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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

STANDING OPERATING PROCEDURES
for
PROSSER CREEK DAM AND RESERVOIR

WASHOE PROJECT

NEVADA - CALIFORNIA

REGION 2
DIVISION OF IRRIGATION
SACRAMENTO, CALIFORNIA

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

STANDING OPERATING PROCEDURES

for

PROSSER CREEK DAM AND RESERVOIR

LAHONTAN BASIN PROJECTS OFFICE

WASHOE PROJECT

CALIFORNIA - NEVADA

Issuance of Standing Operating Procedures on irrigation projects is authorized and required by Part 233 Irrigation Operation and Maintenance Series 230 Irrigation O&M Reclamation Instructions.

REGION 2
DIVISION OF IRRIGATION
SACRAMENTO, CALIFORNIA

MAR 27 1967

FOREWORD

These Standing Operating Procedures are issued to provide definite lines of communication and instructions to Lahontan Basin Project's Office personnel, and other operating personnel, to guide them in a safe, efficient and effective operation of Prosser Creek Dam and Reservoir during normal and emergency operating conditions.

Operating procedures shall not deviate from those stated in the SOP without appropriate authorization. No changes are to be made without approval of the Regional Director. Procedures and corresponding instructions that are based on (1) directives from the Chief Engineer, (2) O&M concepts visualized during design and construction, (3) hydrology, or (4) any other data or analyses for which the Chief Engineer has reviewing responsibility, shall not be revised without referral via the Regional Director to the Chief Engineer for approval prior to implementation of the revision. Where the need for deviation or revision develops during emergencies or critical operating conditions, approval shall be obtained from the appropriate authorities by use of the most expeditious means of communication, such as telephone, radio, and teletype.

The reproduction and distribution of this Standing Operating Procedures document and all supporting and supervisory documents (except the Designers' Operation Criteria) and addenda and amendments thereto are the responsibility of the Regional Office. The Office of Chief Engineer has this responsibility for the Designers' Operating Criteria. Proposed changes, revisions and recommendations should be reported immediately to the Regional Director, Attention: 2-430, -- for supplement or revision.

The official distribution list for this SOP, Revisions, Amendments, and other documents related hereto is as follows:

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Lahontan Basin Projects Office	6	5
Regional Office -- 2-400(1); 2-430(3); 2-212(1); 2-220(1); 2-910(1); 2-770(2); 2-116(3)	12	6*

Office of Chief Engineer Attention: D-400	3	Unknown
Commissioner's Office Attention: 400	1	1

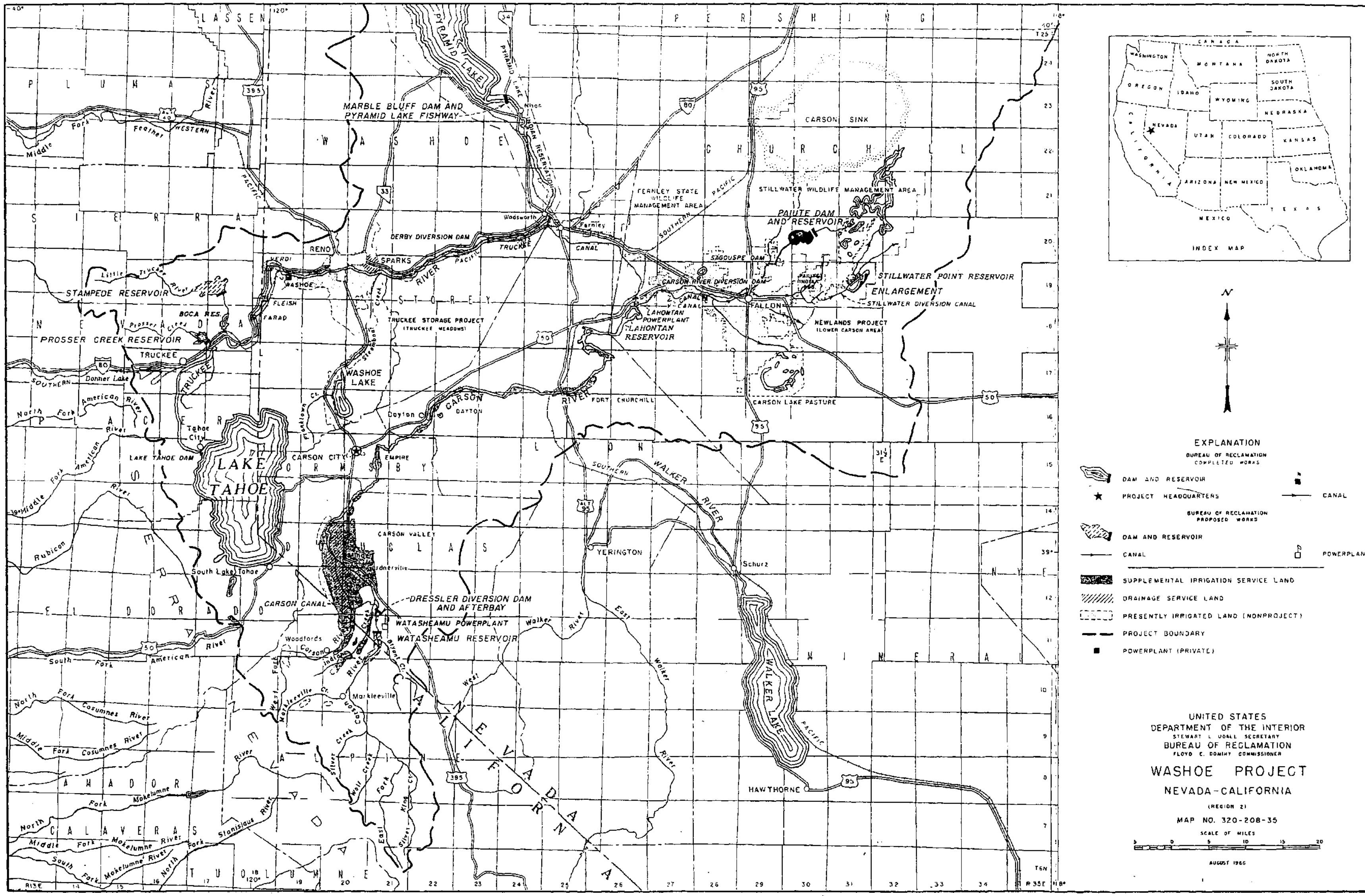
*Distribution without designation

Recommended for Approval:

W. Smith Richards — 2-10-67
Project Manager, Lahontan Basin Projects Office, Carson City, Nevada — Date

Approved:

R. J. Pafford Jr — 3-27-67
Regional Director, Region 2
Sacramento, California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DEPARTMENT OF THE INTERIOR
STEWART L. UDALL SECRETARY
BUREAU OF RECLAMATION
FLOYD E. DOMINY COMMISSIONER
WASHOE PROJECT
NEVADA-CALIFORNIA
(REGION 2)
MAP NO. 320-208-35
SCALE OF MILES
AUGUST 1966
MARBLE BLUFF DAM AND PYRAMID LAKE FISHWAY
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YERINGTON
Schurz
WALKER LAKE
HAWTHORNE
WALKER RIVER
NEVADA
CALIFORNIA

FACTUAL DATA ON THE WASHOE PROJECT

The Washoe Project area, a part of the Lahontan Basin, is comprised of the drainage basins of the Truckee and Carson Rivers. Most of the area is in west-central Nevada, but a small portion extends into east-central California in the vicinity of Lake Tahoe.

The Nevada portion of the project area includes the commercial centers of Reno and Sparks; Carson City, Nevada's capital; and the agricultural communities of Fallon, Fernley, Minden, Gardnerville, and Dayton. The cities of Truckee, Tahoe City, and South Lake Tahoe are in the California portion of the project.

Washoe Project facilities will improve the control and regulation of runoff of the Truckee and Carson River systems to permit increased beneficial use for a variety of purposes. The project will provide supplemental irrigation water supplies and drainage for presently irrigated lands, water for municipal and industrial and fishery uses, flood protection, hydroelectric power, other fish and wildlife benefits, and recreation development.

The Washoe Project is comprised of the Watasheamu and Stampede Divisions. The Watasheamu Division is the portion to be developed in the Carson River basin upstream from Lahontan Reservoir. This division will include the development of water supplies for irrigation, and the drainage and power functions of the project. The Stampede Division embraces project features in the Truckee River basin and lower Carson River basin. Purposes of this division include development of water supplies for municipal and industrial uses and to assist in restoring Pyramid Lake fishery, and other measures for fish and wildlife enhancement. Both divisions will provide flood control and recreation benefits.

WATER SUPPLY

The Truckee and Carson Rivers and their tributaries are the only streams in the project area. They drain the eastern slope of the Sierra Nevada and are fed primarily by melting snow. Their flows are high in the spring runoff season but drop sharply after midsummer. The combined drainage area of the two rivers is approximately 7,700 square miles.

The Truckee River heads at Lake Tahoe and terminates at Pyramid Lake. Its principal tributaries, in order of importance, are the Little Truckee River, Prosser Creek, Donner Creek, and Martis Creek. Other tributaries important to water-resources-development are Franktown Creek, which flows into Washoe Lake, and Steamboat Creek, which flows from Washoe Lake into the Truckee River. The average annual discharge of the Truckee River system at the Nevada-California state line is 500,000 acre-feet.

EXISTING FEATURES OF OTHER PROJECTS

LAKE TAHOE DAM at the outlet of Lake Tahoe creates 732,000 acre-feet of additional storage and regulates the lake outflow into the Truckee River. Completed in 1913, the dam is a concrete structure with a height of 16 feet and a crest length of 109 feet.

BOCA DAM on the Little Truckee River stores water for Truckee River regulation and irrigation of land of the Truckee Storage and Newlands Projects. The reservoir has a capacity of 41,000 acre-feet. The dam, completed in 1939, is an earthfill, rock-faced structure with a height of 116 feet and a crest length of 1,629 feet.

DONNER LAKE STORAGE. The Truckee-Carson Irrigation District and the Sierra Pacific Power Company have acquired storage rights on Donner Lake, with a capacity of about 9,500 acre-feet on Donner Creek, for joint use and Truckee River regulation.

DERBY DIVERSION DAM on the Truckee River about 20 miles below Reno, diverts water into the Truckee Canal for delivery to Lahontan Reservoir and irrigation of the Newlands Project lands. The dam is a concrete structure with a height of 31 feet and a crest length of 1,331 feet.

TRUCKEE CANAL extends from Derby Diversion Dam to Lahontan Reservoir. It has a length of 31 miles and an initial capacity of 1,500 second-feet.

LAHONTAN DAM on the main Carson River, 18 miles west of Fallon, stores water diverted from the Truckee River along with the natural flow of the Carson River. The reservoir has a capacity of 273,600 acre-feet. The dam, completed in 1915, is an earth and gravel fill structure with a height of 162 feet and a crest length of 3,400 feet.

LAHONTAN POWERPLANT immediately below Lahontan Dam, with a capacity of 2,400 kilowatts, has facilities to receive water from Lahontan Reservoir or Truckee Canal. Adjoining this plant the Truckee-Carson Irrigation District installed diesel equipment in 1949 to generate 2,000 kilowatts.

V-CANAL POWERPLANT, built in 1906 by the Truckee-Carson Irrigation District, is located on the main supply canal for the South Carson Division of the Newlands Project. It has an installed capacity of 1,000 kilowatts and a static head of 26 feet.

CARSON RIVER DIVERSION DAM on the Carson River, five miles below Lahontan Dam, diverts water into two main canals for irrigation of lands in the North and South Carson Divisions of the Newlands Project. The dam is a concrete structure with a height of 23 feet and a crest length of 241 feet.

DISTRIBUTION SYSTEMS. The Newlands Project area contains 67 miles of canals and 505 miles of laterals. In the Truckee Storage Project all canals and laterals were built by private parties.

DRAINAGE SYSTEMS. The Newlands Project has about 360 miles of deep open type drains constructed by the United States and the District. In the Truckee Storage Project the drains have been constructed by the individual landowners.

POWER DISTRIBUTION SYSTEM. A 73 mile, 34.5 kilovolt transmission system constructed by the Truckee-Carson Irrigation District carries power to the City of Fallon; towns of Fernley, Wadsworth, Hazen, and Stillwater; Indian Reservations; Naval Auxiliary Air Station; and most of the rural section of the Newlands Project. The original government line from the Lahontan Powerplant to the Fallon Substation has been abandoned. Distribution facilities were constructed by the District and local improvement districts. The Newlands Project powerplants are interconnected with the Sierra Pacific Power Company system.

FEATURES OF WASHOE PROJECT

STAMPEDE DIVISION

PROSSER CREEK DAM AND RESERVOIR, completed in 1962, is located on Prosser Creek approximately 1½ miles above the confluence of Prosser Creek and the Truckee River. The dam has a structural height of 163 feet and a crest length of 1830. The reservoir has a capacity of 30,000 acre-feet. It is used for flood control and to store water for an exchange of releases with Lake Tahoe to improve fishery flows in the Truckee River, principally in the reach from Lake Tahoe to the mouth of Donner Creek. Sites in the reservoir vicinity are developed for recreation use and the reservoir provides a new fishery.

STAMPEDE DAM AND RESERVOIR will be located on the Little Truckee River immediately below the mouth of Davies Creek and approximately 8 miles above the confluence of the Little Truckee and Truckee Rivers. The dam will be of rolled earth and rockfill construction with a height of 233 feet above streambed, a crest length of 1,450 feet and embankment volume of 9½ million cubic yards. With a capacity of 225,000 acre-feet, the reservoir will develop water supplies for municipal and industrial use and for firming of fishery flows. The fishery water will enhance the fishery along the Truckee River downstream from Derby Dam and will facilitate operation of the Pyramid Lake Fishway. The reservoir will also provide flood control, recreation use, a new reservoir fishery, and other fishery improvements on the main Truckee River, Little Truckee River, and Boca Reservoir.

MARBLE BLUFF DAM will be located on the Truckee River about 3 miles upstream from Pyramid Lake. This rolled earth structure will have a height above streambed of 22 feet and a crest length of 1,000 feet. It will function to check headward downcutting of the river channel and to halt erosion of Indian lands. Marble Bluff Dam will also serve as a heading to control water supplies used by the Pyramid Lake Fishway.

PYRAMID LAKE FISHWAY will extend from Marble Bluff Dam about 3 miles to Pyramid Lake. With a capacity of 35 cubic feet per second, it will provide a passageway for Pyramid Lake fish to move up into the Truckee River for spawning and return to the lake. An average of 6,900 acre-feet annually from water developed by the Stampede Division of the project will provide supplemental flows to facilitate functioning of the fishway during years of low streamflow.

STILLWATER WILDLIFE AREA IMPROVEMENT FACILITIES will be constructed in the Stillwater Wildlife Management Area of the lower Carson River basin to improve water supply for waterfowl habitat. New reservoir capacity to regulate available water supplies will be provided by enlarging the capacity of Stillwater Point Reservoir by about 6,000 acre-feet and by constructing Paiute Dam and Reservoir with a capacity of about 5,900 acre-feet. A Paiute Reservoir Supply Canal will be constructed to take Newlands Project drain water and Carson River spills from the lower Carson River to Paiute Reservoir. Other conveyance facilities will be constructed to improve distribution and movement of drain and spill waters to the Management Area.

WATASHEAMU DIVISION

WATASHEAMU DAM AND RESERVOIR will be located on the East Fork of the Carson River about 10 miles south of Gardnerville. The reservoir will have a capacity of 160,000 acre-feet. It will develop an additional irrigation water supply. Releases from the reservoir will also be used for power generation. This reservoir will also provide flood control and a new recreation site. The dam will be a rolled earth and rockfill structure with a height of 310 feet above streambed, a crest length of 2,050 feet, and embankment volume of 5½ million cubic yards.

DRESSLER DIVERSION DAM AND AFTERBAY will be located on the East Fork of the Carson River about 4¼ miles downstream from Watasheamu Dam. It will provide a diversion heading for the proposed Carson Canal and an afterbay for the Watasheamu Powerplant. The afterbay will have a capacity of 1,050 acre-feet, and will regulate the discharge of Watasheamu Powerplant for irrigation use. The diversion dam will be an earth materials embankment with a height of 75 feet above streambed and a crest length of 800 feet.

CARSON CANAL will extend approximately 8 miles from the Dressler Diversion Dam and Afterbay on the East Fork of the Carson River to about 2 miles beyond the West Fork of the Carson River. The canal will have a capacity of 140 second-feet to its junction with the West Fork. The 2-mile extension beyond West Fork will be relatively small. The Carson Canal will convey natural flows of the East Carson River and Watasheamu Reservoir storage to provide supplemental irrigation for West Fork lands in Alpine County, California, and Douglas County, Nevada.

LATERAL SYSTEM. Existing distribution laterals will be rehabilitated on 43,380 acres of supplemental service lands in the Carson Valley, Empire, Dayton, and Fort Churchill areas in Nevada. In Carson Valley approximately 30 miles of laterals will be improved and in the Empire, Dayton, and Fort Churchill areas about 10 miles of laterals will require minor rehabilitation work.

DRAINAGE SYSTEM. In Carson Valley about 30 miles of new open subsurface drains and 31 miles of closed tile drains will be installed. About 11 miles of existing drains and natural channels will be improved. The drain system will improve land productivity and will develop part of the project irrigation water supply by reducing wasteful evapo-transpiration from nonbeneficial vegetation.

WATASHEAMU POWERPLANT will be located near the toe of Watasheamu Dam on the East Fork of the Carson River and will be operated by natural flow and storage releases from Watasheamu Reservoir to meet downstream irrigation requirements. It will be a single unit with an installed capacity of 8,000 kilowatts. It will be semiautomatic and will operate under a maximum static head of 262 feet and a mean operating head of 236 feet.

SUBSTATIONS AND TRANSMISSION SYSTEMS. A switchyard will be constructed at Watasheamu Powerplant to increase the voltage of the power generated to 69,000 volts. Transmission lines about 10 miles long will be constructed from the Watasheamu switchyard to existing facilities near Minden, Nevada.

MUNICIPAL AND INDUSTRIAL WATER SUPPLY

The project will provide about 45,800 acre-feet of divertible M&I water annually to meet foreseeable future increases in M&I needs in the Reno-Sparks area, the Truckee River basin in California, and other possible points of use in the project area. The tremendous population growth in the area, especially in the Reno-Sparks and Lake Tahoe localities, is bringing heavy demands for additional M&I water. Population of the project area, estimated at 167,000 in 1964, is expected to grow to 760,000 by the year 2020.

WATER SUPPLY FOR FISHERY

An average of 6,900 acre-feet annually of the water supply developed by the Stampede Division will be provided for fishery purposes in the lower Truckee River basin. The fishery water will supplement flows in the river below Derby Dam in periods of low runoff to help maintain stream conditions and Pyramid Lake Fishway flows that will enable Pyramid Lake fish to spawn in the lower Truckee River. Reestablishment of river spawning will help to restore Pyramid Lake fishery and the improved flows will enhance fishery in the river.

IRRIGATION PLAN

Irrigation under the Washoe Project will consist of supplying about 44,000 acre-feet of supplemental water annually on a divertible basis to irrigated lands in the Carson River basin above Lahontan Reservoir. Watasheamu Reservoir will develop part of this water supply by regulating flood flows. A part of the project water supply will be developed by project drainage of some of the irrigated lands. Wasteful evaporation and transpiration will be reduced and the water saved will increase water available for beneficial use.

Releases from Watasheamu Reservoir will pass through the Watasheamu Powerplant at the base of the dam. The water will then be regulated at the Dressler Diversion Dam and Afterbay. At the dam some water will be diverted into the Carson Canal and delivered to the West Fork of the Carson River for distribution by existing facilities. Some water bypassing Dressler Diversion Dam together with return flows, will be diverted to lands in the Carson Valley and in the Empire, Dayton, and Fort Churchill areas. The remaining flows passing Dressler Diversion Dam will continue on to Lahontan Reservoir for the Newlands project.

IRRIGATION AND DRAINAGE SERVICE AREA

The project will provide service to a total of 43,380 acres of irrigable land. This will include both supplemental water and drainage service for 16,530 acres in Carson Valley. Supplemental water only will be provided to 23,290 acres in Carson Valley and 5,560 acres in the Empire, Dayton, and Fort Churchill areas downstream.

The remainder of the classified arable lands cannot be served under present project plans. The total classified arable land consists of 59,230 acres in Carson Valley, 7,720 acres in the Empire, Dayton, and Fort Churchill areas and 30,400 acres in Truckee Meadows.

LAND AND SOIL CHARACTERISTICS

Most agricultural lands of the project area vary from 4,200 to 5,000 feet in elevation.

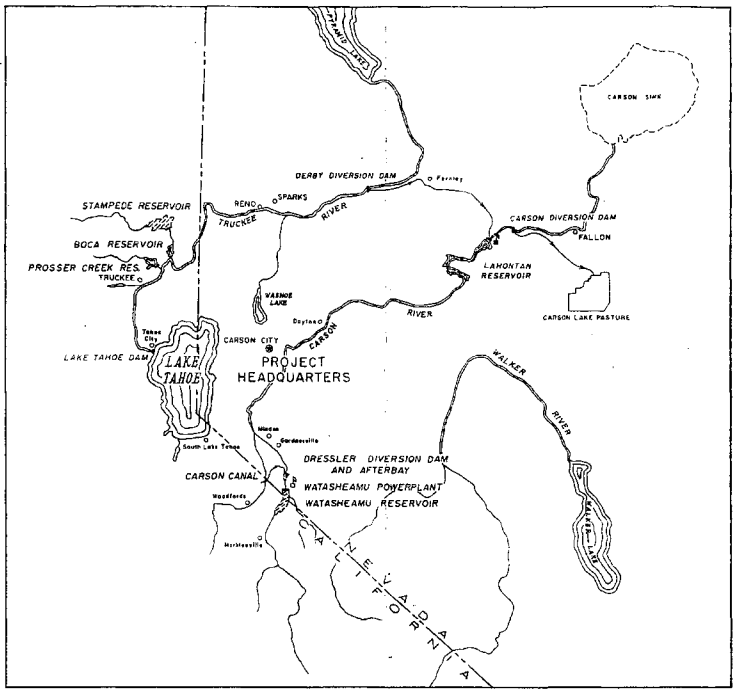
The annual water requirements of farms in the area varies from 3.0 to 4.3 acre-feet per acre depending on the type of soil, topography, season, crops grown, and location. With allowance for normal conveyance losses, diversion requirements at heads of canals would vary from 4.2 to 5.7 acre-feet annually.

Soils of the Carson Valley consist primarily of alluvial sediments deposited by the Carson River and its tributaries. Soils in the northern part of the valley are generally deeper and of finer texture than those in the south. The heaviest soils are in the center of the valley bottom, 1 to 3 miles north of Minden. Soils on the alluvial fans along the western and northwestern edges of the valley are generally lighter in texture than those of the valley bottom.

Soils of the Empire area have developed from materials originating in three different sources, those laid down by the Carson River, those derived from small outwash areas from the western hills, and those deposited within a small lake in the area's northern portion.

Soils of the Fort Churchill area and Dayton area bottom lands have developed chiefly from materials laid down by the Carson River.

Soils of the Dayton area benchlands were formed on outwash materials from the adjoining hills and on materials laid down within ancient Lake Lahontan.



CLIMATE

The average irrigation season at Reno, which is representative of the project area, is 178 days. The average frost-free period is about 155 days. The average frost-free period of the project irrigation service area, however, is about 115 days.

The average annual rainfall at Reno is 8.97 inches of which 1.45 inches occur during the growing season.

Temperatures at Reno have varied from a maximum of 102° F to a minimum of −19° F. The mean annual temperature is 49.6° F.

CROPS

Livestock feed crops are the most important crops grown on the irrigated lands of the project. Alfalfa, irrigated pasture and irrigated meadow hay support a thriving livestock and dairying industry. Next in order of their importance are wheat, barley, oats, and potatoes.

PRINCIPAL MARKETS

Principal markets for the project area products are cities and towns of Nevada, the Lake Tahoe area, San Francisco, Los Angeles and other Pacific Coast cities. Dairy products are consumed in western Nevada and the Lake Tahoe areas. Most of the beef cattle go to the California markets. Most livestock feed crops are consumed locally with some being shipped to California markets. Excellent transportation facilities are provided by the Southern Pacific Railroad and U. S. Highways 80, 50, and 395. Commercial air service is provided out of Reno by Western Airlines, United Air Lines, Bonanza Airlines, and Pacific Air Lines.

Address all inquiries regarding additional information concerning this Project to:

REGIONAL DIRECTOR, REGION 2
BUREAU OF RECLAMATION

P. O. Box 15011, SACRAMENTO, CALIFORNIA 95813

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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
REGION 2

STANDING OPERATING PROCEDURES
for
PROSSER CREEK DAM AND RESERVOIR

CHAPTER I GENERAL

The Prosser Creek Dam and Reservoir is located on Prosser Creek approximately 1-1/2 miles upstream from the confluence of Prosser Creek and the Truckee River. The dam is in Nevada County, California, about 4 miles northeast of Truckee, California. The dam embankment is a zoned earthfill of 1,803,500 cubic yards, which rises a maximum of 163 feet above the lowest portion of the foundation. The crest has a total length of 1,830 feet and a top width of 30 feet. The maximum base width is 728 feet. The reservoir, with a storage capacity of 29,840 acre-feet, is used for flood control and fish and wildlife benefits.

A. Directions for Traveling to the Dam

1. To reach the dam from Interstate 80 near Truckee, California, follow California SR 89 about 1/2 mile north of Interchange; turn easterly at Prosser Creek Dam directional sign and follow asphalt surfaced road about 2 miles; turn east at Forest Service directional sign and follow gravel surfaced road 1 mile to dam. (See Exhibit A for Location Map.)

2. When surface conditions permit, Prosser Creek Dam may be reached from Boca Dam by following Forest Service Road No. 18N03 westerly for 4 miles.

3. To reach the dam from the Lahontan Basin Projects Office or Carson City, follow the route below:

   a. Proceed southerly for 4 miles on U.S. Highway 395 to U.S. Highway 50.

   b. Turn west on U.S. Highway 50 and proceed 9 miles to Spooner Summit Junction (Nevada SR 28).

   c. Turn north on Nevada SR 28 and proceed 15 miles, around Lake Tahoe, to Kings Beach, California. (California SR 267)

   d. Turn northwest on California SR 267 and proceed 12 miles via the Brockway cutoff to Truckee, California. (California SR 89)

   e. Turn north on California SR 89 and proceed 1-1/2 miles to the Prosser Creek Dam directional sign and follow directions in No. 1 above.

The above route is approximately 15 miles shorter than traveling to Reno, Nevada and Interstate Highway 80.

B. Assignment of Responsibility

1. Lahontan Basin Projects Office

The order of responsibility within the Lahontan Basin Projects Office is as follows:

NAME	TITLE	RESIDENCE PHONE NO.
H. S. Richards	Project Manager	702-882-3497 (Carson City, Nevada)
E. C. Malstrom	Office Engineer	702-882-2775 (Carson City, Nevada)
J. D. Carter	Field Engineer	702-882-3902 (Carson City, Nevada)
W. J. Wick	Administrative Officer	702-882-2043 (Carson City, Nevada)

2. Damtender

Services of the Boca Dam damtender are provided on a part-time basis at Prosser Creek Dam by contract between the Bureau of Reclamation and the Washoe County Water Conservation District. (This agency has the responsibility for operation and maintenance of Boca Dam.)

NAME	TITLE	RESIDENCE PHONE NO.
Ron Kirby	Damtender	916-587-3697 (Boca Dam near Truckee, California)

The damtender's duties consist of reporting daily reservoir storage and releases to the Federal Water Master and the Lahontan Basin Projects Office, and when requested by the Water Master, adjusts the outlet gates to the specified release. The damtender shall perform minor maintenance on outlet works equipment only. Repairs and other maintenance requirements remain the responsibility of the Lahontan Basin Projects Office.

3. Federal Water Master

The operation of Prosser Creek Dam and Reservoir is affected by related decrees and agreements in connection with water rights of the Truckee River, commonly known as the 1915 Decree, the 1935 Truckee River Agreement, and the Truckee River Final Decree dated 1944. The conditions imposed by these water rights documents are administered in the State of Nevada by a Federal Court-appointed Water Master.

C. Communications Procedures

Routine and emergency reporting by the damtender is accomplished by commercial telephone.

1. Prosser Creek Dam 916-587-3258

The dam is unattended except during flood periods and service visits.

Prosser Creek Dam Telemark 916-587-3258

Special electronic instruments connected to telephone equipment installed at the dam allows anyone to telephone and receive the reservoir water surface elevation by special signal. These signals give the elevation in tens, units, tenths and hundredths, i.e. 59.63. A long buzzing signal will indicate a zero. Other signals are short and each group is separated by a pause. When the damtender is not present to answer the phone, the calling party will automatically receive the water surface elevation. Should

the caller miss or confuse a signal, it will be necessary to recall as the telemark does not repeat the reading continuously. No reading during power outage.

Damtender's Residence (at Boca Dam) 916-587-3697

2. Lahontan Basin Projects Office 702-882-3436
(813 No. Plaza Street, Carson City, Nevada 89701)

3. U. S. Bureau of Reclamation Regional Office
2929 Fulton Avenue, P. O. Box 15011
Sacramento, California 95813

a. During working hours (7:45 a.m. to 4:30 p.m.)

All telephone calls are routed through the switchboard to designated or appropriate parties. 916-489-7631

b. After working hours

The Central Valley Operations Office located in the Regional Office is manned 24 hours per day. Telephone calls shall be direct dialed as follows:

CVOO Control Room 916-489-6139

c. Emergency reporting all hours

All emergency reporting to Regional Office personnel shall be through the Central Valley Operations Office, which will dispatch the call to the appropriate official day or night.

d. Regional Officials' names and residence phone numbers of personnel concerned are contained in Exhibit B.

e. Natural Disaster Rehabilitation Division

Regional Letter No. 206 established the Natural Disaster Rehabilitation Division with broad

responsibility for handling all matters relative to requests for relief or assistance in the rehabilitation of property and facilities damaged through natural disaster of any sort. (See Exhibit B.)

4. U. S. Army Corps of Engineers (Flood Control Operations)

   See Exhibit C for Corps of Engineer personnel concerned.

5. Federal Water Master (Truckee River System)

   Claude Dukes
   Reno, Nevada
   Office. 702-784-5241

   Flood Control Center or Residence 702-784-5319

D. Restricted Areas

The dam and reservoir are subject to the following restrictions:

1. Parking on the operating road traversing the dam is prohibited, except authorized vehicles at the shaft house.
2. The door to the shaft house is kept locked and access is restricted to authorized personnel. Keys to the shaft house may be obtained at the Lahontan Basin Projects Office in Carson City and the damtender's residence at Boca Dam.
3. Boating in the immediate vicinity of the spillway channel is prohibited. Signs are posted at this point in the reservoir warning of the hazard, but there are no physical means present to actually deter any craft. In addition, by County Ordinance, boating speeds shall not exceed 10 m.p.h.

E. Personnel Training

The Lahontan Basin Projects Manager shall see that all operating and maintenance procedures are imparted to the damtender, and periodically review these procedures with the damtender for adequacy and compliance.

F. List of Supporting Documents

The following documents are not contained within this SOP, but are important reference sources:

1. Designers' Operating Criteria--Prosser Creek Dam--Washoe Project, Nevada-California--Denver, Colorado--as revised June 1966, hereafter, noted as "D.O.C."
2. State of California Water Rights Board Permit No. 11666.
3. Specifications No. DC-5197--Schedule, General Provisions, Specifications, and Drawings--Prosser Creek Dam.
   Invitation No. DS-5209--High Pressure Gate Valves for Outlet Works.
4. Reservoir Regulation Manual for Flood Control--Truckee River Reservoirs--California and Nevada--U. S. Army Engineer District Corps of Engineers--April 1962.
   Authority for "Flood Control Regulations" is published in F.R. Doc. 63-617; Filed January 21, 1963, 8:45 a.m. under Title 33 - NAVIGATION AND NAVIGABLE WATERS - Part 208.
5. Agreement for Water Exchange Operations for Lake Tahoe and Prosser Creek Reservoir (Contract No. 14-06-400-957) dated June 15, 1959, between the United States, Truckee-Carson

Irrigation District, Sierra Pacific Power Company, and the Washoe County Water Conservation District.

6. Related decrees and agreements in connection with water rights of the Truckee River, commonly known as the 1915 Decree, the 1935 Truckee River Agreement, and the Truckee River Final Decree dated 1944.

7. U. S. Weather Bureau Circular B, Instructions for Climatological Observers, Eleventh Edition, Revised January 1962.

STANDING OPERATING PROCEDURES
for
PROSSER CREEK DAM AND RESERVOIR

CHAPTER II RESERVOIR OPERATIONS

A. Reservoir Allocations, Design Flood Size and Study Reference

1. Reservoir capacity allocations are contained in Exhibit D.

2. The inflow design flood as approved by the Chief Engineer on August 13, 1957, has the following characteristics:

Peak Inflow	13,900 c.f.s.
Volume	41,200 AF
Duration	4 days
Peak Outflow	4,700 c.f.s.

See Exhibit E for Flood Routing Curves.

B. General Filling Schedule and Release Procedures

Prosser Creek Reservoir, with a capacity of 29,840 acre-feet, will be operated for flood control and for exchange requirements for fishery purposes on the Truckee River below the outlet of Lake Tahoe.

The operation of the reservoir shall be in accordance with existing decrees, agreements and water rights on the Truckee River as mainly set forth in the Washoe Project, Agreement for Water Exchange Operations at Lake Tahoe and Prosser Creek Reservoir. (Contract No. 14-06-400-957 dated June 15, 1959) These decrees, agreements and water rights provisions are further discussed in Paragraph F, herein.

The reservoir shall be evacuated to provide 20,000 acre-feet of storage space for flood control during the period of November 1 through April 10 each next following year. Between April 10 and July 12 of each year, varying amounts of flood control space will be reserved depending on snow surveys and runoff forecasts, as recommended by the Corps of Engineers. (For details of the Corps of Engineers' Flood Control Criteria, see Chapter IV, Paragraph A and Exhibit X.)

C. Flood Forecasting, Flood Operating Criteria and Operations

Detailed flood forecasting is not required by the Lahontan Basin Projects Office. Flood operating criteria and operations shall be as provided in Chapter IV, Paragraph A, herein.

D. Geologic Limits on Filling and Drawdown

Not applicable. However, in earthquake zone, see Chapter V.

E. Hydro-Power Release Criteria

Not applicable. However, the Sierra Pacific Power Company in Reno is to be notified of any sudden flow changes over 25 c.f.s. At any hour call 702-789-4333 or 4334.

F. Operating Criteria for Other Functions

1. Lake Tahoe Exchange Water

Water releases from Lake Tahoe to maintain fishery flows in the upper reach of the Truckee River will decrease the amount of water that would otherwise be stored in the lake for irrigation use, unless an equal amount of water is stored in Prosser Creek Reservoir to accomplish the replacement

and maintain decreed Truckee River streamflows at "Floriston Rates." Operation of the Lake Tahoe reservoir for exchange of water for fishery purpose shall be as follows:

a. Whenever the flow of the Truckee River at the outlet of Lake Tahoe is less than 50 cubic feet per second during the period from October 1 of any year through the next following March 31, and less than 70 cubic feet per second during the period from April 1 of any year through September 30 of that year, the United States may release or cause to be released, but not to exceed, sufficient water from Lake Tahoe to maintain minimum flows at Lake Tahoe outlet during the above described periods, provided, however, that any water the United States may release, or cause to be released, from Lake Tahoe for the maintenance of said minimum flows be only to the extent and amounts below:

   i. When Lake Tahoe water can be released by gravity flow through the outlet works of Lake Tahoe Dam; and

   ii. when an amount of water equal to that so released from Lake Tahoe is available for later release from Prosser Creek Reservoir for replacement of water so released from Lake Tahoe consisting of either (a) concurrent flow of Prosser Creek being stored in Prosser Creek Reservoir, or (b) water in Prosser

Creek Reservoir previously stored under California State Water Rights Board Permit 11666 and not previously credited to and classified as "Tahoe Exchange Water" as defined in subparagraph (b) below, or (c) a combination of waters defined in (a) and (b) above.

b. When water is released from Lake Tahoe under provisions of subparagraph (a) above, an equal amount of water stored by the United States in Prosser Creek Reservoir shall be credited to and classified as Lake Tahoe Storage and known as "Tahoe Exchange Water." The United States shall release the "Tahoe Exchange Water" stored in Prosser Creek Reservoir, when and in amounts necessary, to maintain "Floriston Rates" or "Reduced Floriston Rates" as herein defined (whichever are in effect) and make available by November 1st of each year in the Prosser Creek Reservoir 20,000 acre-feet of flood storage space or such other amount as the U. S. Army Corps of Engineers may designate from time to time. Any water discharged in excess of that required to maintain "Floriston Rates" or "Reduced Floriston Rates" (whichever is in effect) to provide the required flood storage space shall be charged to "uncommitted water" impounded in the Prosser Creek Reservoir under Permit No. 11666. Storage of "Tahoe Exchange Water" in Prosser Creek Reservoir

shall be limited at any given time to the amount that may be stored and evacuated to maintain "Floriston Rates" or "Reduced Floriston Rates," (whichever is in effect) under provisions of this paragraph. The term "uncommitted water" as used herein means all water stored in Prosser Creek Reservoir under Permit No. 11666, which will not be required as "Tahoe Exchange Water" for delivery as provided herein, including the amount of water necessary to replace evaporation and other reservoir losses as described in the provisions of subparagraph (c) below.

c. Water stored in Prosser Creek Reservoir as "Tahoe Exchange Water" shall not be diminished by reservoir losses, and the United States shall replace these losses from "uncommitted water" stored in the reservoir. When water is not available in the reservoir to make up the losses, no further exchange of Lake Tahoe water shall be made until such water is available for this purpose.

2. Floriston and Reduced Floriston Rates

a. The term "Floriston Rates," as defined in the 1935 Truckee River Agreement, means the rate of flow in the Truckee River at the Iceland Gage located in the Truckee River between the point of diversion of the former penstock at Floriston, California, and the point of confluence of Gray's Creek with the Truckee River. (The

Iceland Gage was destroyed by flood in December 1937. Current measurements for "Floriston Rates" are made at the Farad Gage located about 5 miles downstream from the Iceland Gage site.) This rate of flow consists of an average of 500 cubic feet per second of water per day during the period from March 1 and September 30 of any year, and an average flow of 400 cubic feet per second each day during the period from October 1 and continuing through the last day of the next following February of any year.

The term "Reduced Floriston Rates" means the rate of flow in the Truckee River at the above described gage effective and in force during the period from November 1 to the next following March 31 of each year, determined as follows:

(i) 350 c.f.s. whenever the water surface elevation of Lake Tahoe is below 6226.00 but above 6225.25, and

(ii) 300 c.f.s. whenever the water surface elevation of Lake Tahoe is below 6225.25.

See Exhibit F for a summary of the above rates.

b. The 1935 Truckee River Agreement affects the order of releases from Lake Tahoe and Boca Reservoir to meet "Floriston Rates" and also determines procedures in regard to operation of Prosser Creek Reservoir. Article III (c) (2) of the 1935 Agreement provides that if the water surface elevation of Lake Tahoe is, at any time

during the period of April 1 and October 31, higher than 6225.5, then "supplemental storage water" shall be released first from Boca Reservoir to maintain "Floriston Rates"; provided that 4,000 acre-feet of "supplemental storage water" shall be retained in Boca Reservoir for further use in accordance with the 1935 Agreement. When the water surface elevation of Lake Tahoe is below elevation 6225.5, then water from Lake Tahoe shall be released first to the extent possible to maintain "Floriston Rates" and if the release from Lake Tahoe is insufficient to meet the required "Floriston Rates," additional water shall be released from Boca Reservoir to make up the required flow to meet the "Floriston Rates." A natural reef or rim at the outlet of Lake Tahoe limits the lake outflow at lower elevations as follows:

Elevations	Discharge
6223.9	70 c.f.s.
6223.7	50 c.f.s.
6223.0	0 c.f.s.

All Lake Tahoe elevations based on "1915 Decree" datum.

However, if "Tahoe Exchange Water" is available in Prosser Creek Reservoir, when sufficient water cannot be released from Lake Tahoe to meet the required "Floriston Rates," and water would otherwise have

been required to be released from Boca Reservoir, it shall be released first in accordance with the same requirements as would be placed on water stored in Lake Tahoe. Whenever releases at Lake Tahoe required to maintain "Floriston Rates" exceed the minimum flow for fishery purposes (50 or 70 c.f.s.), the Lake release would be held at the minimum flow and the remainder would be released from "Tahoe Exchange Water" stored in Prosser Creek Reservoir to meet the "Floriston Rates."

c. The procedure in the release of "Tahoe Exchange Water" from Prosser Creek Reservoir would be followed until all such water had been released. Normally, at the end of each irrigation season or by November 1 when the drawdown on the Prosser Creek Reservoir has been completed for flood protection, the exchange would be completed and the content of Lake Tahoe would be returned to a level as if no fishery releases had been made.

3. Other Water Rights Provisions

a. Permit No. 11666 provides that whenever active storage space is available in Prosser Creek Reservoir without encroaching on inviolate flood space, excess flows of Prosser Creek which would normally cause or contribute to spills at Derby Dam would be stored in the reservoir in addition to exchange storage requirements. This water shall be known as "uncommitted water" and used to

replace evaporation and other reservoir losses.

b. A minimum flow of 5 c.f.s. or the natural flow of Prosser Creek, whichever is less, will be maintained below the dam for the maintenance of fish life.

G. Daily Observations and Data Collection

The following observations and data collection shall be accomplished daily or at other intervals as specified by the Project Manager.

1. Damtender

a. Obtain, at the Boca Dam Weather Station, air temperatures, precipitation and wind data. Record on U.S.W.B. Form 612-25 (Exhibit G). This information shall also be recorded on LBPO Form 38 discussed below. Refer to U. S. Weather Bureau Circular B, Instructions for Climatological Observers, for operation and maintenance of weather station equipment.

b. Obtain the reservoir water surface elevation by means of the Electric Contact Gage at 8:00 a.m. and record on the daily report form, LBPO Form 38 (Exhibit I).

c. Determine reservoir storage content using the above elevation and the Prosser Creek Reservoir Capacity Table (Exhibit H), and record on LBPO Form 38 (Exhibit I).

d. Telephone the Federal Water Master in Reno, Nevada, and report water surface elevation and storage. Set the outlet gates to discharge the rate specified by the Federal

Water Master and record the value on LBPO Form 38 (Exhibit I). Exhibit S - Outlet Works Discharge Curves - will aid in determining the proper settings.

e. Determine evaporation by the following method:

(1) Determine mean water surface area for past month from Exhibit U - Area - Capacity Curves.

(2) Determine rate of evaporation in thousandths of feet per month from the Evaporation Rate Curve (Exhibit V) and correct for month's precipitation.

(3) From water surface area and rate of evaporation, determine total evaporation for the month in acre-feet. Change to average c.f.s. by dividing by 2. Record on Exhibit I.

(4) Evaporation determinations are not required during period of Minimum Flood Control Reservation.

f. Readings from the 90 degree V-notch weir shall be made monthly and included on Exhibit I as a footnote. Readings other than monthly occur during periods of usually high flows and only when directed during winter months when the weir is inaccessable.

2. Federal Water Master

a. The Water Master will verify the reservoir storage, determine inflow and instruct the damtender as to the required outflow.

b. Information required on LBPO Form 39 (Exhibit M) will be completed daily.

c. Each time a change in Prosser Creek reservoir operation is made under "Tahoe Exchange Water" provisions, the Project Manager or his designated representative will be notified by telephone during regular LBPO hours.

d. As often as necessary during the flood season, the Water Master will telephone the Reservoir Regulation Section of the Corps of Engineers at Sacramento and report Prosser Creek Reservoir storage and outflow and other information as required.

e. The services performed by the Water Master for the United States are covered by purchase order.

H. Other Observations and Data Collection

In accordance with the "Schedule for Periodic Readings" by the Chief, Dams Branch, Denver, Colorado, dated April 30, 1964, obtain surface settlement data every five years for the embankment and outlet works. Record data on Forms 7-1355 (Exhibit J) and 7-1355-A (Exhibit K).

I. Preparation and Distribution of Reports

1. Prosser Creek Reservoir Operation, LBPO-38 (Exhibit I)

Information obtained on daily or specified visits by damtender to the dam are recorded on this form and transmitted weekly, on Friday or Saturday, to reach the Project Manager on the following Monday morning.

2. Water Supply Report, Form 7-1460, (Exhibit L)

This form is prepared monthly by the Project Office and submitted to the Chief Engineer and the Regional Director, Attention: 2-116.

3. Monthly Water Report - Prosser Creek Reservoir, LBPO-39 (Exhibit M)

Data to complete this form is posted daily by the Federal Water Master and transmitted monthly to the Project Office. Annually, in January, completed forms for the preceding 12-month period are transmitted by the Project Office to the following parties:

Mr. Phil W. Hiibel, Project Manager
Truckee-Carson Irrigation District
152 North Maine Street
Fallon, Nevada 89406

Mr. Edward M. Peckham, President
Washoe County Water Conservation District
421 Hill Street, Room 5
Reno, Nevada 89501

Mr. Neil Plath, President
Sierra Pacific Power Company
P. O. Box 2111
Reno, Nevada 89505

Mr. Claude Dukes, Water Master
600 South Arlington Avenue
Reno, Nevada 89502

4. Annual Water Report - Lake Tahoe - Prosser Creek Reservoir Fishery Exchange - LBPO Form 44 (Exhibit O)

This report is a summary of the monthly operations of Prosser Creek Dam and is completed by the Project Office

in January for the preceding 12-month period. Transmittal of the form, in addition to those parties in (3) above, is to:

Mrs. Mary Wallan, Office Manager
Carson-Truckee Water Conservancy District
P. O. Box 2047
Reno, Nevada 89501

State of California
Department of Fish and Game
Region 2 Headquarters
1001 Jedsmith Drive
Sacramento, California 95819

Mr. Norman R. Chupp, Field Supervisor
River Basin Studies
U. S. Bureau of Sport Fisheries and Wildlife
650 Capital Mall - Room 4110
Sacramento, California

Mr. Paul T. Quick, Regional Director
U. S. Bureau of Sport Fisheries and Wildlife
P. O. Box 3737
Portland, Oregon 97208

Mr. L. K. Hill, Executive Officer
California State Water Rights Board
P. O. Box 1592
Sacramento, California

Regional Director, Region 2
U. S. Bureau of Reclamation
P. O. Box 15011
Sacramento, California 95813
Attention: 2-116

5. Monthly Flood Control Report, Truckee River Reservoirs, LBPO-41 (Exhibit Q)

During applicable periods, this information is transmitted at the end of each month to the District Engineer, U. S. Corps of Engineers.

6. Monthly Flood Control Report, Prosser Creek Reservoir, LBPO-42 (Exhibit R)

During applicable periods, information to complete this report is posted daily. This report serves as the Project Office's primary worksheet for other reports and also satisfies Corps of Engineers' requirements.

7. U. S. W. B. Form 612-25 (Exhibit G)

Data for this form is posted daily by the damtender. A copy is furnished to the Project Office at the end of each month.

STANDING OPERATING PROCEDURES
for
PROSSER CREEK DAM AND RESERVOIR

CHAPTER III

STRUCTURAL, MECHANICAL, AND ELECTRICAL OPERATION AND MAINTENANCE

A. Dam Embankment

The upstream face of the zoned earth embankment is protected by a 3-foot riprap face and slopes $2\frac{1}{2}$:1 from the crest to elevation 5740, 3:1 from elevation 5740 to elevation 5660, and 4:1 from elevation 5660 to the original ground surface. The downstream face, covered to a depth of 3 feet by variable sized cobbles and boulders, slopes 2:1 from the crest to elevation 5670, then tapers to 4:1 over the toe drains. The 30-foot crest also serves as an operating road and a public county road.

B. Outlet Works

1. Description

The outlet works is located through the left abutment of the dam and commences with a trashracked intake tower structure, 27.75 feet in height. Water entering the tower is transported through an 8-foot diameter circular conduit to the gate chamber located approximately 30 feet beyond the dam axis. The gate chamber houses four 3-foot, 0-inch by 6-foot, 6-inch hydraulic high pressure slide gates. Access to the gate chamber from the shaft house on the dam crest is provided by steel safety ladder within a 7-foot

diameter shaft. Water passing the high pressure gates is transported through a 9-foot diameter, flat bottom conduit to the stilling basin.

2. Operation

Generally, operation of the outlet works shall be in a manner to conform with provisions of Chapter II herein, or the Corps of Engineers' Flood Control Criteria as applicable.

a. High Pressure Gates

Four 3-foot, 0-inch by 6-foot, 6-inch high pressure steel slide gates are installed in tandem within the gate chamber. The upstream gates serve as guard gates and are normally wide open. They are capable of closing under full flow in an emergency or to permit inspection and repair of the downstream regulatory gates.

Discharges through the outlet works shall be made equally through both regulatory gates whenever practicable. Small flows should be discharged through the bypass line and prolonged operation of the high pressure gates with openings of less than 1 inch should be avoided. The damtender shall have posted an ozaplastic print of Drawing No. 40-D-5314, mounted on the wall of the shaft house. This drawing gives the step-by-step operation of the gates. Additional operating instructions are

found in Chapter IV, Page 11 of the D.O.C. (See Exhibit S for Discharge Curves.)

b. Bypass Line

The bypass line is used to pass low flows through the outlet works, primarily when satisfying downstream fish requirements. The line, embedded in the floor of the gate chamber, consists of a 5/16-inch plate steel inlet box and a 16-inch by 8-inch rectangular to 8-inch I.D. transition to 14-feet of 8-inch standard black steel pipe. The 8-inch pipe is reduced to 6-inch standard black steel pipe capped by two 6-inch, 175 pound gate valves in series. Each valve has a floor stand directly above on the gate chamber floor. The upstream valve is hand operated by a handwheel mounted on its stand. The downstream valve is motor-operated from pushbutton controls in the shaft house or gate chamber (See Exhibit T for Bypass Discharge Curves).

c. Reservoir Level Gages

Two interconnected gage wells are provided in the outlet works for determining the reservoir water surface elevation. One well is equipped with an automatic water level recorder and telephonic telemetering equipment. The other gage operates manually with an electrical contact on a graduated tape. The wells are to be flushed periodically in accordance with the D.O.C.

d. V-Notch Weirs

To aid in determining seepage flows from the dam embankment a 6-inch high, 90 degree, V-notch metal weir box was installed on the end of the 12-inch embankment drain. Total flow of both the closed and open drain is measured by a 1-foot high 90 degree V-notch weir installed approximately midway and normal to the existing open embankment drain outlet. A schedule of observations is described in Chapter II, under daily observations.

3. Maintenance

Inspection and maintenance of the outlet works equipment is to be in accordance with the "Maintenance Guide" provided in the D.O.C. The following instructions supplement the D.O.C.:

a. The high pressure gates shall be greased with either Lubriplate 630AA, Texaco Marfax Multipurpose No. 2, or Texaco "All Temp", and exercised through two complete cycles at least twice yearly in May and November.

b. When the gates are greased and by inspection it is determined that repairs are required, these repairs should be programmed for a time when water is being discharged over the spillway, if possible.

c. When maintenance of the gates is performed, the steel liner and gate leaf should be repainted, as required.

d. Once yearly, check for moisture in and the condition of the oil at a low point on the hoist (i.e. Part 14 - Pipe Plug on Drawing 320-D-49 in the D.O.C.) and in the oil storage tank. Refill oil storage tank when level falls below gage window and clean oil filter. See D.O.C.

e. Operation and maintenance of water level recording equipment shall be in accordance with the manufacturers' instructions. Periodic care of the instruments consists of at least twice each year (June and December) remove covers, clean and dust each machine, then place a drop of oil on all bearings. Use very light oil, such as Capella A-A as furnished. Keep covers on each instrument. For additional instructions, see Exhibit Y.

Each year, before winter storms, the damtender will call the telephone service department and arrange for them to check their lines and the relay connecting unit to the telemark. They will replace the two $22\frac{1}{2}$ volt batteries in the relay as required.

C. Spillway

1. Description

The overflow type spillway is located in the left abutment of the dam and has a capacity of 2750 c.f.s. Overflow

water reaches the fixed crest through an approach channel from the reservoir. The variable width open chute and stilling basin portion of the spillway drops the overflow water from elevation 5741.20 to elevation 5597.00, where it is discharged into an outlet channel to rejoin the creek.

2. Operation

Since the spillway is the uncontrolled overflow type, water overflows whenever the reservoir water surface elevation exceeds elevation 5741.20. See D.O.C. Chapter IV, Items 10 and 11.

3. Maintenance

The spillway shall be checked for cracks, spalls, and displacement of riprap at least once yearly and the chute stilling basin cleaned of debris as required.

D. Electrical System and Equipment

The electrical system consists of equipment and circuits required for operation of the following:

a. Oil pump motor providing oil pressure for hydraulic operation of the outlet works high-pressure gates.

b. Drive motor of the motor-operated bypass valve.

c. Fan motor for the outlet works gate chamber and shaft ventilating system.

d. Shaft house heating equipment.

e. Outlet works lighting system.

f. Four Stevens water surface measurement instruments.

Maintenance of the electrical system by the damtender is limited to changing and maintaining fuses or light bulbs and prompt reporting of malfunctions and nonoperable equipment to the Project Office. The Project Office will contract for repairs.

E. Auxiliary Equipment and Service System

A hand operated oil pump is located in the shaft house for emergency operation of either high pressure gate. When the pump is in operation, one gate will open at the rate of 2 feet per hour. The pump should be operated at least once yearly to insure its operation and ability to raise the gate. Other operations and maintenance should be in accordance with the manufacturer's instructions.

F. Dam Maintenance, Inspection and Behavior Observations

1. Monthly inspection of the dam should include the following:
   a. Condition of the crown, slope and toe of the embankment. Evidence of new cracks, erosion, or sloughs shall be reported to the Project Office.
   b. During periods of unusually low reservoir level, inspect the upstream face for signs of beaching conditions, cracks or seepage holes.
   c. Indication of the rate of flow in the toe drain.
   d. Whenever possible, recommendations for repair should accompany any report that damage has occured.
2. In addition to the above, clearance of floating debris, or weed and rodent control activities shall be scheduled as required.

3. The Biennial Inspection Team, composed of representatives from the Regional and Project Offices, will inspect the dam and related works on odd numbered years. Every 6 years representatives from the Chief Engineer's Office will be included in the inspection team.

G. Protective Coating Inspection and Maintenance

See Chapter VI, Page 20 of the D.O.C.

STANDING OPERATING PROCEDURES
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CHAPTER IV COOPERATION WITH OTHER AGENCIES

A. Corps of Engineers' Flood Control Criteria

1. General

The authority for issuing instructions relevant to operation of reservoirs constructed or operated for flood control is vested in the Secretary of Defense and implemented by the U. S. Army Corps of Engineers through its District Engineer in charge of the locality in which the storage facility is located. In the case of Bureau of Reclamation constructed or operated facilities with designated Corps of Engineers' flood space, the District Engineer charges the Regional Director with the responsibility of reporting specific data and operating the facility according to current Corps of Engineers' recommendations.

2. Flood Forecasting, Flood Operations and Criteria

a. Flood Forecasting

The Federal Water Master, discussed in Chapter I, regulates the Truckee River Reservoirs under Federal Court Order and maintains a Flood Control Center, as needed. Under purchase order with the United States, the Federal Water Master provides to the District Engineer for the Regional Director, each Monday morning prior

to 9:00 a.m. (unless otherwise directed by the Corps) all forecast information available.

b. Flood Operations and Criteria

(1) Prosser Creek Reservoir shall be operated for flood control purposes as provided on the Flood Control Diagram included as Exhibit X. Between November 1 and April 10 of any year, 20,000 acre-feet of reservoir space will be maintained. After April 10 of any year, flood control space will be maintained as directed by the Corps.

(2) Releases from the reservoir to evacuate for minimum flood control reservation or during flood periods shall be restricted insofar as possible to quantities which will not cause flows in the Truckee River below Reno to exceed 6,000 c.f.s.

(3) If, for any reason, waters are stored above the elevation prescribed by the Corps, approval must be obtained from the District Engineer.

(4) Each Monday morning prior to 9:00 a.m. (or as otherwise directed) the Federal Water Master, for the Regional Director, shall telephone the District Engineer (see Exhibit C) and provide such hydrologic data as he may request, along with forecast. (See paragraph 2.a.)

(5) For additional details, see Reservoir Regulation Manual for Flood Control - Truckee River Reservoirs - California and Nevada - April 1962.

B. Fish and Wildlife Considerations

Reservoir capacity allocations for Prosser Creek Reservoir provide 1,117 acre-feet of inactive storage for fish and wildlife purposes. In addition, a minimum flow of 5 c.f.s. or the natural flow of Prosser Creek, whichever is less, shall be maintained below the dam for maintenance of fish life.

C. Recreational Management Plan

Under provisions of the "Memorandum of Understanding," Contract 14-06-200-9405, dated August 1, 1961, between the Bureau of Reclamation and the Forest Service of the U. S. Department of Agriculture, the Service assumed responsibility for the development, administration and maintenance of recreational facilities of the Prosser Creek Reservoir. A Forest Service Management Plan, dated June 18, 1963, defines priorities, objectives, and direction for recreational and related uses of this unit.

The Service annually furnishes data for Recreation and Wildlife Summary, Form 7-1643.

D. Other Agencies

1. "Agreement for Water Exchange Operations of Lake Tahoe and Prosser Creek Reservoir" Contract No. 14-06-400-957 dated June 15, 1959, among the United States, the Truckee-Carson Irrigation District, the Washoe County Water Conservation District, and the Sierra Pacific Power

Company provides the means of operating Prosser Creek Dam and is the basis for this SOP.

2. Washoe County Water Conservation District

Under provisions of Contract No. 14-06-200-605-A, between the United States and the District, the damtender at Boca Dam attends Prosser Creek Dam on a part-time basis to make certain observations, regulate the outlet works, and accomplish minor maintenance duties as required.

3. Federal Water Master

Under terms of a purchase order with the United States, the Federal Water Master collects and records certain data required for the operation of reservoirs within the Truckee River System.

4. U. S. Geological Survey

By informal agreement, the Geological Survey furnishes to the Project Office steamflow records as required and the Project Office submits to the Survey computed inflow quantities for Prosser Creek Reservoir.

5. Bureau of Sport Fisheries and Wildlife

The Project Office and the Bureau of Sport Fisheries and Wildlife maintain extensive liaison and coordination in an attempt to achieve the best operating criteria for fish and wilflife enhancement.

STANDING OPERATING PROCEDURES
for
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CHAPTER V EMERGENCY PROCEDURES AND REPORTING

A. Special Reporting during Flood or High Water Conditions

See Chapter IV, Paragraph A, Corps of Engineers' Flood Control Criteria.

B. Earthquake Reporting Procedure

1. Immediately upon receiving a report that an earthquake of a reportable magnitude has occurred in the vicinity of Boca and Prosser Creek Dams, the damtender shall first proceed to Boca Dam and proceed as outlined in (2) below. He shall then proceed to Prosser Creek Dam.

2. An emergency inspection is required after every earthquake of any reportable magnitude in the vicinity of the dam and reservoir. The following information should be submitted immediately by the damtender to the Lahontan Basin Projects Office. The Regional Office will accept this information from the Project Office and transmit it to the Chief Engineer:

   a. Report "No Damage" if none occurred.

   b. Give a description of slides, sloughs, or sudden subsidence, effects on the adjoining structures, reservoir elevations, prevailing weather conditions, and other facts believed to be pertinent.

c. Information regarding flow change in existing drains, the development of springs, seeps, and boggy areas should include such data as location, size of affected areas, estimated discharge, nature of discharge (whether clear or cloudy water), and tailwater elevations.

d. To facilitate analysis of conditions, a map should be prepared showing the extent of all seeped areas, springs, and any other pertinent data, including the dates of readings and reservoir levels at the time of observations. This map should be revised periodically to show changing conditions until conditions are stabilized. If settlement readings will contribute to a clarification of the abnormal conditions, observations should be made and reported. Should remedial actions be required, the Office of Chief Engineer, Denver, will issue instructions and the nature of additional reports that should be made.

e. On receipt of reports of unusual conditions, the Office of the Chief Engineer, Denver, will issue instructions to the Region for remedial actions, if required, and will determine the nature of additional reports that should be made.

f. Pending receipt of instructions on remedial measures by the Chief Engineer, the Regional Office will collaborate

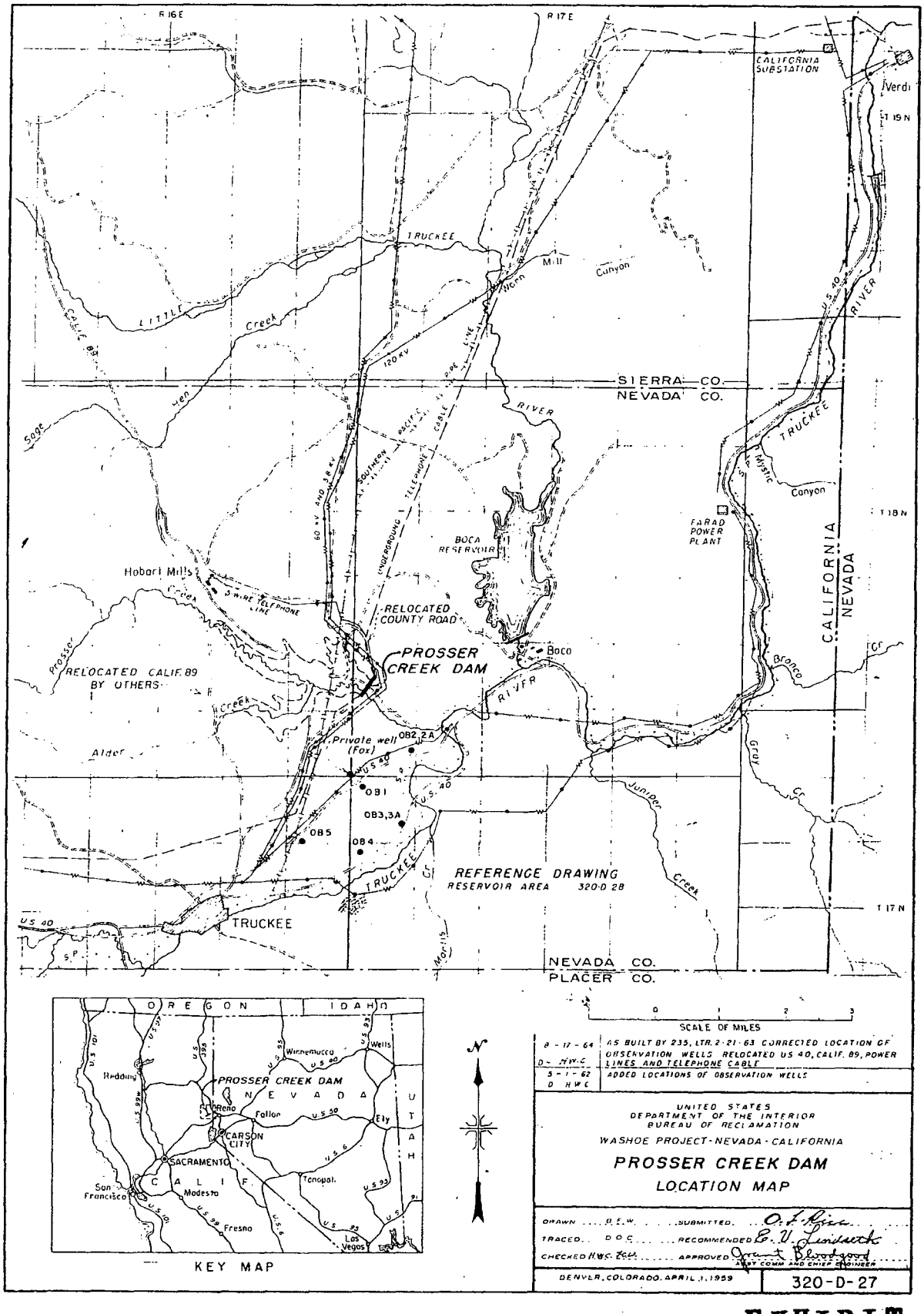
with the Lahontan Basin Projects Office on interim remedial measures.

3. Depending on conditions, it may be necessary to drain the reservoir as quickly as possible to avoid flooding the area below. The Project Office will notify the Federal Water Master, who in turn will notify other interested parties*. Should the Federal Water Master be unavailable, the Project Office will notify these parties directly. The interested parties shall further include water users and residents along the Truckee River whose lives and/or property may be endangered.

C. Other Abnormal Conditions

Other abnormal conditions such as the development of significant cracks in the embankment, seeps, the development of boils or sinks downstream, large slides in the reservoir, and similar abnormal conditions which could imperil the safety of the dam and reservoir as well as endanger life and property below the dam, shall be handled and reported by the damtender and other personnel as stated under earthquake procedures.

* Unofficial Truckee River Water Committee, composed of the Truckee-Carson Irrigation District, the Washoe County Water Conservation District, the Sierra Pacific Power Company and the Federal Water Master.



8-17-64	AS BUILT BY 235, LTR. 2-21-63 CORRECTED LOCATION OF OBSERVATION WELLS RELOCATED US 40, CALIF. 89, POWER LINES AND TELEPHONE CABLE
D-HWC	
5-1-62	ADDED LOCATIONS OF OBSERVATION WELLS
D HWC	

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

WASHOE PROJECT - NEVADA - CALIFORNIA

PROSSER CREEK DAM

LOCATION MAP

DRAWN D.E.W. SUBMITTED O. F. Rice
TRACED D.D.C. RECOMMENDED E. V. Lindseth
CHECKED H.W.C. ZCH APPROVED Grant Blandford
ASST COMM AND CHIEF ENGINEER

DENVER, COLORADO, APRIL 1, 1959

320-D-27

EXHIBIT A

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
REGION 2

REGIONAL OFFICIALS' NAMES AND RESIDENCE PHONE NUMBERS

NAME	TITLE	RESIDENCE	PHONE
	Concerning Central Valley Operations		
George R. Carroll	Chief, Water and Power Control Division, CVOO	Sacramento	916-428-7446
Norman E. Beck	Chief, Water Control Branch	Carmichael	916-483-2028
Byron F. Smith	Chief, Power Control Branch	El Dorado Hills	916-933-6254
	Concerning Operation, Maintenance and Engineering Matters		
Reginald G. Howard	Regional Supervisor of Irrigation	Citrus Heights	916-725-2003
Harry E. Van Every	Chief, Irrigation O & M Branch	Sacramento	916-487-7160
Terence A. Polley	Head, Maintenance Section, Irrigation O & M Branch (Acting)	Sacramento	916-967-5143
	Extreme Emergencies, Severe Damage to Facilities, Loss of Life to Government Personnel, Contractor Employees, or the General Public		
Robert J. Pafford, Jr.	Regional Director	Sacramento	916-487-3946
Carl H. Kadie	Assistant Regional Director	Sacramento	916-451-6920
Edwin F. Sullivan	Assistant Regional Director and Chief of Operations	Sacramento	916-457-1775
	Concerning Natural Disaster Rehabilitation		
Winston L. Somerville	Chief, Natural Disaster Rehabilitation Division	Sacramento	916-487-1046

EXHIBIT B

PERSONNEL CONCERNED WITH FLOOD CONTROL OPERATION OF TRUCKEE RIVER RESERVOIRS

	UNIT	OFFICE PHONE	NAME	HOME PHONE
FEDERAL WATERMASTER	Truckee River System Reno, Nevada (Flood Control Center	702–784–5241 702–784–5319)	Mr. Claude Dukes Reno, Nevada	702–323–4697
LAKE TAHOE DAM	Truckee–Carson Irrigation District Fallon, Nevada	702–423–2141	Mr. Daryl DeWalt Tahoe City, Calif.	916–583–3651
	Dam tender at Boca P.O. Box 265, Truckee, Calif.		Ronald Kirby Boca, Calif.	916–587–3697
BOCA DAM & PROSSER CREEK DAM	Gate Control House Prosser Creek Dam (telemark w/s transmitter, unattended except during floods & service visits)	916–587–3258		
	Region II Sacramento, Calif.	916–489–7631	Robert J. Pafford, Jr. Regional Director	916–487–3946
U. S. BUREAU OF RECLAMATION	Lahontan Basin Projects Office, 813 N. Plaza St. Carson City, Nevada	702–882–3436	H. Smith Richards Project Manager	702–882–3497
U. S. ARMY ENGINEER DISTRICT OFFICE SACRAMENTO, CALIFORNIA	District Engineer	916–449–2232*	Col. Crawford Young District Engineer	916–922–5073
	Hydrology Reservoir Regulation	449–2517* 449–2517* 449–3167* 449–3168*	R. E. Bennion R. P. Leatham	916–456–9942 916–483–2010
WEATHER BUREAU	Weather Bureau Airport Station Reno, Nevada (Recorded weather	702–784–5401 or 2 702–329–2904)	J. H. Ganzer	702–329–5073
SOIL CONSERVATION SERVICE (For Snow Survey)	Reno, Nevada	702–784–5305	Bob L. Whaley	702–329–6766

FTS: Sacramento 916–449–2000; Reno 702–784–5911

*NOTE: Between 4:30 p.m. and 7:45 a.m., or on Saturday, Sunday, or Holidays use 916–452–1535

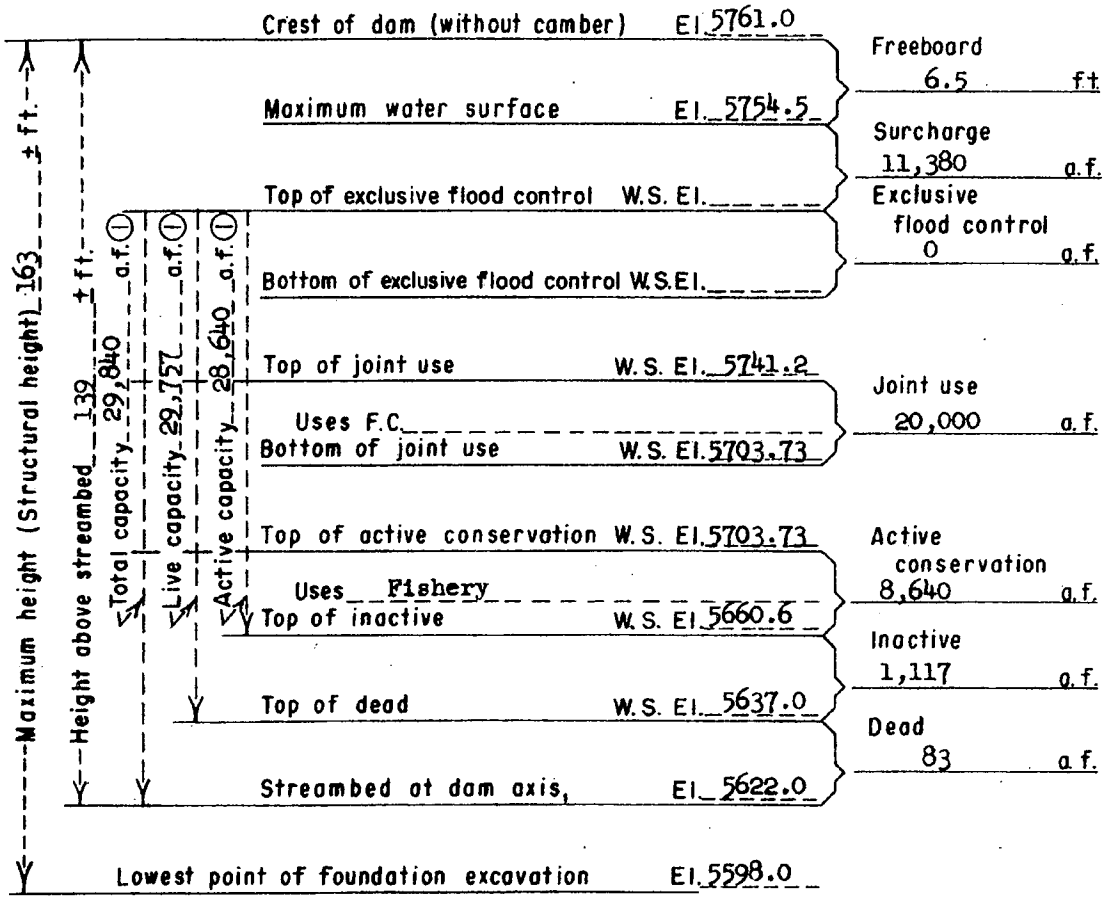
Truckee River Reservoirs, Nevada and California C.D.M. Rev. Oct. 1966

EXHIBIT C

7-1686
(11-64)

RESERVOIR CAPACITY ALLOCATIONS

Type of dam Rolled Earth and Rockfill — Region 2 State California
Operated by Bureau of Reclamation — Prosser Creek Reservoir
Crest length 1830 ft. — Prosser Creek Dam
Volume 1,803,514 cubic yards — Washoe Project
Top width 30 ft., Max. Base Width 728 ft. — Stampede Division
Closure date January 30, 1963 — Unit
Construction period 3 years — Operational Status
Stream Prosser Creek — November 20, 1963 Date
Reservoir Surface area 734 acres at El. 5741.2



Fishery Pool (Dead and Inactive) 1,200 a.f.

F.C.	Flood Control (Total)	20,000	a.f.
I.	Irrigation	0	a.f.
M. & I.	Municipal and Industrial	0	a.f.
P.	Power	0	a.f.
F. & W.	Fish and Wildlife	8,640	a.f.
	Other	0	a.f.
S	Sediment	0	a.f.

C (ACTIVE CONSERVATION AND JOINT USE)

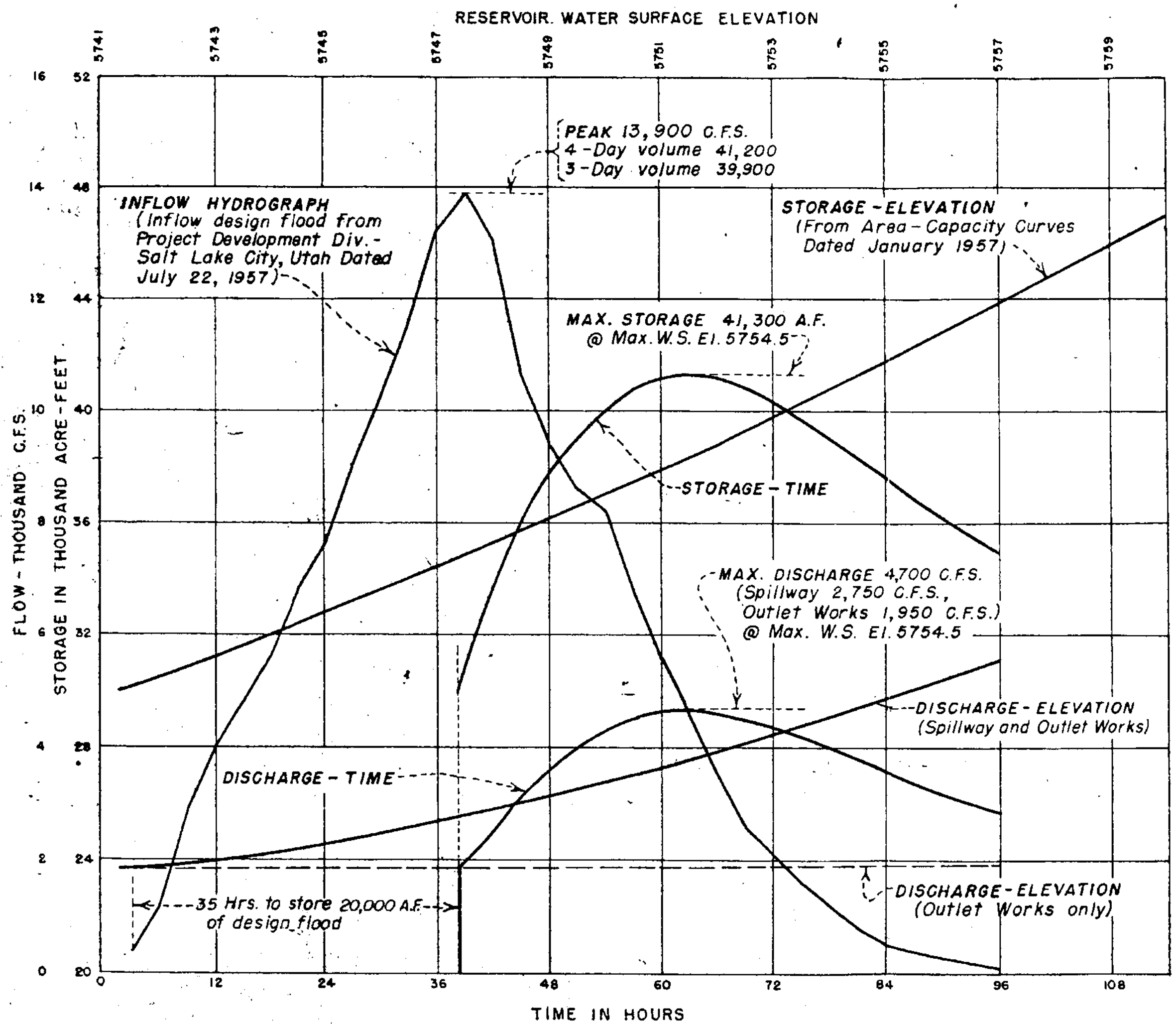
① Includes _____ a.f. allowance for _____ year sediment deposition between streambed and El. _____, of which _____ a.f. is above El. _____

Reference: 1. Drawing No. 320-D-29, General Plan and Sections "As Built".
2. Drawing No. 320-208-39, Capacity Tables dated August 1962.
3. Specifications No. DC-5197.

EXHIBIT D

Computed by Office of the Chief Engineer — Furnish one copy of completed form to the Chief Engineer: Attention D-756

GPO 846-816



FLOOD ROUTING CRITERIA

The Reservoir W.S. is at El. 5703.7 (top of conservation pool) at the beginning of the design flood. The W.S. rises to El. 5741.2 (top of joint use pool) thereby storing 20,000 A.F. before allowing any discharge. At this point the outlet works gates are opened to a max height of 5'-2" and the remainder of the design flood is released thru the outlet works and the 15'-0" wide uncontrolled spillway crest simultaneously.

NOTES

This routing is for the spillway and outlet works structures shown on Dwg. 320-D-8.
A table of reservoir storage allocations is shown on Dwg. 320-D-29. (Rev. 9-5-61)

9-18-64 D. JCB	REVISED W.S. El. PER LTR. 12-13-63

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
WASHOE PROJECT—NEVADA-CALIFORNIA
PROSSER CREEK DAM
FLOOD ROUTING CURVES

DRAWN J.E.E. SUBMITTED [signature]
TRACED R.T.S. RECOMMENDED R.W. [signature]
CHECKED C.C.B. APPROVED R. J. Larson
CHIEF, DAMS BRANCH
DENVER, COLO., NOV. 1, 1959 320-D-51

EXHIBIT E

TRUCKEE RIVER REGULATIONS
LAKE TAHOE & BOCA RESERVOIRS

Releases from Lake Tahoe or Boca Reservoir required to make up flow for "Floriston" and "Reduced Floriston Rates" during period of April 1 to October 31.*

Lake Tahoe water surface elevation -

Below 6225.5 Lake Tahoe water released prior to Boca Reservoir
Above 6225.5 Boca Reservoir water released prior to Lake Tahoe

Boca not to be drawn down below 4,000 Ac-ft. before October 1.
Water in Boca over 4,000 Ac-ft. after October 31, shall be released to provide Floriston or Reduced Floriston Rates.

Floriston & Reduced Floriston Rates

Discharge in cfs

Lake Tahoe W.S. Elev.	March	April - Sept.	Oct.	Nov. - Feb.
Floriston Rates				
Above 6226.0	500	500	400	400
Reduced Floriston Rates				
6226.0 to 6225.25	350	500	400	350
Below 6225.25	300	500	400	300

* See 1935 Truckee River Agreement

EXHIBIT F

W B FORM 612-25

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

RECORD OF EVAPORATION AND CLIMATOLOGICAL OBSERVATIONS

Station ____________ County ____________ State ____________ Month ____________ 19____

Time of Complete Observation (local time) ____________ Standard time in use ____________

Date	AIR TEMPERATURE °F: 24 Hrs Ending at Obsn. Max.	Min.	At Observation Dry-bulb	Wet-bulb	Dew Point	Supplemental Readings at ____ Dry-bulb	Wet-bulb	Dew Point	WATER TEMP. °F: 24 Hours Ending at Obsn. Max.	Min.	PRECIPITATION: Time of beginning	Time of ending	Time of beginning	Time of ending	24 Hr. Amounts: Rain, Melted snow, etc. in. & hundredths	Snow, Sleet, Hail ins. & tenths	At obsn. Snow, Sleet, Hail, Ice on gnd. (inches)	WIND: Anemometer Dial Reading (Miles)	24 Hr. Movement	EVAPORATION (inches & hundredths): Gage Reading or Amount Added +	Reading When Tank Filled or Amount Removed −	Amount of Evaporation	ADDITIONAL DATA—REMARKS
1																							
2																							
3																							
4																							
5																							
6																							
7																							
8																							
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28																							
29																							
30																							
31																							
Sum																							
Avg.														Greatest						Adjusted Total			

Observer ____________ Station ____________ Month ____________ 19____

04 1253 6

W B FORM 612-25

EXHIBIT G

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
REGION 2
DIVISION OF IRRIGATION
CAPACITY TABLE AUGUST 1962
PROSSER CREEK RESERVOIR - WASHOE PROJECT

Based on topography of Prosser Creek Reservoir obtained by Planetable 1956 Sheets No. 320-PT-419-128, -131, -132 Scales of 1" = 100' and 1" = 400' contour interval of 10' and supplied by Lahontan Basin Projects Office by Drawing 320-208-36 January 1962.

ELEV.	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9	DIFF.
					ACRE-FEET						
5,630	17	17	18	18	19	19	20	20	21	21	5
5,631	22	22	23	24	24	25	25	26	27	27	6
5,632	28	29	29	30	31	32	32	33	34	35	8
5,633	35	36	37	38	39	40	41	42	43	44	9
5,634	45	46	47	48	49	50	51	52	53	54	11
5,635	56	57	58	59	61	62	63	65	66	67	13
5,636	68	70	71	73	74	76	77	79	80	82	15
5,637	83	85	87	89	90	92	94	95	97	99	17
5,638	101	103	105	107	108	110	112	114	116	118	20
5,639	120	123	125	127	129	131	134	136	138	140	22
5,640	143	145	148	150	153	155	157	160	162	165	25
5,641	167	170	173	175	178	181	183	186	189	191	27
5,642	194	197	200	203	206	209	212	214	217	220	29
5,643	223	226	229	232	236	239	242	245	248	251	31
5,644	254	258	261	264	268	271	274	278	281	284	33
5,645	288	291	295	298	302	306	309	313	316	320	36
5,646	323	327	331	335	339	343	346	350	354	358	38
5,647	362	366	370	374	378	382	386	390	394	398	41
5,648	402	407	411	415	419	424	428	432	437	441	43
5,649	445	450	454	459	464	468	473	477	482	486	46
5,650	491	496	501	506	510	515	520	525	530	535	49
5,651	540	545	550	555	560	566	571	576	581	585	52
5,652	592	597	603	608	614	619	625	631	636	642	56
5,653	647	653	659	665	671	677	683	689	695	701	59
5,654	707	713	719	726	732	738	745	751	757	764	63
5,655	770	777	783	790	797	803	810	817	824	830	67
5,656	837	844	851	858	866	873	880	887	894	901	71
5,657	908	916	923	931	938	946	954	961	969	976	75
5,658	984	992	1,000	1,008	1,016	1,024	1,032	1,040	1,048	1,055	80
5,659	1,063	1,072	1,080	1,089	1,097	1,106	1,114	1,122	1,131	1,139	84
5,660	1,148	1,156	1,165	1,174	1,183	1,192	1,201	1,210	1,218	1,227	88
5,661	1,236	1,245	1,255	1,264	1,273	1,282	1,292	1,301	1,310	1,319	93
5,662	1,329	1,338	1,348	1,358	1,367	1,377	1,387	1,397	1,406	1,416	97
5,663	1,426	1,436	1,446	1,456	1,466	1,476	1,486	1,496	1,507	1,517	101
5,664	1,527	1,537	1,548	1,559	1,569	1,580	1,590	1,601	1,611	1,622	106
5,665	1,633	1,644	1,655	1,666	1,677	1,688	1,699	1,710	1,721	1,732	110
5,666	1,743	1,754	1,766	1,777	1,789	1,800	1,812	1,823	1,834	1,846	115
5,667	1,857	1,869	1,881	1,893	1,905	1,917	1,929	1,941	1,953	1,965	119
5,668	1,977	1,989	2,002	2,014	2,027	2,039	2,051	2,064	2,076	2,089	124
5,669	2,101	2,114	2,127	2,140	2,153	2,166	2,178	2,191	2,204	2,217	129
5,670	2,230	2,243	2,257	2,270	2,284	2,297	2,310	2,324	2,337	2,351	134
5,671	2,364	2,378	2,392	2,406	2,419	2,433	2,447	2,461	2,475	2,489	139
5,672	2,503	2,517	2,531	2,546	2,560	2,574	2,589	2,603	2,617	2,632	143
5,673	2,646	2,661	2,676	2,690	2,705	2,720	2,735	2,750	2,765	2,779	148
5,674	2,794	2,810	2,825	2,840	2,856	2,871	2,886	2,902	2,917	2,932	153
5,675	2,948	2,963	2,979	2,995	3,011	3,027	3,043	3,058	3,074	3,090	158
5,676	3,106	3,122	3,139	3,155	3,171	3,188	3,204	3,220	3,237	3,253	163
5,677	3,269	3,286	3,303	3,320	3,337	3,354	3,370	3,387	3,404	3,421	169
5,678	3,438	3,455	3,473	3,490	3,507	3,525	3,542	3,560	3,577	3,594	174
5,679	3,612	3,630	3,648	3,665	3,683	3,701	3,719	3,737	3,755	3,773	179
5,680	3,791	3,809	3,828	3,846	3,865	3,883	3,902	3,920	3,939	3,957	185
5,681	3,975	3,994	4,013	4,033	4,052	4,071	4,090	4,109	4,128	4,147	190
5,682	4,166	4,185	4,205	4,225	4,244	4,264	4,283	4,303	4,323	4,342	196
5,683	4,362	4,382	4,402	4,422	4,442	4,463	4,483	4,503	4,523	4,543	202
5,684	4,564	4,584	4,603	4,626	4,647	4,667	4,688	4,709	4,730	4,750	208
5,685	4,771	4,793	4,814	4,835	4,857	4,878	4,899	4,921	4,942	4,964	214
5,686	4,985	5,007	5,029	5,051	5,073	5,095	5,117	5,139	5,161	5,183	220
5,687	5,205	5,227	5,250	5,272	5,295	5,318	5,340	5,363	5,385	5,408	226
5,688	5,431	5,454	5,477	5,500	5,523	5,547	5,570	5,593	5,616	5,639	232
5,689	5,663	5,686	5,710	5,734	5,758	5,782	5,806	5,829	5,853	5,877	238
5,690	5,901	5,925	5,950	5,974	5,999	6,023	6,048	6,072	6,097	6,121	245
5,691	6,145	6,171	6,196	6,221	6,246	6,271	6,296	6,321	6,346	6,371	251
5,692	6,396	6,422	6,448	6,473	6,499	6,525	6,551	6,576	6,602	6,628	257
5,693	6,653	6,680	6,706	6,733	6,759	6,785	6,812	6,838	6,864	6,891	264
5,694	6,917	6,944	6,971	6,998	7,025	7,052	7,079	7,106	7,133	7,160	270
5,695	7,187	7,215	7,242	7,270	7,298	7,325	7,353	7,381	7,408	7,436	277
5,696	7,464	7,492	7,520	7,548	7,577	7,605	7,633	7,662	7,690	7,718	283
5,697	7,747	7,776	7,805	7,834	7,863	7,892	7,921	7,949	7,978	8,007	290
5,698	8,036	8,066	8,096	8,125	8,155	8,185	8,214	8,244	8,274	8,303	297
5,699	8,333	8,363	8,394	8,424	8,454	8,486	8,515	8,545	8,576	8,606	303

EXHIBIT H
320-208-39

ELEV.	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9	DIFF.
					ACRE-FEET						
5,700	8,636	8,667	8,698	8,730	8,761	8,792	8,823	8,854	8,885	8,916	311
5,701	8,947	8,979	9,011	9,043	9,075	9,107	9,139	9,171	9,203	9,235	320
5,702	9,267	9,300	9,332	9,365	9,398	9,431	9,464	9,497	9,529	9,562	328
5,703	9,595	9,629	9,662	9,696	9,730	9,764	9,797	9,831	9,865	9,898	337
5,704	9,932	9,967	10,001	10,036	10,071	10,105	10,140	10,174	10,209	10,244	346
5,705	10,278	10,314	10,349	10,385	10,420	10,456	10,491	10,527	10,562	10,598	355
5,706	10,633	10,670	10,706	10,743	10,779	10,815	10,852	10,888	10,925	10,961	364
5,707	10,998	11,035	11,072	11,110	11,147	11,185	11,222	11,259	11,297	11,334	374
5,708	11,371	11,410	11,448	11,486	11,525	11,563	11,601	11,640	11,678	11,716	383
5,709	11,755	11,794	11,833	11,872	11,912	11,951	11,990	12,029	12,069	12,108	393
5,710	12,147	12,188	12,228	12,268	12,308	12,349	12,389	12,429	12,469	12,510	403
5,711	12,550	12,591	12,632	12,674	12,715	12,756	12,798	12,839	12,880	12,921	413
5,712	12,963	13,005	13,047	13,089	13,132	13,174	13,216	13,259	13,301	13,343	423
5,713	13,385	13,429	13,472	13,515	13,559	13,602	13,645	13,689	13,732	13,775	433
5,714	13,819	13,863	13,907	13,952	13,996	14,040	14,085	14,129	14,174	14,218	444
5,715	14,262	14,308	14,353	14,399	14,444	14,489	14,535	14,580	14,626	14,671	454
5,716	14,717	14,763	14,810	14,856	14,903	14,949	14,996	15,042	15,089	15,135	465
5,717	15,182	15,229	15,277	15,324	15,372	15,420	15,467	15,515	15,562	15,610	476
5,718	15,658	15,706	15,755	15,804	15,852	15,901	15,950	15,998	16,047	16,096	487
5,719	16,145	16,194	16,244	16,294	16,344	16,394	16,443	16,493	16,543	16,593	498
5,720	16,643	16,694	16,744	16,795	16,846	16,897	16,948	16,999	17,050	17,101	509
5,721	17,152	17,204	17,255	17,307	17,359	17,411	17,463	17,515	17,567	17,619	520
5,722	17,671	17,724	17,777	17,830	17,883	17,936	17,989	18,042	18,095	18,148	530
5,723	18,201	18,255	18,309	18,364	18,418	18,472	18,526	18,580	18,634	18,688	541
5,724	18,742	18,797	18,853	18,908	18,963	19,018	19,073	19,128	19,184	19,239	552
5,725	19,294	19,350	19,407	19,463	19,519	19,575	19,632	19,688	19,744	19,800	563
5,726	19,857	19,914	19,972	20,029	20,086	20,144	20,201	20,258	20,316	20,373	574
5,727	20,431	20,489	20,548	20,606	20,665	20,723	20,782	20,840	20,899	20,957	585
5,728	21,016	21,075	21,135	21,195	21,254	21,314	21,374	21,433	21,493	21,552	596
5,729	21,612	21,673	21,734	21,794	21,855	21,916	21,977	22,038	22,098	22,159	608
5,730	22,220	22,282	22,344	22,406	22,468	22,530	22,591	22,653	22,715	22,777	619
5,731	22,839	22,902	22,965	23,028	23,092	23,155	23,218	23,281	23,344	23,407	631
5,732	23,470	23,534	23,599	23,663	23,727	23,791	23,856	23,920	23,984	24,049	643
5,733	24,113	24,178	24,244	24,309	24,375	24,440	24,506	24,571	24,636	24,702	655
5,734	24,767	24,834	24,901	24,967	25,034	25,101	25,167	25,234	25,301	25,367	666
5,735	25,434	25,502	25,570	25,637	25,705	25,773	25,841	25,909	25,977	26,044	679
5,736	26,112	26,181	26,250	26,320	26,389	26,458	26,527	26,596	26,665	26,734	691
5,737	26,803	26,873	26,944	27,014	27,084	27,155	27,225	27,295	27,365	27,436	703
5,738	27,506	27,578	27,649	27,721	27,792	27,864	27,935	28,007	28,078	28,150	715
5,739	28,221	28,294	28,367	28,440	28,513	28,585	28,658	28,731	28,804	28,877	728
5,740	28,949	29,023	29,098	29,172	29,246	29,320	29,394	29,468	29,542	29,617	741
5,741	29,691	29,766	29,842	29,918	29,993	30,069	30,145	30,220	30,296	30,371	756
5,742	30,447	30,524	30,601	30,678	30,755	30,833	30,910	30,987	31,064	31,141	771
5,743	31,218	31,297	31,375	31,454	31,533	31,611	31,690	31,768	31,847	31,926	786
5,744	32,004	32,084	32,164	32,245	32,325	32,405	32,485	32,565	32,645	32,725	801
5,745	32,806	32,887	32,969	33,051	33,132	33,214	33,296	33,377	33,459	33,541	817
5,746	33,622	33,706	33,789	33,872	33,955	34,038	34,122	34,205	34,288	34,371	832
5,747	34,455	34,539	34,624	34,709	34,794	34,879	34,963	35,048	35,133	35,218	848
5,748	35,303	35,389	35,475	35,562	35,648	35,735	35,821	35,907	35,994	36,080	864
5,749	36,166	36,254	36,342	36,430	36,518	36,606	36,694	36,782	36,870	36,958	880
5,750	37,046	37,136	37,226	37,315	37,405	37,495	37,584	37,674	37,764	37,853	897
5,751	37,943	38,034	38,126	38,217	38,309	38,400	38,491	38,583	38,674	38,766	914
5,752	38,857	38,950	39,043	39,136	39,230	39,323	39,416	39,509	39,602	39,695	931
5,753	39,788	39,883	39,978	40,073	40,168	40,263	40,358	40,453	40,548	40,643	949
5,754	40,738	40,834	40,931	41,028	41,124	41,221	41,318	41,414	41,511	41,608	967
5,755	41,705	41,803	41,902	42,000	42,099	42,197	42,296	42,394	42,493	42,591	985
5,756	42,690	42,790	42,890	42,991	43,091	43,191	43,292	43,392	43,493	43,593	1,003
5,757	43,693	43,795	43,898	44,000	44,102	44,204	44,306	44,409	44,511	44,613	1,022
5,758	44,715	44,819	44,923	45,027	45,131	45,236	45,340	45,444	45,548	45,652	1,041

NOTES

TABLE PREPARED BY IBM 1620, REGION 2 CUMPUTER PROGRAM

PROSSER CREEK RESERVOIR ESTABLISHED ELEVATIONS

MAXIMUM WATER SURFACE	5754.5
NORMAL WATER SURFACE(SPILLWAY CREST)	5741.3
MINIMUM WATER SURFACE (CONSERVATION)	5660.6
OUTLET WORKS INTAKE SILL	5637.0

DEAD & INACTIVE STORAGE 1,200 ACRE-FEET BELOW ELEVATION 5660.6

SUPERSEDES 320-X-235-16

EXHIBIT H

320-208-39

LBPO-38
(9/65)

U. S. Bureau of Reclamation
PROSSER CREEK RESERVOIR -- OPERATION REPORT
Washoe Project, Nevada-California

Month _____ 19____

Prosser Creek Reservoir -- Releases and Openings

Date	Time	W/S Elev. Feet	Storage Acre-Feet	Gate 2 Inches	Gate 4 Inches	By-pass Scale	Spillway Flow-cfs	Total Outflow cfs

Boca Reservoir -- Operation and Weather Data

Date	Time	W/S Elev. Feet	Storage Acre-Feet	Discharge cfs	Precip. Inches	Snow (Inches) Total	Snow (Inches) New	Evap. Inches	Temperature ° Max. F	Temperature ° Min. F

Remarks

Damtender

EXHIBIT 1

7-1355
(4-66)
Bureau of Reclamation

MEASUREMENT POINTS
CUMULATIVE SETTLEMENT AND DEFLECTION READINGS
EMBANKMENT

TO: OFFICE OF CHIEF ENGINEERS
BUREAU OF RECLAMATION
DENVER FEDERAL CENTER
DENVER, COLORADO 80225
ATTENTION 220

MODIFIED 6-20-66 FOR

Dam PROSSER CREEK
Project Washoe, Nev.-Calif.
Ref. Dwg. 320-D-29

Date of Observation
Observer
Sheet 1 of 1

CENTERLINE STATION	SETTLEMENT ORIG. EL.	SETTLEMENT PRES. EL.	SETTLEMENT CUM. DIFF.	OFFSET FROM CENTERLINE DATE POINTS SET OR RESET	DEFLECTION (1) ORIG. OFFSET	DEFLECTION PRES. OFFSET	DEFLECTION CUM. DIFF.
				20.0' U/S			
1+00	5760.08			Dec. 1, 1962	20.13		
3+00	60.24				20.09		
5+00	59.72				20.12		
7+00	60.43				19.67		
9+00	59.63				19.75		
11+00	59.74				19.92		
13+00	58.74				18.98		
15+00	5759.55			Dec. 1, 1962	2/0.06 D/S		
				16.0' D/S			
2+00	5760.40			Dec. 1, 1962	15.96		
4+00	60.81				15.67		
6+00	60.76				16.10		
8+00	60.91				15.92		
10+00	61.13				16.10		
12+00	61.17				15.74		
14+00	60.29				1/ 28.93		
16+00	5760.29			Dec. 1, 1962	2/ 16.46		

1/ Measured from curve tangent P.C. to P.I.
2/ Measured from curve tangent P.I. to P.T.

EXHIBIT J

(1) Record u/s or d/s from ℄ Crest ~~or Axis~~ of Dam
~~Report original elevations and offsets to 0.01 foot.~~
Report cumulative settlement and deflections to 0.01 foot.

Use Minus (−) sign to report heave.
Use u/s or d/s to report horizontal movement.

GPO 857-530

7-1355-A
REV 4-66
Bureau of Reclamation

MEASUREMENT POINTS
CUMULATIVE SETTLEMENT READINGS
CONCRETE STRUCTURES

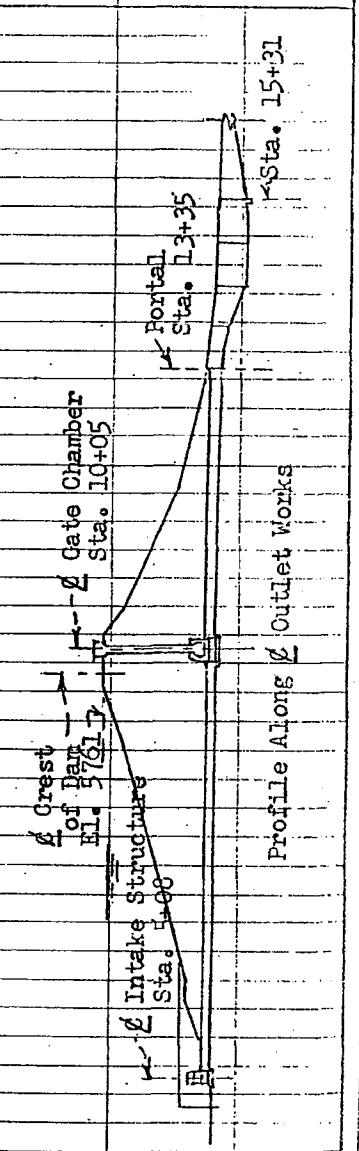
TO OFFICE OF [illegible]
BUREAU OF RECLAMATION
DENVER FEDERAL CENTER
DENVER, COLORADO
ATTENTION 222

MODIFIED 6-20-66 FOR

Dam PROSSER CREEK
Project Washoe, Nevada-Calif.
Ref. Dwg. 320-D-10

Date of Observation
Observer
Sheet 1 of 1

STATION	POINT NO.	DATE AS-BUILT	SETTLEMENT AS-BUILT EL.	SETTLEMENT PRES. EL.	SETTLEMENT CUM DIFF.	DEFLECTION AS-BUILT OFFSET	DEFLECTION PRES. OFFSET	DEFLECTION CUM DIFF
			OUTLET WORKS					
			Points U/S from Gate Chamber					
5+25.44	1	9-9-60	5636.93					
+56.97	2		36.28					
+63.03	3		36.18					
+94.36	4		35.51					
6+00.69	5		35.46					
+32.02	6		34.78					
+38.13	7		34.71					
+69.46	8		34.03					
+75.59	9		33.91					
7+06.98	10		33.25					
+13.01	11	9-9-60	33.17					
+44.49	12	11-21-60	32.50					
+50.54	13		32.43					
+81.87	14		31.77					
+88.14	15		31.72					
8+19.60	16		31.09					
+25.68	17		30.93					
+57.22	18		30.27					
+63.21	19		30.21					
+94.59	20		29.56					
9+00.48	21		29.44					
+31.93	22		28.76					
+38.27	23		28.69					
9+68.22	24	11-21-60	5628.06					
			Points D/S from Gate Chamber					
10+37.54	25	9-9-60	5628.01					
+69.35	26		27.41					
+75.39	27		27.30					
11+07.16	28		26.64					
+12.97	29		26.51					
+44.74	30		25.90					
+50.79	31		25.75					
+82.58	32		25.13					
+88.53	33		24.97					
12+20.40	34		24.36					
+26.40	35		24.25					
+58.25	36	9-9-60	23.62					
+64.32	37	11-21-60	23.44					
+96.10	38		22.82					
13+02.09	39		22.74					
13+33.92	40	11-21-60	5621.63					



~~Report original elevations and offsets to 0.01 foot.~~
Report cumulative settlement and deflections to 0.01 foot.

Use (-) sign to report heave.
Use L or R to report horizontal movement.

Portal BM. 5641.98

GPO 65-[illegible]

EXHIBIT K

7-1460
(3-63)
Bureau of Reclamation

WATER SUPPLY REPORT

To ☐ Chief Engineer-Denver, Colo. Attention 756 Airmail (Original)

☐ _____

☐ _____(Copy)

Region _____

Project _____

Water Supply Prospects At End Of _____

A. RESERVOIR DATA

Reservoir	Reservoir Elevation		Active Storage 1,000 A.F.	Monthly Total		Outlook (E, VG, G, F, P)	Precipitation	
	Feet	Date and time		Outflow 1,000 A.F.	Inflow 1,000 A.F.		Inches	Percent of Normal

Remarks:

B. IRRIGATION DATA

Division or Unit	Prospects for Irrigation Water To Mature Crops		Remarks
	This Year (Abv, Nor, Sub)	Future Years (Abv, Nor, Sub)	

Submitted By

NAME _____ TITLE _____ DATE _____

GPO 833036

REMARKS

LBPO-39 ((11-66)

Month _____ _____19__

MONTHLY WATER REPORT
PROSSER CREEK RESERVOIR
WASHOE PROJECT, NEVADA-CALIFORNIA
U. S. BUREAU OF RECLAMATION

PROSSER CREEK DAM - OPERATION

LAHONTAN BASIN PROJECTS OFFICE
CARSON CITY, NEVADA

Date 19	Truckee R. At Farad C.F.S.	Floriston Rate Reqd. C.F.S.	Boca Storage Ac.Ft.	Boca Outflow C.F.S.	Lake Tahoe W.S. Elev. Feet	Lake Tahoe Storage Ac.Ft.	Lake Tahoe Outflow C.F.S.	Lake Tahoe Outflow Ac.Ft.	Fishery Exchange Release C.F.S.	Fishery Exchange Release Ac.Ft.	Fishery Exchange Release Accum.A.F.	Prosser Creek Reservoir W.S.Elev. Ft.	Prosser Creek Reservoir Storage Ac.Ft.	Prosser Creek Reservoir Stor. Change Ac.Ft.	Prosser Creek Reservoir Outflow C.F.S.	Prosser Creek Reservoir Outflow Ac.Ft.	Prosser Creek Reservoir Evap/Pr. Loss Ac.Ft.	Prosser Creek Reservoir Inflow Ac.Ft.	Prosser Creek Reservoir Net Inflow Ac.Ft.	Prosser Creek Reservoir Tahoe Exch. Water Released C.F.S.	Prosser Creek Reservoir Tahoe Exch. Water Released Ac.Ft.	Prosser Creek Reservoir Tahoe Exch. Water Released Accum.A.F.	Prosser Creek Reservoir Tahoe Exch. Bal. Ac.Ft.	Prosser Creek Reservoir Unlimited Water Released Daily A.F.	Prosser Creek Reservoir Unlimited Water Released Accum A.F.	Prosser Cr. Gage C.F.S.	Precip. Inches	Remarks	Date 19
	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	aa	bb	cc	
1																														1
2																														2
3																														3
4																														4
5																														5
6																														6
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28																														28
29																														29
30																														30
31																														31
Total																														Total
Adj.																														Adj.
Final	a/			a/		b/									b/												x 1.983	→ 12			Final

a/ Adjusted to conform with U.S.C.S. records.

x Daily average of flow changes.

b/ U.S.G.S. Prosser Creek Gaging Station near Boca (Releases from Prosser Creek Reservoir)

c/ 1,200 A.F. dead and inactive storage not included.

LBPO-39 Supersedes [illegible]

EXHIBIT M

(EXPLANATION SHEET FOR TABULATION OF DATA ON FORM LBPO-39)

Truckee River flow at U.S.G.S. Farad Gage located approximately 4 miles upstream from the California-Nevada State Line. This station is currently used to determine flow requirements for "Floriston Rates". (It is connected by telemeter gage to the U. S. Weather Bureau Station in Reno, Nevada, and is monitored hourly.)

Truckee River flow required to meet Floriston Rates under existing Decrees and Agreements. Currently measured at the USGS Farad gage.

Daily readings are made by Boca damtender at 8 a.m. and reported directly by telephone and confirmed by a mailed record card to the Federal Watermaster in Reno, Nevada, and the Washoe County Water Conservation District. Active storage 40,900 ac.ft.

Rate of release under direction of Federal Watermaster. Outflow determined from gate opening charts and checked on U.S.G.S. Stevens A-35 recorder station located about 500 feet below the dam.

Daily readings made at 8 a.m. by Lake Tahoe damtender at U.S.G.S. gaging station near the outlet structure. He reports both outflow and gage elevation of the lake to Truckee-Carson Irrigation District and the Federal Watermaster as required.

Storage computed using zero capacity at El. 6223.0 and decreed area for the lake of 120,000 acres. The 6.1 feet of active storage permitted on the lake surface equals 732,000 A.F.

Outflow is measured by gatetender using U.S.G.S. gaging station located on the Truckee River 200 feet downstream from outlet works at Tahoe City, California. Releases made under direction of Federal Watermaster. a/

Acre-feet computed by using a factor of 2 times the outflow in cfs and adjusted at the end of the month to conform to U.S.G.S. records. The gatetender reports data by telephone direct to Truckee-Carson Irrigation District and prepares a monthly record. a/

Fishery Exchange Release from Lake Tahoe is related to water impoundment in Prosser Creek Reservoir pursuant to Permit No. 11666 of California State Water Rights Board. Fishery water may be released, but not to exceed sufficient water to maintain minimum flows from Lake Tahoe set at 50 cfs from Oct. 1 through Mar. 31 and 70 cfs Apr. 1 through Sept. 30 of that year.

Outflow records of the gatetender at Lake Tahoe will be used for Fishery Exchange records and the monthly totals adjusted to conform to U.S.G.S. records for the exchange period. If only part of the outflow is for fishery release the adjustment will be prorated accordingly. a/

Accumulation on acre-foot basis of water released from Lake Tahoe for fishery purposes only. (The fishery exchange cycle is completed when Lake Tahoe content is restored to the amount it would have been without fishery release. Normally this will occur about November 1 of each year.)

Remarks or data as pertinent to the Tahoe Exchange.

Prosser Creek Dam is tended by the Washoe County Water Conservation District's damtender living at Boca Dam.

Water surface elevation determined from Stevens Electric Contact Gage in shaft house on the dam. Direct readings on tape at indicator mark are based on mean sea level datum. Stevens A-35 recorder and telemark installed in 1965 provide additional records and checks.

Storage in acre-feet determined from Capacity Table dated August 1962, Dwg. 320-208-39.

Daily net change of reservoir content in acre-feet. Change prorated when daily readings not obtained. Decrease in storage shall be preceded by minus (-) sign.

Outflow computed from outlet works - Discharge Curves, Dwg. 320-208-43, and spillway rating curves, Dwg. 320X-235-19. Minimum flow for maintenance of fishery below dam is 5 cfs or natural inflow if less than 5 cfs. a/

Discharge computed using a factor of 2 times cfs for record purposes, prorated between readings to nearest unit, and adjusted to conform to U.S.G.S. records for the Prosser Creek gage near Boca at the end of the month. a/

Evaporation loss for the reservoir is computed by obtaining monthly rate of evaporation from the Evaporation Rate Curve Dwg. 320X-235-26, corrected for precipitation times the mean area of the reservoir water surface for the period outside the Corps' flood control reservation. Show loss (-) and gain (+) as total for month.

Inflow or gross inflow is computed by adding evaporation loss or subtracting gain from net inflow. The final inflow for the month is adjusted in accordance with the gain - loss correction required. (t) + (±r) = (s)

Net inflow is computed from outflow plus algebraic change in reservoir content, including monthly adjustments. (Decrease in storage is considered as negative.) (q) + (±o) = (t)

The USBR shall cause the release of "Tahoe Exchange Water" in accordance with the "Agreement for Water Exchange Operations of Lake Tahoe and Prosser Creek Reservoir" within governing "Floriston or reduced Floriston Rates" coordinated through the Federal Watermaster, Reno, Nevada. Exchange records are kept in AF and multiplied by ½ for conversions to cfs as needed.

The daily AF credit for exchange equals the daily storage change, shown in column (o).

Accumulation of "Tahoe Exchange Water" released from storage in Prosser Creek Reservoir.

Tahoe Exchange Balance is a running account of credits or debits of "Tahoe Exchange Water". It is the accumulated amount of "Tahoe Exchange Water" stored in Prosser Creek Reservoir, less the "Tahoe Exchange Water" released. Normally the Tahoe Exchange is balanced and returned to zero about November 1 of each year. (k) - (w) = (x)

Uncommitted water is all water stored under Permit No. 11666 which has not been previously credited to "Tahoe Exchange Water" less 1,200 acre-feet dead and inactive pool. It is collected when water is spilled at Derby Dam, or flows in the Truckee River exceed Truckee Canal capacity.

The accumulated uncommitted water is computed from storage minus Tahoe Exchange balance less 1,200 AF dead and inactive storage. Computed for end of month final, or as needed. (n) - (x) - c/ = (z)

The Prosser Creek Gage is located one mile below dam on Prosser Creek. Stevens A-35 recorder is operated by the U.S.G.S. and they provide mean daily flow records.

U.S. Department of Commerce, Weather Bureau, Boca Station at Boca Dam is source of data for record of evaporation and climatological observations. The damtender at Boca maintains station and makes daily reading and sends monthly report.

Remarks as pertinent to operation of Prosser Creek.

Abbreviations of agencies and sources of data used in this report.

- USBR - United States Bureau of Reclamation
- USGS - United States Geological Survey - Water Resources Division
- FWM - U.S. District Court - Federal Watermaster
- TCID - Truckee-Carson Irrigation District
- WCWCD - Washoe County Water Conservation District
- SPPC - Sierra Pacific Power Company
- TBWC - Truckee Basin Water Committee
- PCR - Prosser Creek Reservoir

a/ Adjusted to conform with U.S.G.S. records.

b/ U.S.G.S. ... c 1,200 A.F. dead and inactive storage not included.

EXHIBIT N

Rev. 320X-235-20a 2-65, (4-66)

LBPO-44 (4-66)

ANNUAL WATER REPORT
LAKE TAHOE - PROSSER CREEK RESERVOIR
FISHERY EXCHANGE

Year
19

U. S. BUREAU OF RECLAMATION

Lahontan Basin Projects Office
Carson City, Nevada

Month	LAKE TAHOE			PROSSER CREEK RESERVOIR						
	Water Surface Elevation * Feet	Total Outflow Reported by USGS Acre-feet	Fishery Release Acre-feet	Water Surface Elevation * Feet	Active Storage Content ** Acre-feet	Net Inflow Acre-feet	Total Outflow Reported by USGS Acre-feet	Tahoe Exchange Water Released Acre-feet	Tahoe Exchange Water In Reservoir * Acre-feet	
January										
February										
March										
April										
May										
June										
July										
August										
September										
October										
November										
December										
Total										

* End of month

** Dead and inactive, 1200 acre-feet excluded

LBPO-44 Supersedes ~~320X-235-25~~
(12-63)

EXHIBIT O

ANNUAL WATER REPORT
LAKE TAHOE - PROSSER CREEK RESERVOIR
FISHERY EXCHANGE

(Explanation Sheet for Tabulation of Data on LBPO-44)
U. S. BUREAU OF RECLAMATION

Year 19

Lahontan Basin Projects Office
Carson City, Nevada

Month	LAKE TAHOE			PROSSER CREEK RESERVOIR						Column letters refer to Operation Explanation Sheet Dwg. 320X-235-20a
	e Water Surface Elevation * Feet	h Total Outflow Acre-feet	j Fishery Release Acre-feet	m Water Surface Elevation * Feet	(n less **) Active Storage Content ** Acre-feet	t Net Inflow Acre-feet	q Total Outflow Acre-feet	v Tahoe Exchange Water Released Acre-feet	x Tahoe Exchange Water in Reservoir * Acre-feet	
January										
February										
March										
April										
May										
June										
July										
August										
September										
October										
November										
December										
Total										
	This reading is made by Lake Tahoe Damtender from USGS lake gaging station near outlet works on last day of month at 8 a.m.	This record is conformed to Provisional Records of USGS Monthly Water Report, and is subject to later revisions by that agency.	This release pursuant to Permit No. 11666 is adjusted to USGS provisional record. Adjustment prorated on partial outflow when applicable.	This elevation determined from Stevens remote registering system installed in shaft house and read by telemark coupled to telephone. Elevation periodically checked by original Stevens Electric Contact Gage.	Content determined from Capacity Table - August 1962. Dwg. No. 320-208-39, less 1,200 AF of dead and inactive storage.	Net inflow is computed from outflow obtained from USBR provisional records, plus algebraic change in reservoir content. (Decrease in storage is considered as negative.)	Outflow is computed from USBR provisional records for outlet works discharge curves and/or spillway rating curves adjusted at end of month to conform with USGS records.	Computed from outflow records less net inflow adjusted to USGS provisional records.	Running account of the Tahoe Exchange water currently stored in Prosser Creek Reservoir.	

* End of month

** Dead and inactive, 1200 acre-feet excluded

320X-235-25a
(2-65)

EXHIBIT P

1 (12-64)

TRUCKEE RIVER RVOIRS

FLOOD CONTROL CONDITIONS REPORT -- PROSSER CREEK RESERVOIR OPERATION

(Information Requested by Corps of Engineers - Manual - April 1962)

U. S. BUREAU OF RECLAMATION
LAHONTAN BASIN PROJECTS OFFICE
CARSON CITY, NEVADA

Month _____ 19___

Date	Truckee River Discharge						Prosser Creek Reservoir - Washoe Project							Boca Reservoir - Truckee Storage Project							Boca Station		Date
	Farad, Calif.		Reno, Nev.		Vista, Nev.		Time	W.S.Elev.	Storage	Reservoir Change		Inflow	Outflow	Remarks	Time	W.S.Elev.	Storage	Reservoir Change		Inflow	Outflow	Remarks	Precip.	Snow	
	Time	C.F.S.	Time	C.F.S.	Time	C.F.S.		Ft.	Ac.Ft.	Ac.Ft.	C.F.S.	C.F.S.	C.F.S.			Ft.	Ac.Ft.	Ac.Ft.	C.F.S.	C.F.S.	C.F.S.		Inches	Inches	

EXHIBIT 06

L&PO-41 Supersedes 320X-735-22

LBPO-42 (12-64)

MONTHLY FLOOD CONTROL REPORT
PROSSER CREEK RESERVOIR
WASHOE PROJECT, NEVADA-CALIFORNIA
U. S. BUREAU OF RECLAMATION

Month_____19___

Lahontan Basin Projects Office
Carson City, Nevada

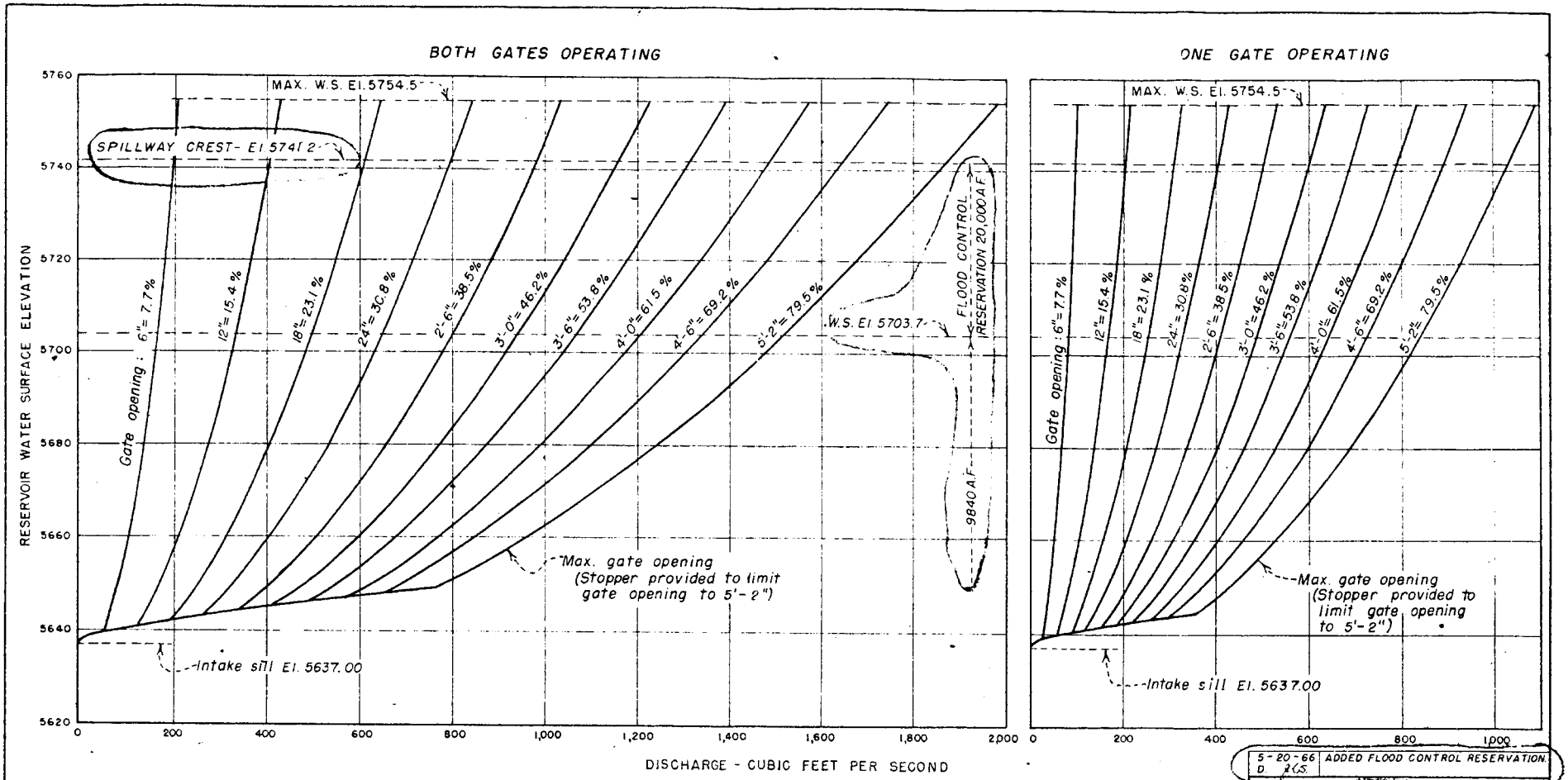
Date	W.S. Elev. Ft. 1/	Storage Ac. Ft.	Inflow Ac. Ft.	Outflow Ac. Ft.	Flood Space Ac. Ft. *
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
Total					

* Daily requirement of flood control space in the reservoir in accordance with Corps of Engineers' Flood Control Diagram File No. TR-26-177.

1/ All readings made at 8:00 a.m. on date shown.

LBPO-42 Supersedes ~~320X-235-24~~

EXHIBIT R



NOTES

Gates : 2 – 3'-0" x 6'-6" H.P. regulating gates. Any variations in discharge from these curves as determined by flow measurements downstream of the outlet works should be reported to the Chief Engineer.

5-20-66 D. WLS.	ADDED FLOOD CONTROL RESERVATION

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
WASHOE PROJECT - NEVADA-CALIFORNIA

PROSSER CREEK DAM
OUTLET WORKS-DISCHARGE CURVES

DRAWN J.E.W. SUBMITTED
TRACED R.T.S. RECOMMENDED
CHECKED C.S.P. APPROVED
CHIEF, DAMS BRANCH

DENVER, COLO., NOV. 1, 1959 | 320-D-62

EXHIBIT S

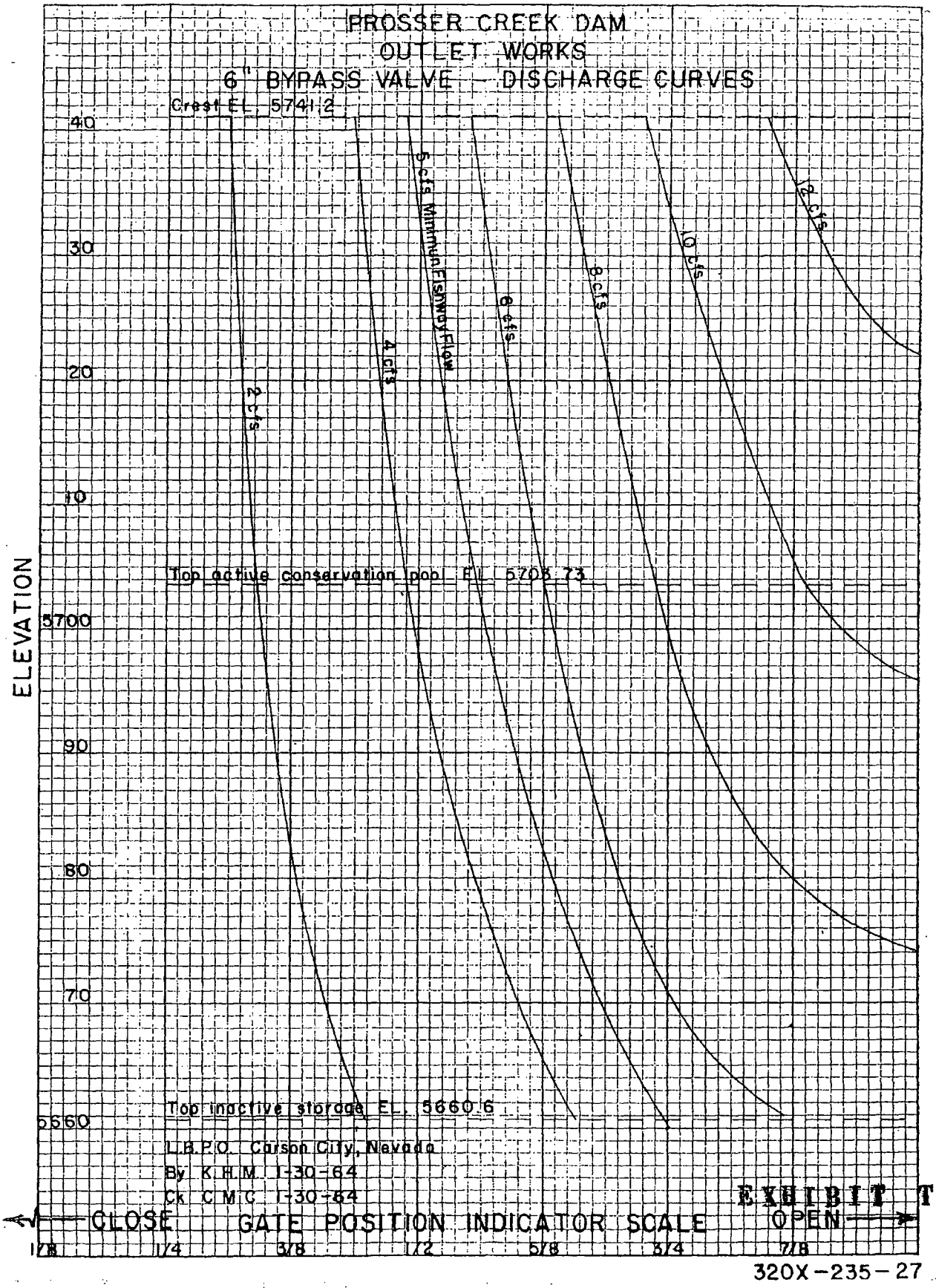
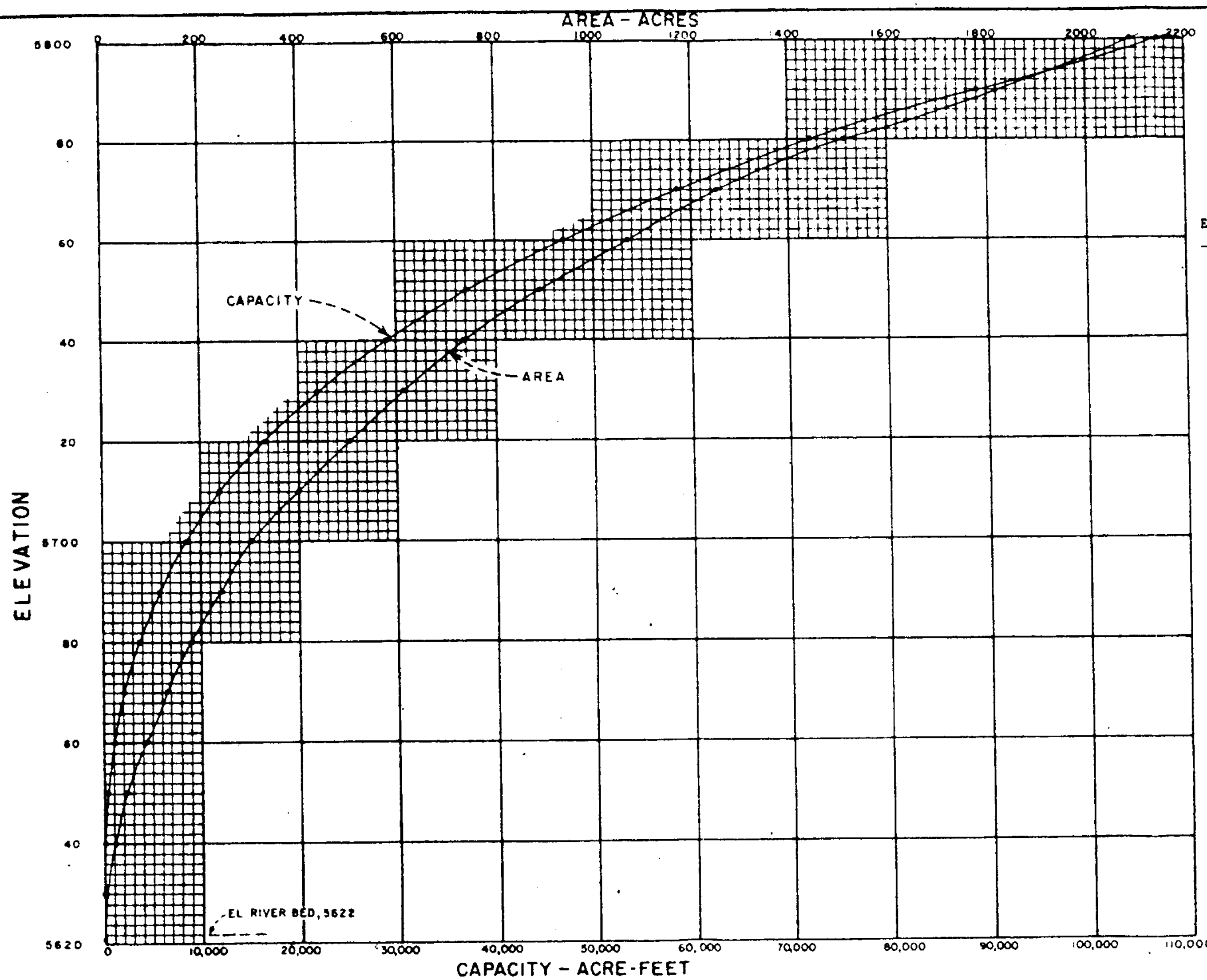


EXHIBIT T

320X-235-27



NOTES

COMPUTED FROM PLANETABLE SHEETS OF TOPOGRAPHY TAKEN IN 1956 SCALE 1"=100 & 1"=400
RIVER BED ELEVATION AT PROPOSED AXIS A-A' AS NOTED ON PLANETABLE SHEETS NO 320 PT-419-128 131 & 132
THESE CURVES SUPERSEDE DWG NO 320 419-130

Elevation (ft.)	Area (acres)	Capacity (ac.ft.)
5622	0	0
5630	4.2	16.9*
5640	23.7	142.6*
5650	46.9	490.9*
5660	86.4	1,147.6*
5670	131.5	2,230.1*
5680	181.8	3,790.8*
5690	241.5	5,900.9*
5700	306.7	8,636.2*
5710	397.6	12,147.3*
5720	503.7	16,642.6*
5730	613.9	22,219.9*
5740	734.2	28,949.3*
5750	888.0	37,046.4*
5760	1,069.1	46,536.3
5770	1,249.1	58,527.0
5780	1,513.3	72,339.0
5790	1,620.6	89,006.6
5800	2,092.9	108,576.3

* Reservoir capacity revised to agree with capacity table, Drawing No. 320-X-235-16 prepared by Reg on 2 Computer Program using a logarithmic curve for control points below elevation 5750.

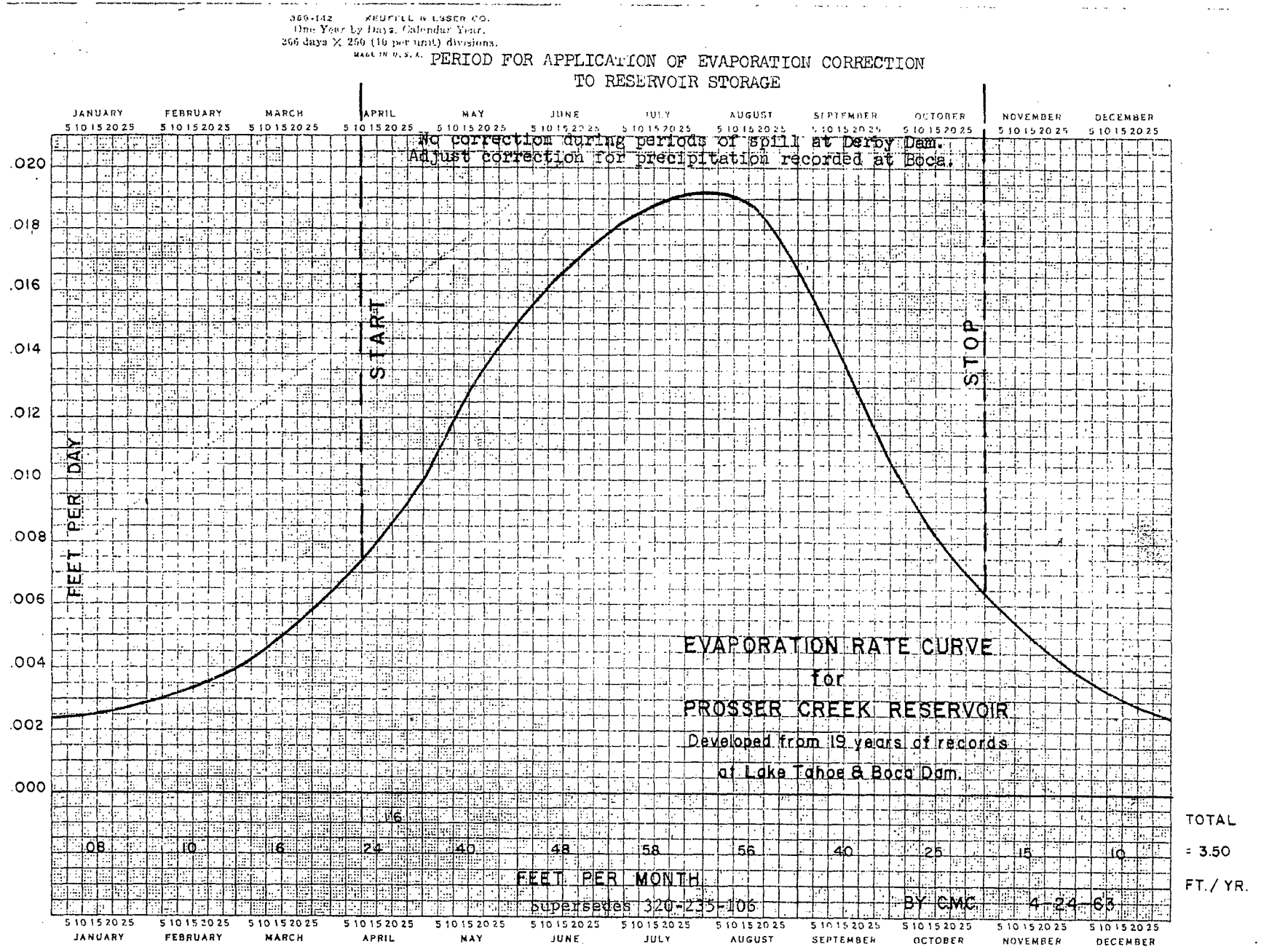
6-1-67 235 CCM	REVISED CAPACITY TABLES
7-9-62 235	ADDED AREA-CAPACITY TABLES
7-17-57 419	NEW TITLE
8-57 419	CURVES RECOMPUTED

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
WASHOE PROJECT-NEVADA-CALIFORNIA
PROSSER CREEK RESERVOIR
AREA - CAPACITY CURVES

DRAWN J.L.M. SUBMITTED
TRACED H.R.H. RECOMMENDED
CHECKED J.A.K. APPROVED
L 800 CARSON CITY, NEVADA JAN 1957 320-X-419-4

EXHIBIT U

EXHIBIT V


360-142 KEUFFEL & ESSER CO.
One Year by Days, Calendar Year.
366 days X 250 (10 per unit) divisions.
MADE IN U.S.A.
PERIOD FOR APPLICATION OF EVAPORATION CORRECTION TO RESERVOIR STORAGE
JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER
5 10 15 20 25
No correction during periods of spill at Derby Dam.
Adjust correction for precipitation recorded at Boca.
START
STOP
FEET PER DAY
.020
.018
.016
.014
.012
.010
.008
.006
.004
.002
.000
EVAPORATION RATE CURVE
for
PROSSER CREEK RESERVOIR
Developed from 19 years of records
at Lake Tahoe & Boca Dam.
08 10 16 24 40 48 58 56 40 25 15 10
TOTAL = 3.50 FT./YR.
FEET PER MONTH
supersedes 320-235-106
BY CMC 4-24-64
320X-235-26
(4-30-64)

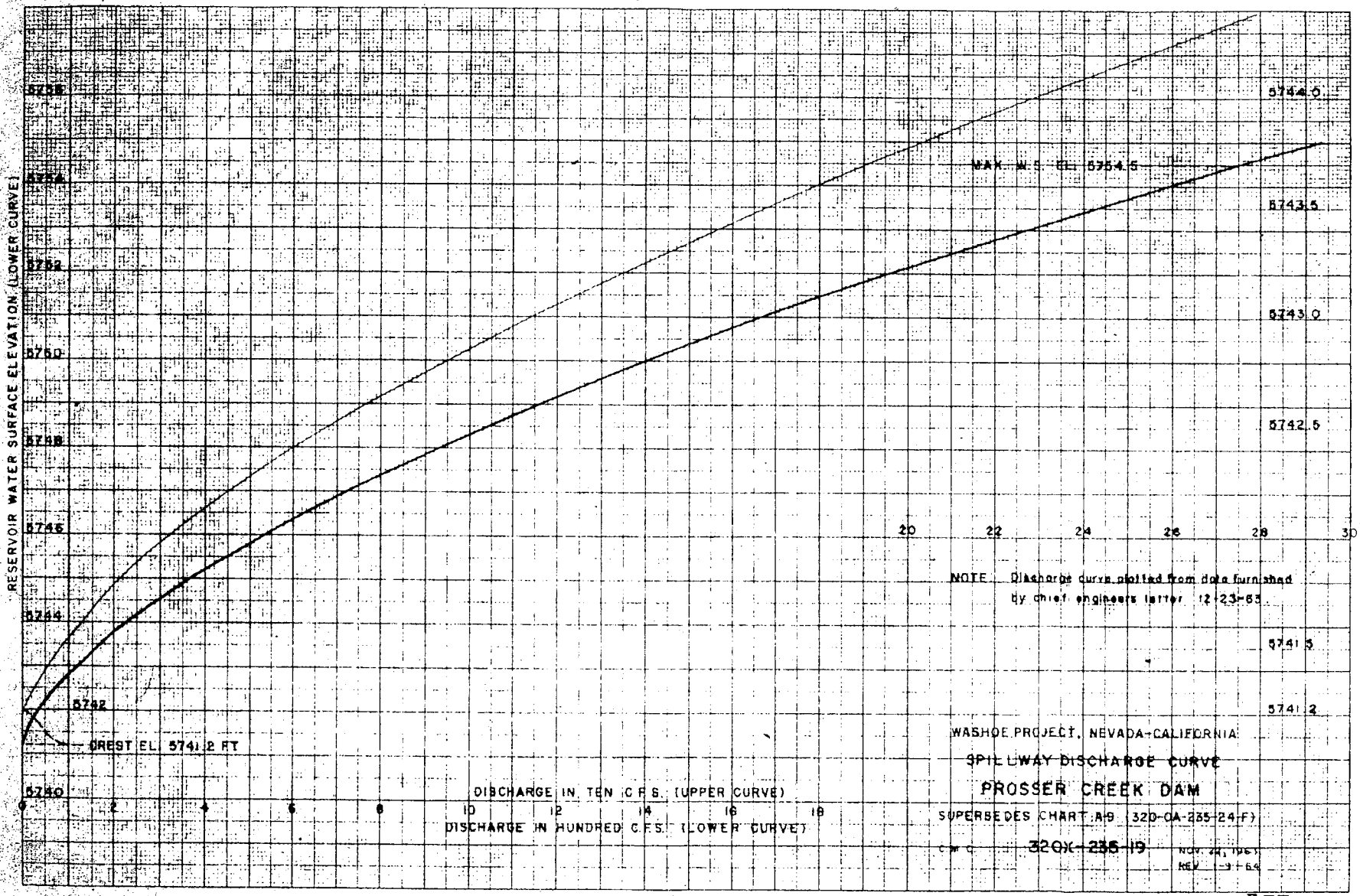
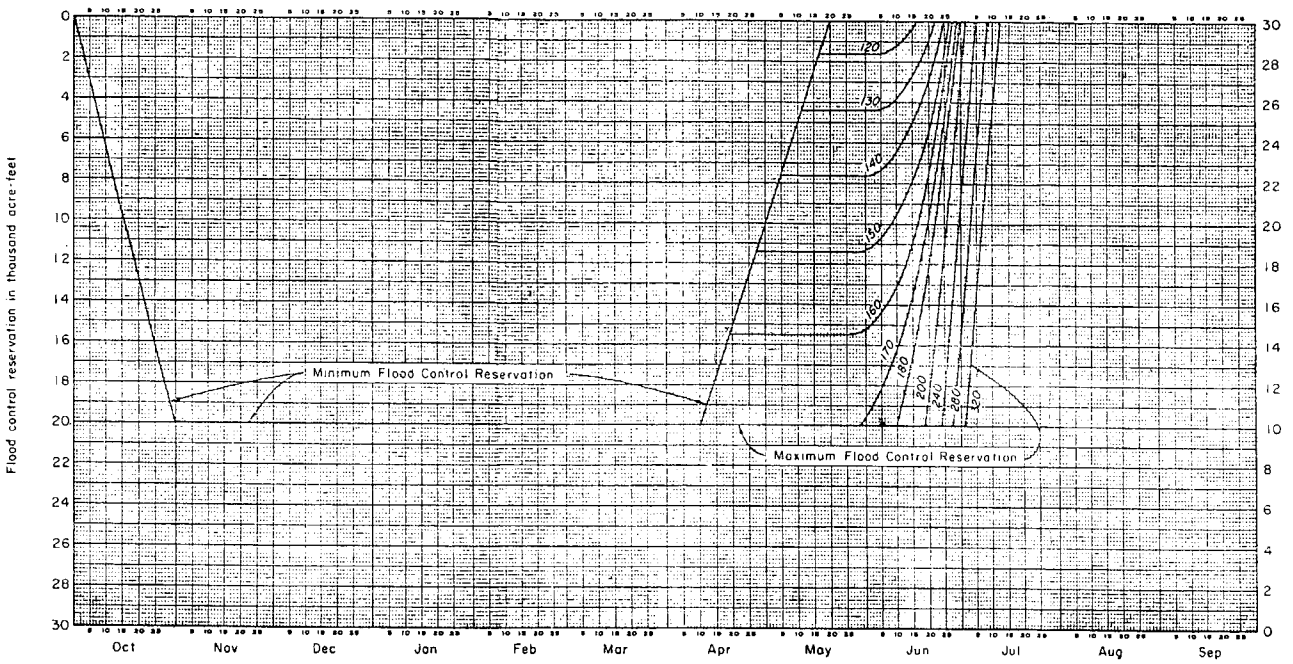

RESERVOIR WATER SURFACE ELEVATION (LOWER CURVE)
RESERVOIR WATER SURFACE ELEVATION (UPPER CURVE)
5760
5758
5756
5754
5752
5750
5748
5746
5744
5742
5740
MAX. W.S. EL. 5754.5
5744.0
5743.5
5743.0
5742.5
5741.5
5741.2
CREST EL. 5741.2 FT
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30
DISCHARGE IN TEN C.F.S. (UPPER CURVE)
DISCHARGE IN HUNDRED C.F.S. (LOWER CURVE)
NOTE Discharge curve plotted from data furnished by chief engineers letter 12-23-63.
WASHOE PROJECT, NEVADA-CALIFORNIA
SPILLWAY DISCHARGE CURVE
PROSSER CREEK DAM
SUPERSEDES CHART A-9 (320-DA-235-24-F)
320-235-19
NOV. 24, 1964
REV. 9-1-64

EXHIBIT W



NOTES:

1. Parameter values are forecast remaining natural runoff to 31 July, in percent of normal, of Truckee River at Farad, excluding releases from Lake Tahoe. These parameters are based on values of normal remaining runoff shown hereon.

2. When the empty space below gross pool level is less than either the minimum flood control space or the space indicated by the parameter corresponding to the current official forecast of snowmelt runoff, water shall be released as rapidly as possible without causing flows in Truckee River below Reno to exceed 6000 c.f.s.

3. Releases shall at all times be restricted insofar as possible to quantities which will not cause flows in Truckee River below Reno to exceed 6000 c.f.s.

Normal Remaining Runoff
Truckee River at Farad
(Excluding Tahoe Release)

1 Apr to 31 Jul . . .	281,000 ac-ft
1 May to 31 Jul . . .	194,000 ac-ft
1 Jun to 31 Jul . . .	88,000 ac-ft
1 Jul to 31 Jul . . .	21,000 ac-ft

PROSSER CREEK RESERVOIR
Truckee River Basin, California

FLOOD CONTROL DIAGRAM
Prepared Pursuant to Flood Control Regulations
for Prosser Creek Dam and Reservoir (33 CFR 208.)

APPROVED: _____
Commissioner of Reclamation

APPROVED: _____
Lieutenant General, Chief of Engineers

Effective Date: _____ Sheet No. TR-26-137

EXHIBIT X

CHART C-1

STANDING OPERATING PROCEDURES
FOR
PROSSER CREEK DAM AND RESERVOIR

OPERATION AND MAINTENANCE OF WATER STAGE RECORDERS

1. In addition to the manufacturer's instruction for the installation and operation of water stage recorders, the following supplementary instructions are issued by which accurage interpretation of the record on the chart may be obtained:

   a. Whenever the pen is removed from the chart or placed on a chart, the following notes will be made:

      Date
      Pen time (P.S.T. or P.D.S.T.)
      Gage height
      Watch time (P.S.T. or P.D.S.T.)
      True height from dial, tape, or staff
      Name of observer
      Name of station

   b. When it is necessary to "reset" the pen for time or gage height, a note shall be made stating it is reset and indicating both the conditions noted by the recorder and the true conditions.

   c. Both ends of removed segment of chart shall show the vertical scale and the time scale (if different from the below prescribed Regional Standard) and complete station identification.

EXHIBIT Y

d. The Region 2 standard scales are 2.4-inches of chart per day (0.1-inch per hour) and 1:12 vertical scale, i.e. one inch on the chart is equal to twelve inches on the water.

EXHIBIT Y