company, et al., defendants, signed September 8, 1944):

Originally the Washoe Lake Reservoir was established by a wooden dam, built across the outlet of Lower Washoe Lake in the year 1863 or 1864. This dam was superseded by a rock-concrete dam constructed in the year 1889. The wasteway or overflow of this concrete dam, as lowered by 2 feet in 1890, is the same as the present spillway or overflow of the concrete dam. * * * The Washoe Lake Reservoir, as so made, comprises Washoe Lake and Lower Washoe Lake, connecting therewith the areas of lands comprising these lakes and the tule or swamp lands adjacent thereto, sufficient to throw back and store the waters in these lakes, upon these areas of lands to the heighth of high water mark of these lakes and to the height and capacity of said dam. (See Appendix C - Page 75 of the Orr Ditch Decree.)

The court appointed Federal Water Master of the Truckee and Carson Rivers is responsible to assure that the provisions of the Orr Ditch Decree are adhered to.

D. <u>WASHOE LAKE OUTLET STRUCTURE OWNERSHIP</u>

The outlet structure for Washoe Lake, which consists of a dam and gates, is located just northwest of Little Washoe Lake and U.S. Highway 395. This structure is old and periodically in need of repair. According to Nevada's division of state lands, in a memorandum dated April 25, 1986, "The dam site is presently owned by Brien Walters et al. The State did receive a quitclaim to the dam structure from (Edward) Scripps (II) in 1961; however, we have been unable to confirm that Scripps actually had an ownership interest in the dam."

According to other testimony received by the subcommittee, the actual owners of the outlet structure probably include everyone who has a water right or shares of stock in Washoe Lake Reservoir from Steamboat Creek below the dam. This group of persons probably comprise the Washoe Lake Reservoir and Galena Creek Ditch Company. The ditch company has maintained the outlet structure over the years.

IV. LAND OWNERSHIP

Almost all of the lands located adjacent to Washoe Lake, as well as those submerged lands in the area, are the property of the State of Nevada. Nevada's department of wildlife and the division of state parks, state department of conservation and natural resources, manage the great majority of these lands. Much smaller acreages are managed by the division of forestry, state department of conservation and natural resources, and the department of transportation. The Washoe County Parks and Recreation Department also controls a small amount of land on the northeast side of Big Washoe Lake.

There are a few private parcels of land around Washoe Lake, primarily in the Bellevue Interchange area, and a subdivision that fronts on the west shore of Little Washoe Lake. (See Appendix D - Land Ownership Map.)

V. POSSIBLE LAND TRANSFERS

Several suggestions were discussed during the study hearings concerning the transfer of certain lands currently owned by the department of transportation and the department of wildlife to the division of state parks of the state department of conservation and natural resources. The lands include:

A. LITTLE WASHOE LAKE

There was a general agreement that there should be a transfer of department of wildlife lands at Little Washoe Lake to the division of state parks. Special attention should be given to the ingress and egress from U.S. Highway 395 and Eastlake Boulevard to any recreation improvements that may be planned for the Little Washoe Lake area.

B. BELLEVUE INTERCHANGE

There was a general agreement that there should be a transfer of the department of transportation's surplus property near the Bellevue Interchange on U.S. Highway 395 to

the division of state parks to develop and manage the recreation resources. In reviewing this land transfer, an analysis of the privately owned parcels in the area should be made to determine any impacts they could have on future recreation facility development. It may be desirable to acquire the private parcels for public use in this area.

C. WASHOE COUNTY BOAT RAMP AND PICNIC AREA

A discussion was also held concerning the possibility of having the division of state parks assume the operation and maintenance of the Washoe County boat ramp and picnic area on the east side of Washoe Lake near New Washoe City. The county park could either be leased to the division of state parks or it could be transferred to the state by Washoe County. Such a transfer by lease or title would require authorization by the Washoe County Commissioners and acceptance by the interim finance committee of the Nevada legislature.

VI. MANAGEMENT AND PLANNING OF STATE-OWNED LANDS

The state-owned lands surrounding Washoe Lake are under the jurisdiction and management control of several state agencies. The south portion of Washoe Lake, which is in the Washoe Lake state park, has been developed and is managed by the division of state parks. The north portion of the lake which is in the Scripps Wildlife Management Area is managed by the department of wildlife. An area along the west shore near the Bellevue Interchange and adjacent to U.S. Highway 395 is under the jurisdiction of the department of transportation. In addition, the division of forestry operates a plant nursery, fire station and its western district headquarters on a 60-acre site located on the east side of the lake between Big Washoe and Little Washoe Lakes adjacent to Eastlake Boulevard.

The recreation use at Washoe Lake state park has substantially increased over the last decade. In 1974, the estimated visitor use was between 20,000 and 30,000. In 1985, that figure had grown to between 325,000 and 350,000 visitors, which includes 250,000 state park visitors and between 75,000 and 100,000 other visitors. Fishing, which has always been a popular activity, continues to be an attraction. There are a variety of game fish in the lake which include: Black Bullhead, Channel Catfish, Sacramento Perch, White Catfish and Yellow Perch. Other recreation uses at Washoe Lake are boating, camping, picnicking and swimming. The advent of the sailboard, or windsurfer, has provided a new dimension of recreation opportunity at the lake. The warm, shallow waters combined with the regular afternoon winds

make Washoe Lake and Little Washoe Lake ideally suited for the increasingly popular sport of windsurfing. Almost every day during the summer, one can see several brightly sailed windsurfers skimming across the waters of Washoe Lake. Staff of the division of state parks believe that the popularity of this recreation area will continue to increase as more improvements and additional facilities are added to the state park.

The Scripps Wildlife Management Area (SWMA), which comprises 2,762 acres, is a prime game bird breeding area. The wetlands and islands between Washoe Lake and Little Washoe Lake provide breeding habitat for approximately 100 pairs of geese and a large number of ducks. A typical nesting season will produce between 230 and 250 goslings and 350 ducklings. There are also a low number of nongame birds that live in the SWMA. The department of wildlife staff is of the opinion that, with improved management practices, the SWMA could support up to 200 pairs of breeding geese and 500 pairs of breeding ducks. Staff is also concerned about the adverse impacts that increased recreation activities can have on some of the breeding areas, such as on the islands and around Little Washoe Lake.

With four state agencies having the responsibility to manage portions of land around Washoe Lake, it is desirable to have a coordinated joint management plan prepared to assure that the most efficient stewardship program possible is developed and implemented to protect and preserve this valuable natural resource.

The joint management program could be designed to coordinate staff duties and responsibilities, thus allowing for the efficient use of equipment, personnel and programs, plus eliminating duplication of effort and minimizing the overlapping of duties. As an example, state park rangers and department of wildlife fish and game agents could be cross-deputized, which would allow park rangers to enforce fish and game regulations and fish and game agents to enforce park regulations. Such cross-deputizing would allow for an increased enforcement effort with existing personnel.

The coordinated management and planning program for Washoe Lake should include suggested land transfers, agency responsibilities and duties, long-range facility development needs and estimated improvement costs. The recommended plan could be reviewed by the legislative commission or the Washoe Lake subcommittee for review and approval.

VII. FINAL ISSUES AND RECOMMENDATIONS

A. WATER LEVEL

The water level of Washoe Lake is directly affected by the amount of annual precipitation. In the 1930's, during a drought of several years, the lake was completely dry. More recently, western Nevada has experienced above normal precipitation, which has resulted in an unusually high water level. During the heavy rains in 1986, more water was entering the lake than could be released from the restricted outlet structure and spillway which is located just north of Little Washoe Lake. The result was a backup of water that, at times, was 2 feet higher than the top of the outlet control gates. The high water caused some localized flooding and other high water related problems at several locations around the lake. The issue of concern is the high water level and how it should be managed and regulated.

In 1944, a United States District Court decree was issued that set the criteria for controlling and regulating the waters of the Carson River and Truckee River water systems. The court decree, which is known as the Orr Ditch Decree, was far reaching and included the waters and tributaries of Washoe Lake. In order to change any of the Washoe Lake water level control practices, the decree would have to be amended.

Recommendations:

It is recognized that most issues pertaining to water at Washoe Lake are subject to a water decree issued by the United States District Court. However, legal staff of the legislative counsel bureau and affected state agencies are directed to compile and prepare information on issues concerning:

- 1. The high water level of Washoe Lake; and
- Ownership and responsibility for the outlet structure (dam) and flow gate at the north end of Little Washoe Lake.

(See Appendix E - Memoranda From Legislative Counsel Bureau And Division Of State Lands.)

B. LAND OWNERSHIP AND MANAGEMENT

The lands around Washoe Lake are state-owned except for a few privately owned parcels near the Bellevue Interchange on the west shore of Washoe Lake. Washoe County also has a small park and boat ramp on the east side of Washoe Lake near New Washoe City.

The state-owned lands are managed by the division of state parks and division of forestry of the state department of conservation and natural resources, the department of wildlife and the department of transportation. The division of state parks is responsible for managing the recreation activities at the Washoe Lake state park. The department of wildlife manages the Scripps Wildlife Management Area. The department of transportation has undeveloped surplus lands at the Bellevue Interchange. The division of forestry operates its western area headquarters at a location on the east side of the lake between Washoe Lake and Little Washoe Lake.

Two areas outside the state park that are receiving increased recreation use are the Bellevue Interchange area and Little Washoe Lake.

Bellevue Interchange Area

The department of transportation planned, at one time, to develop a roadside rest area adjacent to Washoe Lake at the Bellevue Interchange. Those plans have changed because of budget constraints and other higher priority needs. The department of transportation now considers that property to be surplus. These lands could be made available to the division of state parks for recreation. There are also several private parcels in the area that would be beneficial to public recreation uses.

Recommendations for Bellevue Interchange Area:

- Before developing or improving state-owned lands at the Bellevue Interchange, located just east of U.S. Highway 395, the State of Nevada should first acquire privately owned lands located in this same immediate area.
- 2. The department of transportation is encouraged to assist the state department of conservation and natural resources in the appraisal of private properties located in the Bellevue area which should be acquired by the state (see Recommendation No. 1). If additional money is required to perform these appraisals, the agencies involved should present a request to the interim finance committee.
- 3. After state acquisition of private lands as discussed in Recommendations No. 1 and 2, surplus lands now under the jurisdiction of Nevada's department of transportation located on the east side of the Bellevue Interchange should be transferred to the division of state parks. The division of state parks should manage these lands in accordance with the agency's master plan for Washoe Lake, with emphasis on public recreation uses.

Little Washoe Lake

Little Washoe Lake, which is located at the northern end of the Washoe Lake area near the northern intersection of Eastlake Boulevard and U.S. Highway 395, is part of the Scripps Wildlife Management Area. Due to its easy access and the increased popularity of windsurfing, a substantial increase of recreational activities is now occurring. This increased use has created some adverse impacts on the natural wildlife habitat and game bird nesting in this portion of the wildlife management area. To resolve this matter, several management alternatives were considered. These are:

- 1. Protect the wildlife habitat by fencing the area and keeping out the recreation users.
- 2. Turn Little Washoe Lake over to the division of state parks and develop recreation facilities to accommodate the recreation users.
- Develop a joint management program that allows recreation use and preservation of as much of the bird nesting area as possible.

Recommendations for Little Washoe Lake:

- 1. It is recognized that both recreational uses and wildlife habitat at Washoe Lake are important but sometimes are not mutually compatible. Therefore, both the division of state parks and the department of wildlife are urged to work together cooperatively on the update of the Washoe Lake master plan now being prepared by the division of state parks. The department of wildlife should take an active role in the plan update instead of merely ratifying the recommendations of the division of state parks. The plan, among other things, should delineate restricted areas and buffers which are needed to protect sensitive wildlife habitat.
- 2. Lands at Little Washoe Lake located north of the east/west section line at the lake's southern neck (or collar) should be transferred from the department of wildlife to the division of state parks. Recreational uses should be restricted south of the neck, and the wetlands and island areas should be protected. Assistance on required land appraisals is requested from the department of transportation. If additional money is required to perform these appraisals, the agencies involved should present a request to the interim finance committee. The agencies also are requested to determine the amount of money needed to accomplish this transfer considering the required repayment to the Federal Government of funds provided under the Pittman-Robertson Act.

C. DEVELOPMENT ON PRIVATELY OWNED LAND

The State of Nevada does not have jurisdiction concerning, nor does the subcommittee have any interest in, private development on privately owned lands at Washoe Lake. Issues of this type are under the jursidiction of local government.

D. COMMERCIAL DEVELOPMENT ON STATE-OWNED LAND AND DREDGING WASHOE LAKE

The subcommittee opposes commercial development on stateowned land at Washoe Lake and any further discussion of dredging Washoe Lake.

VIII. BIBLIOGRAPHY

Arteaga, F. E., and Durbin, T. J. "Development of a Relation for Steady-State Pumping Rate for Eagle Valley Ground-Water Basin, Nevada," U.S. Geological Survey Open-File Report 79-261, 1978.

Arteaga, F. E., and Nichols, W. D. "Hydrology of Washoe Valley, Washoe County, Nevada," U.S. Geological Survey Open-File Report 84-465, 1984.

"Bathymetric Reconnaissance of Big and Little Washoe Lakes, Washoe County, Nevada," State Department of Conservation and Natural Resources, Water Resources - Information Report 10, 1972.

Bonham, H. F. "Geology and Mineral Deposits of Washoe and Storey Counties, Nevada," Nevada Bureau of Mines Bulletin 70, 1969.

Crippen, J. R. "Natural Water Loss and Recoverable Water in Mountain Basins of Southern California," U.S. Geological Survey Professional Paper 417-E. 1965.

Doorenbos, J., and Pruitt, W. O. "Guidelines for Predicting Crop Water Requirements," United Nations Food and Agricultural Organization, Irrigation and Drainage Division Paper 24, 1977.

"Geologic Cross Sections, Washoe City Quadrangle," Nevada Bureau of Mines and Geology, Urban Maps Series, Washoe City Folio, Map 5Ak, 1976.

"Hydrologic Map, Washoe City Quadrangle," Nevada Bureau of Mines and Geology, Urban Maps Series, Washoe City Folio, Map 5Af, 1975.

Katzer, Terry. "General Ground-Water Map, Carson City Quadrangle," Nevada Bureau of Mines and Geology, Urban Maps Series, Carson City Folio, Map 1Af, 1980.

"Land Use and Transportation Element," Washoe County Master Plan, Washoe County Department of Comprehensive Planning, Washoe County, Nevada, 1985.

Orr Ditch Decree (Truckee River Decree) United States of America v. Orr Water Ditch Company, et al., defendants, signed September 8, 1944.

Pennington, R. W. "Evaluation of Empirical Methods for Estimating Crop Water Consumptive Use for Selected Sites in Nevada," Division of Water Planning, State Department of Conservation and Natural Resources, Water Planning Report 3, 1980.

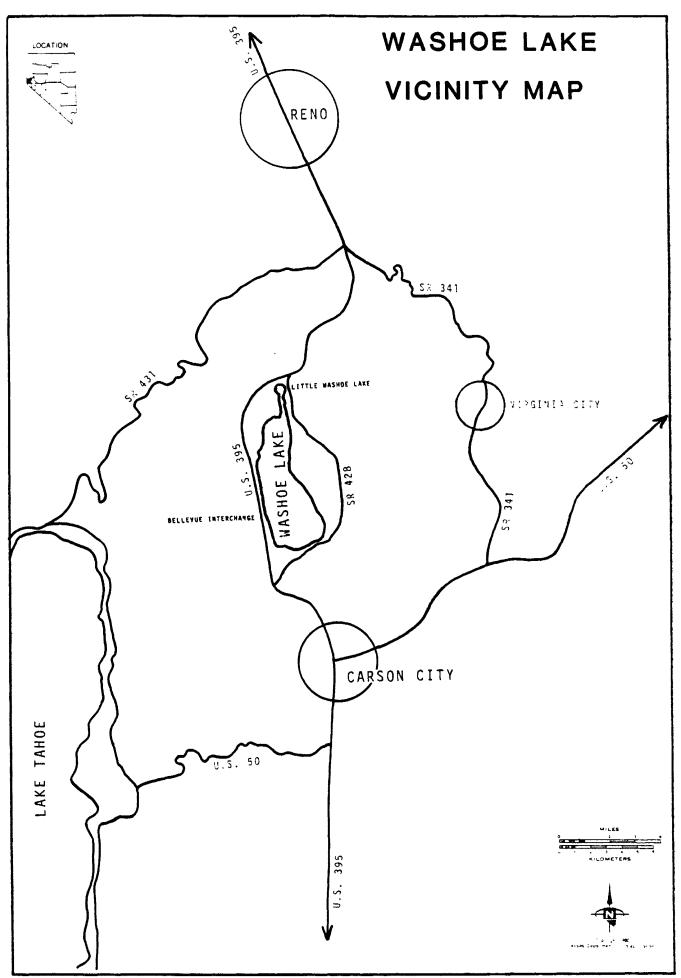
- "Ruling No. 3201 of the State Engineer," Division of Water Resources, State Department of Conservation and Natural Resources, June 5, 1985.
- Rush, F. E. "Water-Resources Appraisal of Washoe Valley, Nevada," State Department of Conservation and Natural Resources, Water Resources Reconnaissance Report, 1967.
- "South Valleys Area Plan," Washoe County Master Plan, Washoe County Department of Comprehensive Planning, Washoe County, Nevada, 1985.
- "Surface Water Records of Nevada, 1963-64," Carson City, Nevada, U.S. Geological Survey Water-Data Reports, 1964-65 (published annually).
- Tabor, R. W., and Ellen, S. "Geologic Map, Washoe City Quadrangle," Nevada Bureau of Mines and Geology, Urban Maps Series, Washoe City Folio, Map 5Ag, 1975.
- Trexler, D. T. "Geologic Map, Carson City Quadrangle," Nevada Bureau of Mines and Geology, Urban Maps Series, Carson City Folio, Map 1Ag, 1977.
- Van Denburgh, A. S. "Water Resources of Cold Spring Valley, A Growing Urban Area Northwest of Reno, Nevada," U.S. Geological Survey Open-File Report 80-1287, 1981.
- "Washoe Lake State Park Master Plan," Nevada State Park System and EDAWinc., 1975.
- "Water Resources Data for Nevada, 1965-70," Carson City, Nevada, U.S. Geological Survey Water-Data Reports, 1966-71 (published annually).
- "Water Resources Data for Nevada, 1971-82," U.S. Geological Survey Water-Data Reports NV-71-1 to NV-82-1, 1972-83 (published annually).
- "Water Resources Element," Washoe County Master Plan, Washoe County Department of Comprehensive Planning, Washoe County, Nevada, 1985.

IX. APPENDICES

				Page
Appendix	Α	-	Vicinity Map	15
Appendix	В	-	Geographic Setting Map	19
Appendix	С	-	Page 75 Of The Orr Ditch Decree	23
Appendix	D	-	Land Ownership Map	27
Appendix	Ε		Memoranda From Legislative Counsel Bureau And Division Of State Lands	31

APPENDIX A

Vicinity Map



APPENDIX B

Geographic Setting Map

WASHOE LAKE GEOGRAPHIC SETTING MAP



APPENDIX C

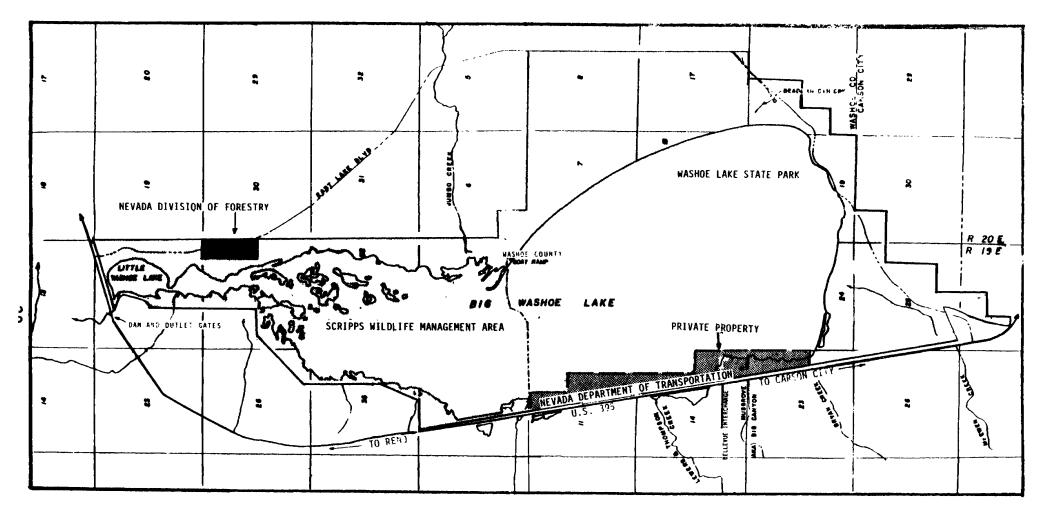
Page 75 Of The Orr Ditch Decree

WASHOE LAKE RESERVOIR AND TRIBUTARIES Washoe Lake Reservoir and Galena Creek Ditch Company Ditch

May 25, 1889 Ditch Right May 25, 1889 1844 Reservoir Right	wasteway or overflow bears from the corner The Washoe L the waters in these As early as it this valley and into the beneficial irrigat. In the year 1t there storing the widam 2 feet higher tip place about one-eight the northwest quarte Therespoon, by amount of the unsue waters of Galena Crube height and capse. By reason of glands, are allowed as waters flowing natural had not been approp and for the irrigatio height of high water White Rock, Little White Rock, Litt	or common to Sections ake Reservoir, as so y lakes, upon these area by year 1864 the sus these takes, including ion of crups growing (89 the Wastes Lake sier takes into and than its present height the of a nite northerly or of Section 24, in t and through this dited and unappropriated set and a like amount city of said dam, for prior appropriation for dare entitled to have ally into these Lakes a will into the component of the proposition of the control of the contro	1, as lowered 2 feet in 1890, 13, 18, 19 and 24, on the made, comprises Washoe Lake as of iands to the heighth of 1 splus and unappropriated wate the streams known as White on the lands of the hereinafte Reservoir and Galena Creek Discouraged by this dich for it and dimensions and econstructe from the center of Section 14 the last-named Township and 5 h, the Washoe Lake Reservoir water of Brown's Creek and it of the not previously appropriately and the company of the control of the section of the	n dam, built across the outlet is the same as the present split east boundary of Township 17, and Lower Washoe Lake, connec high water mark of these lakes are flowing naturally into Washo Block, Little Valley, Franktown is ranned stockholders in the Washot Company was incorporated for igation, stock, domestic and me dithe proposed ditch from the highlight of the highlight of the highlight of sale and dalean Creek Ditch Company allowed and is entitled, and slisted water of Brown's Creek to a, stock, domestic and mechanic Lake Reservoir and Galena Creek wer Washoe Lake and into asid to streams arising in the mountain Lake Reservoir and Galena Creek wer Washoe Lake and into asid to have flow into Washoe Lake and to have flow into Washoe Lake and to have flow into Washoe Lake dam, the waters naturally flows appropriated prior to the year appropriated prior to the year	way or everflow of the centre south \$1 degrees west, \$8 et ling therewith the areas of 1 ind to the height and capacit a Lake and Lewer Washes L. und Ophir creeks, were approne Lake Reservair and Gales the purposes of constructing chanical purposes. Thereupe and thereof, at a point on \$0, E., M. D.B. and M., and at ditch, where it emplies the rappropriated and enserged to consume the consumer of	te dam. These dams were a tains distant, all in T. 17, N. ands comprising these lates a y of said dam. The streams arising it before the streams arising it bristed and stored in Washing on and maletaining a ditch to an and with due diligence, the alone Creek about one-quarter out seven miles in length, ru water into the reservoir. It dubtic fee 180 has been entitled, to se c e the same to the extent of the same to the extent of the same to the beight o shee Valley, including the strike in this action, who arities to this action, who arities to this action, who arities to this reservoir from the st	omstructed in 8. 19, 5, 41, 19, 19, 19, 19, 19, 19, 19, 19, 19, 1	section 24, over the Dishlo Rase and Mer swamp lands adjacent west and southwest or sort and drawn therefrom sort. Some falena Creek, in tearryoir and Galena Cerly from the center chasterly direction to the surplus and unappild ditch, 114 cubic for storage and for the dishlock and for the storage and for the fall lakes and so white Rock, Little rame filled to same com the mountains west	outlet of Lewer Wildian, in Washoe Coutberete, sufficient f Washoe Valley and during the irrigat Washoe County, to reek Ditch Company of Section 9 and a title morthwest end of the morthwest end of the orbigh water of set per second of the orbigh water man the irrigation of the table height and c Valley, Franktown of this corporation, pacity as made by a and southwest of	subno Lake, which outsity and State of Nevado to throw back and store throw back and store of the store of th
	ils stockbolders, bere	PLANTIOT RANGO, Are or	ingineer of the State of Nevada ntitled under priority of last-o corporation and its stockholder	i, duted June 3, 1913, on an aguamed date, to draw from Washo	oplication therefor filed in the e Lake Reservoir after it rea	State Engineer's office on N chee low water mark, through	vember 19, 16 a ditch eocetr	12, Washee Lake Res uctd for the purpose,	ervoir and Galena C 5,000 acre feet of	reek Ditch Company and water each year for the
	The rights in Recorder, Washoe Co	Washoe Lake Reservoir	r are subject to the agreemen provides that all waters in the	t between Theo. Winters, party	flood gates and wasteways a	fter the first day of July du	ring each year.	but preceding this di	nd recorded in the	office of the County
	the right to the use	of all waters above (he dam at the lower and of t	he reservoir and below the dam : Company are entitled to receive	of the first party. Which is a	hose and near the coutherly e	viof Little Wa	shoe Leke		
	purposes, the water	stored in or discharge	ed from Washoe Lake Reservols	in proportion to the number t	hat they hold respectively of	the 200 shares of this	corporation, as	follows:		
	.	ļ	Owner L. A. L. Oreen		Acreage New Irriga	ted Number of S				· · · · · · · · · · · · · · · · · · ·
	1	1	Ferretto Katate		53	5 10				
	.,	ł	l G and P W. Ferretto			2 10	il			.
	.l l.	.l	A A Neilson		71.	5 (Irrigated under shares of .	1. C.			
	.]	!	ورامين والبران المجاديات ال	***,**,**,***,***,*******		. Nei				
		1	Mary, Joseph, John, Guy, Rosie	and Angelina Tachino		7 10	_ []			
	.	1 · · · · · · · · · · · · · · · · · · ·	A C Nellson			8 20				
]	IL C MENSON			1 30				• • • • • • • • • • • • • • • • • • • •
	• • • • • • • • • • • • • • • • • • • •		duleumis Arnthers		1 148	: 29				
			2 R Holenmh Estate Communi	<i>, , , , , , , , , , , , , , , , , , , </i>	1,490 484	: 50 1				
				' · · · · · · · · · · · · · · · · · · ·						
	•• • • • • • • • • • • • • • • • • • • •		Total acreage n	www.irrigated		7 Tutal shares 200				
			Additional acre	s allowed for irrigation	1		1			
		1		rom State Englineer	\$ 547	i				
		1	•)					
	.)			· <u>**</u> **********************************		-				
ن برنی <u>ن</u> برا	.۱ <u></u>	<u> </u>		Tutai acres			<u> </u>	<u> </u>		· · · · · · · · · · · · · · · · · · ·
										_

APPENDIX D

Land Ownership Map



WASHOE LAKE STATE PARK
(NEVADA DIVISION OF STATE PĀRKS)

SCRIPPS WILDLIFE MANAGEMENT AREA
(NEVADA DEPARTMENT OF WILDLIFE)

NEVADA DEPARTMENT OF TRANSPORTATION —

NEVADA DIVISION OF FORESTRY — — — —

WASHOE LAKE
LAND OWNERSHIP MAP



APPENDIX E

Memoranda From Legislative Counsel Bureau And Division Of State Lands

STATE OF NEVADA

LEGISLATIVE COUNSEL BUREAU

LEGISLATIVE BUILDING

CAPITOL COMPLEX

CARSON CITY, NEVADA 89710

DONALD A RHODES, Director (702) 885-5627

LEGISLATIVE COMMISSION (702) 885-5627 LOUIS W BERGEVIN. Assemblyman. Chairman Donald A Rhodes. Director. Secretary

INTERIM FINANCE COMMITTEE (702) 885-5640

JAMES I GIBSON, Senator, Chairman Daniel G Miles, Fiscal Analyst Mark W Stevens, Fiscal Analyst

LINDA S JESSEN, Legislative Counsel (702) 885-5627 JOHN R CROSSLEY, Legislative Auditor (702) 885-5622 ROBERT E ERICKSON, Research Director (702) 885-5637

September 15, 1986

MEMORANDUM

To:

Committee to Study Potential Uses of Washoe Lake,

A.C.R. 39.

From:

Kathleen Eddy, Deputy Legislative Counsel

Subject: Interest of the state in Washoe Lake.

As part of the study of the potential uses of Washoe Lake (Assembly Concurrent Resolution 39, File No. 101, Statutes of Nevada 1985) the Division of State Lands, Department of Conservation and Natural Resources, was asked to provide additional information on:

- 1. The high water level of the lake; and
- 2. The ownership of and responsibility for the outlet structure and flow gate at the north end of Little Washoe Lake.

The conclusion of Pamela B. Wilcox, Administrator of the Division, in cooperation with the Division of State Parks and the Division of Water Resources of the Department of Conservation and Natural Resources and the Department of Wildlife, is that the State of Nevada has no interest in or responsibility for the level of water in the lake or the outlet structure and flow gate, nor does any state agency have the authority to determine the resolution of these issues.

As legal counsel to the subcommittee, I agree with Ms. Wilcox's conclusions. The proper forum for a final determination of the rights and responsibilities involved is the courts. A suit for a declaratory judgment could be brought by the Attorney General on behalf of the state.

KE:msb



Address Reply to
Division of State Lands
201 S. Fall Street
Capitol Complex
Carson City, Nevada 89711

STATE OF NEVADA

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

Division of State Lands

September 10, 1986

MEMORANDUM

TO:

Kathleen Eddy

Deputy Legislative Counsel

FROM:

Pamela B. Wilcox, Administrator

SUBJECT:

Washoe Lake

You have asked several state agencies for additional information on two issues concerning Washoe Lake:

- (a) The high water level of the lake; and
- (b) The ownership of and responsibility for the outlet structure and flow gate at the north end of Little Washoe Lake.

We have no new information on these matters, but will summarize information already presented to the Subcommittee to Study Potential Uses of Washoe.

(a) The high water level of the lake.

The subcommittee was presented with a great deal of information on this issue. Discussion focused on the problems created by the existing lake level and the additional problems that could be created by increased attempts to control that level. That discussion is accurately covered in subcommittee minutes. Concerns included practical considerations (e.g., Is it feasible to control the lake level? Would increased damages result from such attempts?) and legal considerations (e.g., Who could set a high water level? Who could enforce it? What about water rights? What about liability?).

The state does own the bed of Washoe Lake, a navigable body of water. However these state agencies do not have authority to determine how much water should be in the lake.

(b) The ownership of and responsibility for the outlet structure and flow gate at the north end of Little Washoe Lake.

The following information on the ownership of the dam was compiled and presented to the subcommittee during its hearing:

- 1. A dam was originally built on this location in 1863 or 1864
- 2. The present dam was constructed on this location in 1889 by the Washoe Lake Reservoir and Galena Creek Ditch Company, under an agreement with the landowner, Theodore Winters. Copies of this agreement were submitted to the subcommittee. In 1890 the spillway was lowered two feet, to its present elevation.
- 3. Theodore Winters' interests have been divided among a number of parties over the years. The state now owns those lands within the Scripps Wildlife Management Area to the east, as well as the highway right-of-way. The actual site of the dam is presently owned by Brien Walters, et al., according to records of the county assessor's office.
- 4. The state does hold a quitclaim to the dam from Edward Scripps II; however, the lands acquired by the state from Scripps did not include the dam site, and it is not clear whether Scripps had any ownership interest in the dam.
- 5. The Washoe Lake Reservoir and Galena Creek Ditch Company has operated and maintained the dam since its construction in 1889. The company's current president is George Curti.
- 6. None of these state agencies has the authority to determine who owns the dam.

The question of who has responsibility for the dam is more complex. The following information was presented to the subcommittee:

- 1. The original agreement of 1889, under which the dam was built, gave the ditch company the authority to build the dam but left with Theodore Winters "absolute control" over the structure.
- 2. Historically, the ditch company has actually operated and maintained the dam.
- 3. The Orr Ditch Decree of 1944 discussed the Washoe Lake reservoir (page 75), recognizing the rights of the ditch company and that those rights were subject to the 1889 agreement with Theodore Winters. The operation of the dam must be in conformance with the Orr Ditch Decree, under the supervision of the federal water master for the Truckee system.

Kathleen Eddy September 10, 1986 Page 3

- 4. In 1973, the federal water master petitioned the federal district court for instructions and declaratory relief, seeking clarification of a number of items relating to the implementation of the Orr Ditch Decree, including the high water mark of the lakes, the rights of the successors in interest to Winters and the ditch company, and the authority of the water master to release water from the lakes when the high water mark is reached. Between 1973 and 1978, extensive negotiations occured among parties of interest, including the water master, the state and the ditch company. A copy of the last draft of the stipulated agreement among the parties was submitted to the subcommittee. This draft was not acceptable to all parties. No agreement has ever been reached, and no court order issued.
- 5. Under NRS 535, the state engineer's office has jurisdiction over the dam with respect to dam safety.
- 6. In summary, these agencies cannot precisely define the responsibilities for the outlet structure and flow gate.

This information was compiled with the cooperation of the Division of State Parks, the Department of Wildlife, and the Division of Water Resources. We hope you find it helpful.

PBW/sb