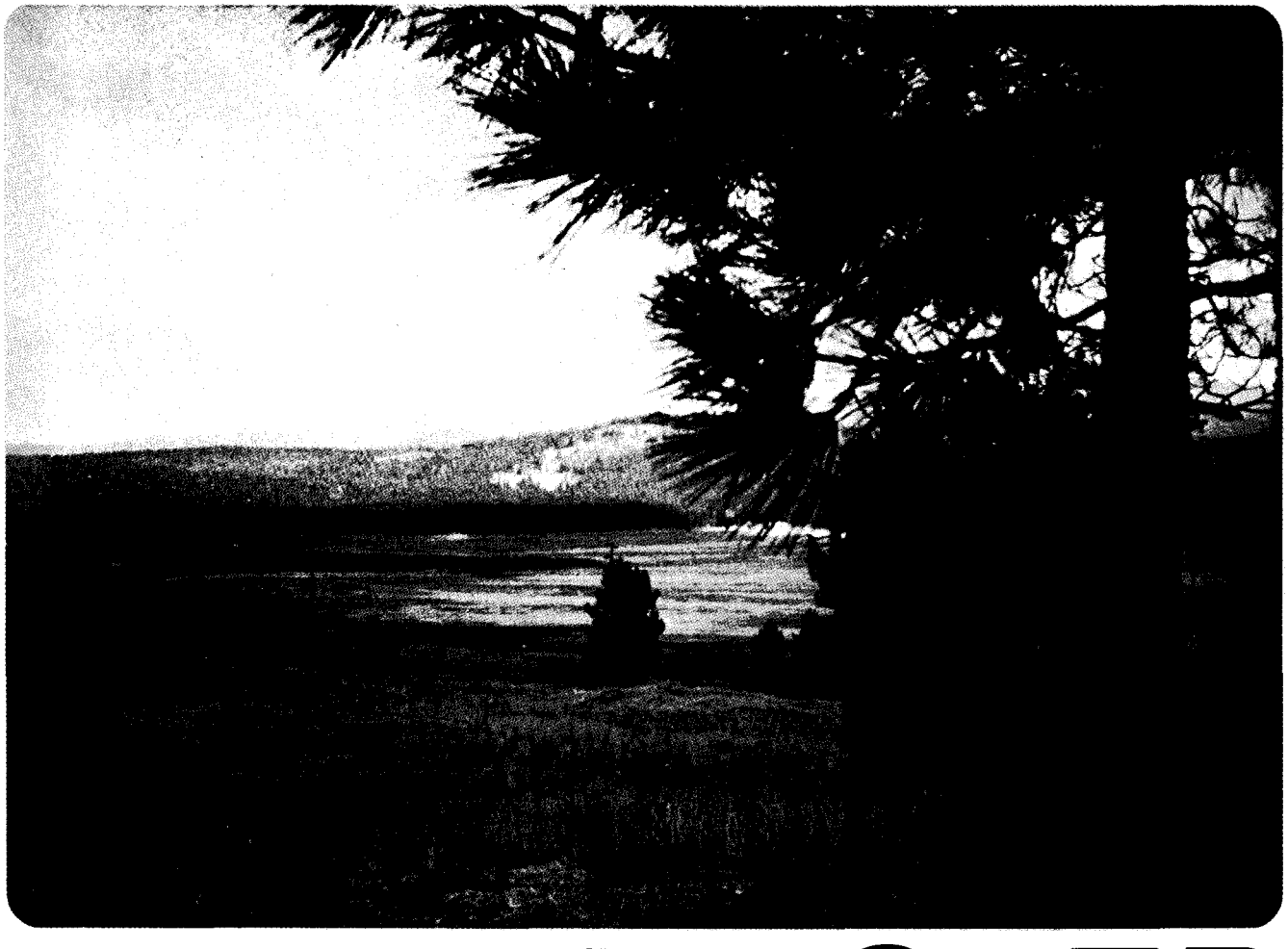
11

Design
Memorandum
No. 16

MARTIS CREEK LAKE

Truckee River and Tributaries California and Nevada



MASTER PLAN

November 1977

SPDCO-O (12 Dec 77) 1st Ind
SUBJECT: Martis Creek Lake, Truckee River and Tributaries, California and Nevada; Design Memorandum No. 16, Master Plan

DA, South Pacific Division, Corps of Engineers, 630 Sansome Street, Room 1216, San Francisco, California

13 FEB 1978

TO: District Engineer, Sacramento

Subject Master Plan has been reviewed and is hereby approved.

1 Incl (10 cys)
wd

JERRY L. TEAGUE
Colonel, CE
Acting Division Engineer

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DEPARTMENT OF THE ARMY
SACRAMENTO DISTRICT, CORPS OF ENGINEERS
650 CAPITOL MALL
SACRAMENTO, CALIFORNIA 95814

REPLY TO
ATTENTION OF

SPKED-W

12 December 1977

SUBJECT: Martis Creek Lake, Truckee River and Tributaries, California and Nevada; Design Memorandum No. 16, Master Plan

Division Engineer, South Pacific

1. Submitted for review and approval are ten copies of the subject master plan prepared in accordance with instructions contained in ER 1120-2-400. Your previous comments on the draft of the master plan have been incorporated.

2. The master plan has been indorsed by the District Real Estate Division pursuant to requirements of ER 405-2-835.

It is recommended that the master plan be approved as a guide for the preservation, development, and administration of recreation and other resources of the Martis Creek Lake project.

Carlos W. Hickman

1 Incl (10 cys)
DM No. 16 dtd Nov 77

CARLOS W. HICKMAN
Lieutenant Colonel, CE
Acting District Engineer

Jacobson

DISPOSITION FORM

For use of this form, see AR 340-15, the proponent agency is TAGCEN.

REFERENCE OR OFFICE SYMBOL	SUBJECT
SPKED-W	Design Memorandum No. 16, Martis Creek Lake Master Plan

TO Chief, Real Estate Division FROM Chief, Engineering Division DATE 21 Mar 1977 CMT 1
Holmberg/bm/2456

1. Transmitted is a copy of subject Design Memorandum for your review and approval.

2. Pursuant to the provisions of ER 405-2-835, your concurrence of the proposed land use classification, development and management program will be an indorsement to this report.

1 Incl
as

WEDDELL

cc: (wo incl)
Wtr Res Plng Br
Env Plng Sec (wd)

SPKRE-C (21 Mar 77)

TO: Ch, Engr Div FROM: Ch, Real Estate Div DATE: 4 May 1977 CMT 2
JACOBSON/kg/2492

Concur.

1 Incl
nc

WHEELER

DESIGN MEMORANDUM NO. 16

MARTIS CREEK LAKE
TRUCKEE RIVER AND TRIBUTARIES
CALIFORNIA AND NEVADA

MASTER PLAN

November 1977

Department of the Army
Sacramento District, Corps of Engineers
Sacramento, California

MARTIS CREEK LAKE
TRUCKEE RIVER AND TRIBUTARIES
CALIFORNIA AND NEVADA

MASTER PLAN

November 1977

REVISIONS

Date	: New Pages or Drawings

DESIGN MEMORANDUM NO. 16
TRUCKEE RIVER AND TRIBUTARIES, CALIFORNIA AND NEVADA
MARTIS CREEK LAKE

MASTER PLAN

DESIGN MEMORANDA

No.	Date	Title	Approved
1	Nov 64	Hydrology	OCE, 26 Jan 65
2	Jul 65	Water Quality Control	SPD, 23 Aug 65
3	Aug 65	Reservoir Capacity	OCE, 4 Apr 66
4	May 67	Relocations	OCE, 20 Jul 67
5A	May 66	Preliminary Master Plan	OCE, 26 Sep 66
6	Jan 67	General Design	OCE, 22 Jun 67
7	May 66	Concrete Materials	SPD, 25 May 66
8	Dec 66	Site Geology	OCE, 21 Mar 67
9	Dec 66	Access Road	OCE, 8 Feb 67
10	Dec 66	Real Estate	OCE, 19 Sep 67
11	Mar 67	Spillway & Outlet Works	OCE, 23 Feb 68
12	Mar 67	Embankment & Foundation	OCE, 16 Jun 67
13	Apr 68	Reservoir Regulation	OCE, 22 Jan 69
14	Apr 67	Instrumentation	OCE, 19 Jun 67
15	Aug 69	Public Use Plan and Initial Recreation Facilities	OCE 19 Dec 69

DESIGN MEMORANDUM NO. 16
MARTIS CREEK LAKE
TRUCKEE RIVER AND TRIBUTARIES
CALIFORNIA AND NEVADA

MASTER PLAN

TABLE OF CONTENTS

TABLE OF CONTENTS (Cont'd)

CHAPTER V - FACTORS INFLUENCING AND CONSTRAINING RESOURCE DEVELOPMENT AND MANAGEMENT (Cont'd)

TABLE OF CONTENTS (Cont'd)

CHAPTER IX - SPECIAL PROBLEMS

CHAPTER X - RESOURCE USE OBJECTIVES

CHAPTER XI - PROJECT RESOURCE MANAGEMENT

CHAPTER XII - COST ESTIMATES

CHAPTER XIII - CONCLUSIONS AND RECOMMENDATIONS

TABLE OF CONTENTS (Cont'd)

TABLES

CHARTS

PLATES

APPENDICES

Photos

DESIGN MEMORANDUM NO. 16
MARTIS CREEK LAKE
TRUCKEE RIVER AND TRIBUTARIES, NEVADA AND CALIFORNIA

MASTER PLAN

CHAPTER I - INTRODUCTION

1. Project authorization. - The Truckee River and Tributaries Project, Nevada and California, was authorized by the Flood Control Act of 1962, (Public Law 87-874), substantially in accordance with the recommendations of the Chief of Engineers in House Document Number 435, 87th Congress 2nd Session. Improvement and management of the land and water resources for public purposes are authorized by Section 4 of the Flood Control Act of 1944, as amended. The Federal Water Project Recreation Act of 1965, Public Law 89-72 as amended, modifies Section 4 authority and provides for Federal and non-Federal sharing of first costs of recreation and fish and wildlife developments and non-Federal operation and maintenance at reservoir projects authorized after 1 January 1965. Similar requirements are being administratively applied to reservoir projects authorized before 1 January 1965.

2. Project purposes. - Flood control and future water supply are project purposes. The lake will not be operated for water supply purposes until a demand develops which is anticipated to occur in about 25 years.

3. Purpose and scope of master plan. - This master plan will be used to guide the administration and development of all project land and water. As public use needs change, this master plan will be updated to be consistant with these requirements. This master plan prescribes the policies, objectives, and programs for the continuation of conservation, enhancement, development, use, and management of all project lands, waters and other resources. It identifies the resources of the project and describes the manner in which public use needs and other uses of the land and water resources will be met. Facilities development, operation, and management are described and discussed. Information presented in the master plan is conceptual in nature. The master plan supersedes the Public Use Plan dated August 1969.

4. Prior pertinent design memoranda. - Prior pertinent design memoranda include:

No. 5A "Preliminary Master Plan" approved by OCE 26 September 1966.

No. 15 "Public Use Plan and Initial Recreation Facilities" approved by OCE 19 December 1969.

Another document pertinent to this master plan is the "Environmental Assessment" dated October 1973, available in Sacramento District files.

5. Application of public laws. -

a. Public Law 78-534, Flood Control Act of 1944, as amended. - This act authorized the Corps of Engineers to construct, operate and maintain recreation facilities at reservoir areas, and to grant leases of lands (including facilities thereon); and to construct certain public works.

b. Public Law 85-624, Fish and Wildlife Coordination Act, approved 12 August 1958. - This act provides for integration of fish and wildlife conservation with Federal water resource development programs.

c. Public Law 87-874, Flood Control Act of 1962, approved 23 October 1962. This act authorized the Truckee River and Tributaries Project.

d. Public Law 88-29, Outdoor Recreation Federal-State Programs, approved 28 May 1963. -This act promotes the coordination and development of effective programs relating to outdoor recreation.

e. Public Law 88-578, Land and Water Conservation Fund, approved 3 September 1964, and amendments. -This act established a program for providing urgently needed public outdoor recreation areas and facilities, and for funding such activities.

f. Public Law 89-72, Federal Water Project Recreation Act, approved 9 June 1965. - This act established Federal Policy for outdoor recreation planning and coordination at Federal water resource projects. Such policy requires non-Federal sharing of not less than one-half the separable costs allocated to recreation, and assumption of all operation, maintenance, and replacements costs. An amendment in 1974 provides that fish and wildlife enhancement requires non-Federal assumption of at least 25 percent of the separable cost and assumption of all operation and maintenance.

g. Public Law 89-665, National Historic Preservation Act of 1966, approved 15 October 1966. - This act establishes a program for the preservation of historic properties throughout the nation.

h. Public Law 91-190, National Environmental Policy Act of 1969, approved 1 January 1970, - This act establishes a national policy to encourage productive and enjoyable harmony between man and his environment, and directs that all Federal agencies shall consider the environmental impact of proposed Federal actions which may have an impact on man's environment.

i. Public Law 92-500, Federal Water Pollution Control Act Amendments of 1972, approved 18 October 1972. This act provides for the restoration and maintenance of the chemical, physical, and biological integrity of the Nation's waters.

j. Public Law 93-291, Historical and Archeological Data Preservation Act, approved 24 May 1974 amends the Reservoir Salvage Act of 1960 (Public Law 86-523). This act provides for the preservation of historical and archeological data which might be irreparably lost or destroyed as the result of a Federal construction project or Federally licensed activity or program.

6. Location. - Martis Creek Lake is located on Martis Creek, a tributary of the Truckee River, about 32 miles west of Reno, Nevada. The lake is located in Placer and Nevada Counties, California. As shown on plate 1, primary access to the lake is good, provided by California State Highway 267. This highway connects with Interstate Highway 80 at the town of Truckee.

7. Project data. -

a. Basin hydrologic and climate summary. - The watershed above Martis Creek Dam encompasses 39 square miles. Average annual runoff of the stream at this location is 15,410 acre-feet. Minimum flow of record (1958 to present) has been 1 cubic foot per second (cfs) and the maximum 1,880 cfs. The highest flows in Martis Creek occur during winter rainstorms. Moderately high flows occur during the March to June snowmelt period. Martis Creek Basin has a semi-arid, temperate climate characterized by mild, dry summers and cold, wet winters. Temperatures at Truckee Ranger Station, located about 4 miles west of the dam site, have ranged from a low of -28°F. to a high of 101°F. Normal annual precipitation on the watershed ranges from about 25 inches at the dam to about 35 inches in the higher elevations, and averages about 31 inches. Precipitation can occur during all months of the year, falling as rain during the summer and as rain or snow during the winter.

b. Lake characteristics. - Martis Creek Lake, at gross pool (5,838 feet, USGS datum), has a surface area of 770 acres and contains 20,400 acre-feet of water. Inactive pool is at elevation 5780 feet with a surface area of 71 acres and a capacity of 817 acre-feet. Since the lake is currently operated only for flood control, the lake is at inactive storage most of the time.

c. Lands. - Total project land is 1,891 acres of which about 18.5 acres are held in flowage easement, about 65 acres are withdrawn from the Tahoe National Forest, and about 1807.5 acres are owned in fee.

d. Project structures. -

Dam

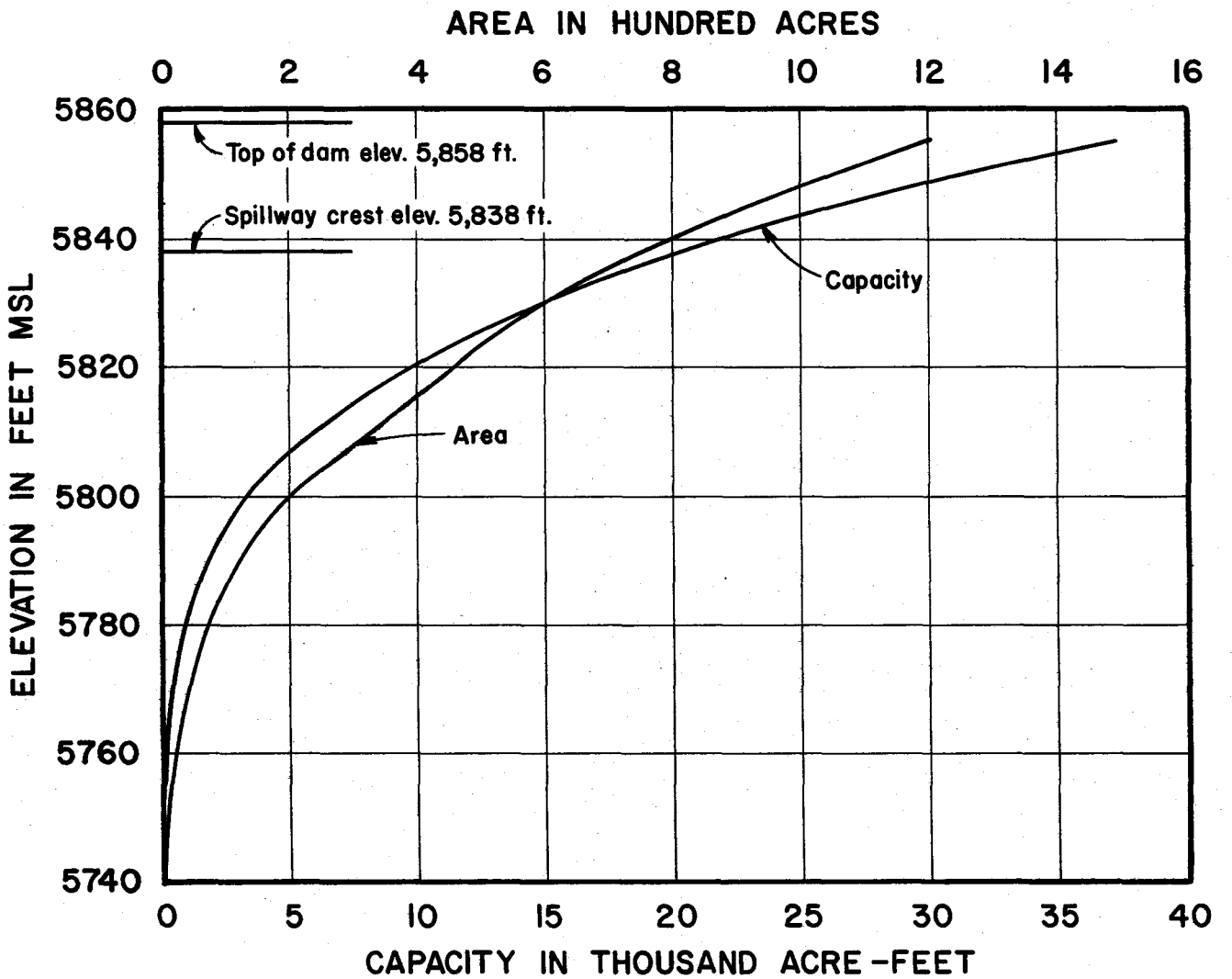
Type	Rolled earthfill
Elevation - top of dam	5858
Maximum height above streambed	113 feet
Length of crest	2670

Spillway

Type	ungated, detached
Crest elevation	5,838
Spillway design flood (elevation)	5,852.9

8. Lake operation. - Until a demand for municipal and industrial water develops (estimated at the year 2000), Martis Creek Lake will be operated for flood control only. Outlet releases during periods of normal inflows are controlled by fixed gate openings to quantities not exceeding 100 cfs. When flood forecasts indicate that flows through Reno probably will equal or exceed the Truckee River design channel capacity of 14,000 cfs, the outlet gate will be closed and all Martis Creek flows stored insofar as possible, until flows through Reno recede below channel design capacity. When flows through Reno are below 14,000 cfs and Martis Creek inflows are receding, water stored in Martis Creek Lake will be released as rapidly as possible until the flood control space is restored. Area and capacity curves for Martis Creek Lake are presented on chart 1. Specific lake operation information is detailed in the "Master Report on Reservoir Regulation for Flood Control - Truckee River Reservoirs, Nevada and California" dated December 1971.

9. Visitation. - Annual records of recreation use have been compiled since 1974. Total annual use, in recreation days, was 1,900 in 1974, 11,000 in 1975, and 24,000 in 1976. Because visitation data is available only for 3 years, a reliable estimate of monthly distribution of use cannot be made for Martis Creek Lake. However, since the lake is situated at 5800 feet elevation, it is estimated that over 75 percent of the use will occur over the 4-month period from mid-May through mid-September. Visitation at nearby Bureau of Reclamation reservoirs substantiates this use pattern.



MARTIS CREEK LAKE
AREA AND CAPACITY CURVES

Chart 1

10. Project development and operation chronology. - Construction funds were initially appropriated in FY 1967 and the initial construction contract was awarded in August 1967. The project was completed in June 1974. Impoundment of water commenced in March 1972. Construction of recreation facilities has been accomplished by the Corps of Engineers. To date a campground, a day use area, and access to the wildlife management area have been developed.

11. Expenditures for public use development. - Capital expenditures by the Federal government for public use development at Martis Creek Lake have totalled $300,000.

CHAPTER IV - RECREATION AND ENVIRONMENTAL RESOURCES OF THE PROJECT AREA

12. Geology and soils. - Martis Creek Lake lies in a valley 1.5 miles upstream of the confluence of Martis Creek with the Truckee River. Elevations in the watershed vary from about 5,700 feet at the dam to 8,742 feet at the top of Martis Peak. The lake rests on eroded Pleistocene glacial outwash deposits which appear to have originated from the Donner Lake area. These outwash deposits form a series of terraces, the highest of which makes up the left bank of the lake. The right bank of the lake rests upon stream deposits of the Truckee formation and also contains basaltic volcanic deposits which predate the glacial epoch. The area is geologically active with five earthquakes of Richter magnitude greater than 4.0 occurring within 7 miles of the lake since 1934. A 5.4 magnitude quake occurred 12 September 1966. A north-south trending fault passes near the right abutment of the dam. Soils in the area are coarse weathered and dry weathered loamy soils that are 40 to 60 inches deep with moderate erosion hazard.

13. Archeology. - The Washo Indians were occupying Martis Valley at the time of the first Anglo-European contact. The Washo occupation was probably seasonal with small hunting and gathering groups following the game and harvesting ripening plant crops. An archeological survey accomplished in 1966 identified 28 separate occupation areas in the lake area or closely adjoining it. Cultural evidence indicates a trade relationship with the Maidu to the west and the Paiutes to the east.

14. History. - As early as 1825 fur trappers led by Jedediah Smith entered the project area. In 1833 Joseph Walker and a party of trappers traveled up the Truckee River into California. By the 1840's emigrants began to arrive. Among these were the Bidwell-Bartheson Party of 1841, and the Stephen Cooper and Donner Parties of 1846. The Donner Party became trapped by early winter snows and endured their ordeal of starvation at two separate encampments, one on Alder Creek about 3 miles north of Martis Creek Lake and the other at Donner Lake about 6 miles west of Martis Creek Lake. Early pioneers used Martis Valley to rest and feed their stock while crossing the Sierra enroute to the Sacramento Valley. In the 1850's cattlemen began bringing herds into the valley for summer grazing. The town of Truckee became a major center for distribution of products and supplies to the northern goldmines. Logging and lumbering were thriving industries. Construction of the Central Pacific Railroad through the Truckee River Basin in the late 1860's was probably the most significant event leading to the early growth of the area. The State Historic Preservation Office has indicated there were no properties listed on, eligible for, or pending nomination to the National Register of Historic Places within the project area.

15. Ecology. -

a. Ecosystems. - The ecosystem of the project area is typical of the eastside Transition life zone. The habitat types which comprise the lake area ecosystem are: standing water, flowing water, marshes and wet meadows, grassland and dry meadow, coniferous forest, and sagebrush scrub. As explained in the Environmental Assessment, which is on file in Sacramento District, the habitat types are not expected to be altered by project operation. However, a change in species composition within several habitat types is expected as a result of flood control operation, fencing of project lands, and recreation area development. The assessment also indicates that the project area does not provide important habitat for any rare or endangered animal species. The Fish and Wildlife Service has advised (Appendix H) that implementation of this master plan will not adversely affect any species offically listed by the U.S. Government as endangered or threatened. The Forest Service, in their environmental statement on the Truckee - Little Truckee Planning Unit, lists 11 sensitive plant species found in the planning unit which are being considered for addition to the "Federal List of Threatened or Endangered Plant Species". Ecotypic factors for these species were examined to determine the likelihood of their occurrence. From this and from examination of maps of rare and endangered plant locations published by the California Native Plant Society, it was concluded that none of these species were likely to occur within the project area. A summary of the environmental assessment and a finding that no formal environmental statement is necessary is attached as appendix F. Future recreation use of project lands and water will be directed toward minimizing disturbances to the present ecosystem. Special effort will be taken to ensure that maximum practical use for the project is not exceeded and that disruption of the environment does not occur. Project visitation will be monitored and, if necessary, controlled to prevent overuse.

b. Vegetation. - The plant species represented in the area are typical of most of the high mountain valleys east of Sierra Nevada crest. Jeffrey pine (Pinus jeffreyi), ponderosa pine (P. ponderosa), lodgepole pine (P. contorta), and quaking aspen (Populus tremuloides) are important tree species. Dispersed among the trees and occupying the streamside terraces are shrubs including sagebrush (Artemisia tridentata), rabbit brush (Chrysothamnus nauseosus), bitterbrush (Purshia tridentata), mountain whitehorn (Ceanothus cordulatus), groundleaf manzanita (Archtostaphylos patula) and pinemat manzanita (A. Nevadensis). The meadow area contains many species of both native and introduced grasses and sedges.

c. Wildlife. - A number of mammals live in or are transient through the project area. The largest mammal presently common to the area is the mule deer (Odocoileus hemionus). Other mammals present include beaver (Castor canadensis), coyote (Canis latrans), porcupine

(Erethizon dorsatum), chipmunk (Eutamias speciosus), golden-mantled ground squirrel (Citellus lateralis), pocket mouse (Perognathus parvus), deer mouse (Peromyscus maniculatus), mole (Scapanus latimanus), and raccoon (Procyon lotor). Some commonly observed birds include eared grebe (Podiceps caspicus), Canada goose (Branta canadensis), sharp-shinned hawk (Accipiter striatulus), red-tailed hawk (Buteo jamaicensis), mountain quail (Oreortyx picta), killdeer (Charadrius vociferus), Say's phoebe (Sayornis saya), wood pewee (Contopus sordidulus), Steller's jay (Cyanocitta stelleri), mountain chickadee (Parus gambeli), red-breasted nuthatch (Sitta canadensis), mountain bluebird (Sialia currucoides) townsend solitaire (Myadestes townsendi), cassin finch (Carpodacus cassini), pine siskin (Spinus pinus), and junco (Junco oreganus). Reptiles and amphibians that inhabit the project include western toad (Bufo boreas), mountain yellow-legged frog (Rana muscosa), sagebrush lizard (Sceloporus graciosus), rubber boa (Charina bottae), and western garter snake (Thamnophis elegans).

d. Fish. - Fishes established in Martis Creek Lake and in Martis Creek include rainbow trout (Salmo gairdnerii), brown trout (S. trutta), speckled dace (Rhinichthys osculus), sucker (Catostomus sp.), and Lahonton redside (Richardsonius egregius). In November 1974, the California Department of Fish and Game designated Martis Creek Lake as a wild trout lake. The lake is to be managed for production of wild trout (produced by natural reproduction) or the rearing of semi-wild trout (from fingerling plants). The Department is attempting to establish a trophy trout fishery consisting of many trout over 14 inches in length in the lake. There is a two trout limit and a winter fishing closure at the lake while the Department studies the effectiveness of their management program.

16. Scenic quality. - The lake is situated in a picturesque high mountain valley (Photos 1 and 2). The open grassy meadows along Martis Creek and its many tributaries merge into sagebrush covered alluvial terraces which further merge into densly forested hillsides as one moves elevationally away from the lake. Steep rock outcrops are near the right abutment of the dam. This scenic setting is framed by often snow-covered granite peaks and accentuated by brillant blue skies or skies containing ominous thunderheads.

17. Recreation. - The principal outdoor recreation pursuits of people in the Truckee River basin are hunting, fishing, boating, waterskiing, swimming, picnicking, and camping. Skiing and snowmobiling are popular winter sports. Martis Creek Lake provides opportunity for all of the summer activities with the exception of water skiing; boating is limited to non-powered car-top boats. Cross-country skiing is permitted but snowmobiling is permitted only under controlled conditions. All of the permitted activities are expected to be continued and enhanced with the developments proposed in this Master Plan. Opportunities for wildlife

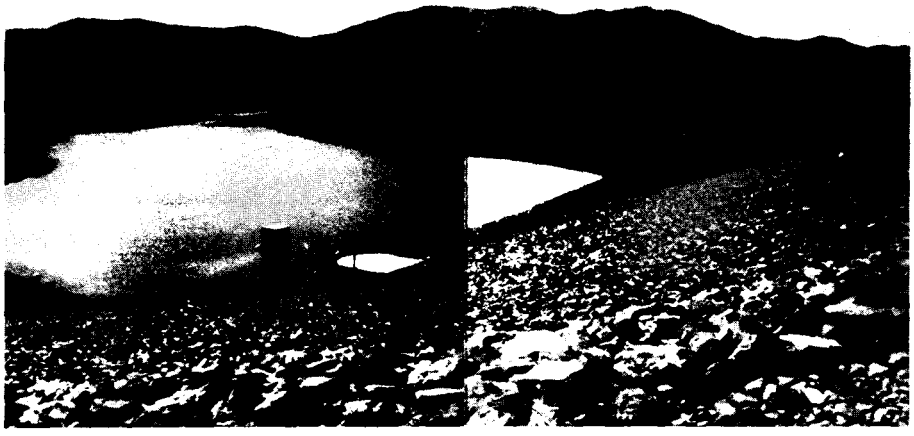


PHOTO 1 - Martis Creek Lake from crest of dam

PHOTO 2 - Martis Creek Lake with dam in background

observation and hiking and nature trails will be provided. Recreation facilities currently available at Martis Creek Lake include 25 campsites, two 4-unit vault restrooms, 2 portable restrooms, parking for 32 cars, and water supply (photo 3).

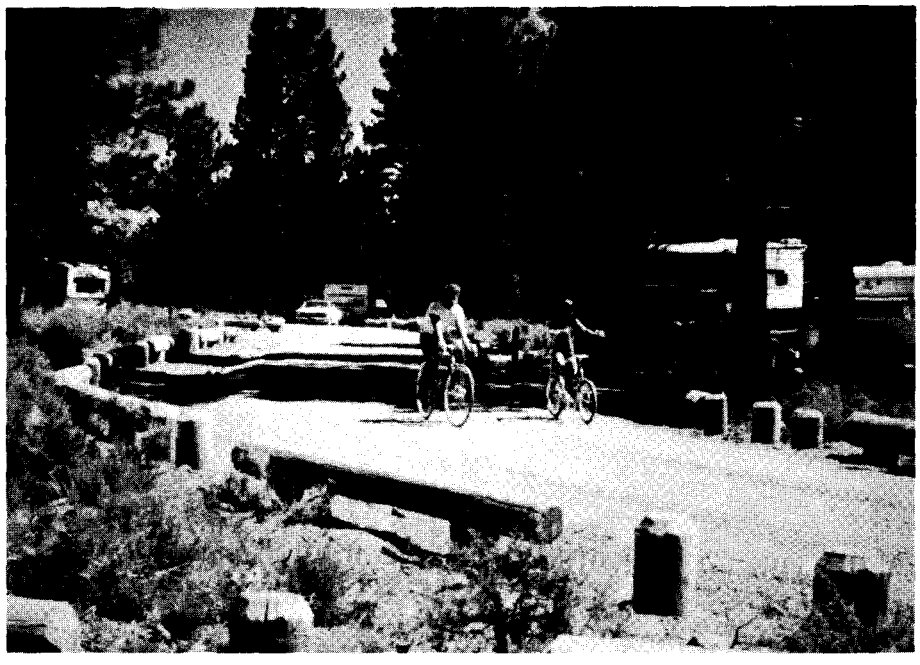


PHOTO 3 - Alpine Meadow Campground

CHAPTER V - FACTORS INFLUENCING AND CONSTRAINING RESOURCE DEVELOPMENT AND MANAGEMENT

18. General. - Resource development and management at Martis Creek Lake is influenced by such factors as climate, surrounding land use, lake operation, and accessibility.

19. Climate. - As mentioned in paragraph 9, the seasonal character of the climate is one of long, wet, cold winters and short, dry summers with mild temperatures. During the winter, storm systems may pass through the area as often as twice a week, bringing most of the annual total precipitation, usually as snow. Boca Reservoir, 4 miles north of Martis Creek Lake, has the record for the coldest temperature ever recorded in California, -45°F. The coldest temperature recorded at the Truckee Ranger Station, 3 miles west of the lake, has been -28°F. Freezing temperatures can occur any time of the year. The average minimum temperature is above freezing only from mid-May to mid-September. Recreation use of Martis Creek Lake is generally limited to this 4-month period except for hunters, sightseers and some campers with self-contained recreation vehicles. If winter snow cover is thick enough, some cross country skiing and snowmobiling also occurs. There is often insufficient snow depth for winter sports within the project boundary but deeper and longer lasting snow cover occurs on nearby hillsides and skiing is popular.

20. Surrounding land use. - As shown on plate 3, much of the land adjacent to the project boundary has been zoned open space by Nevada and Placer counties. However, some adjacent parcels on the east and south boundary have been zoned medium density residential. The Truckee-Tahoe Airport adjoins project land on the west. The proximity of residential development detracts from the natural appearance of surrounding mountainsides and precludes hunting as a recreation activity permitted on project land. The Truckee-Tahoe Airport is currently utilized by non-commercial aircraft including small private jet aircraft. The airport is used extensively as a sailplane glider base. The thermal uplift air currents of the Truckee River watershed are claimed to be among the best in the world for gliding. The airport facilities are currently being upgraded and interstate commercial passenger and air freight service could become established. Airport personnel have indicated that this service would be far in the future. Noise generated by aircraft operation detracts from the recreation experience and introduces an urban-like intrusion into an otherwise remote setting.

21. Lake operation. - The designated primary purposes of Martis Creek Lake are flood control and future municipal and industrial water supply, and the lake is operated accordingly. Until demand develops for municipal and industrial water, only a minimum pool is maintained at the

lake except during flood control operation. The minimum pool is some distance from existing and future permanent recreation facilities, and roads, parking and portable chemical restrooms are provided to provide access to the area below gross pool. Permanent facilities in the campground area have been located to take advantage of the scenic beauty and shade provided by the trees and other vegetation above gross pool. Because of the size of the minimum pool (71 acres) and the low summertime inflow to the pool, powered watercraft are prohibited.

22. Accessibility. - Good access to Martis Creek Lake is provided by Federal and state highways. Principal access to the area from large metropolitan centers is provided by Interstate 80. State Highway 267 crosses the lake and provides direct access to project lands and waters. The Martis Valley General Plan prepared jointly by Placer and Nevada Counties recommends that Highway 267 remain a 2-lane scenic highway from the airport, through the valley, to Kings Beach on Lake Tahoe. However, both the California Department of Transportation and Nevada County have identified traffic problems at the intersection of Highway 267 and commercial row in downtown Truckee and expressed concern about additional conjestion which would result from providing additional recreation facilities at Martis Creek Lake (Appendix H). During the design day at maximum practical use (see paragraph 35), an estimated 166 vehicles destined for the lake would contribute to the conjestion at this intersection or about 15 to 20 vehicles per hour during peak hours. This contribution is minor when compared to the total number of vehicles using this intersection. California Department of Transportation personnel have indicated that, by the time maximum practical use is expected to occur at Martis Creek, Highway 267 would be rerouted around Truckee.

23. Related recreation areas. - The Truckee River Basin (plate 1) abounds in outdoor recreation opportunity. It contains 7 lakes, 21 Federal and state campgrounds, a state park, a regional park, 5 ski areas and over 245 square miles of National Forest. Four of the basin's lakes, Donner, Stampede, Prosser Creek and Boca are located within 10 miles of Martis Creek Lake. The basin adjoins the Lake Tahoe Basin, a world famous outdoor resource and recreation area. Despite the presence of over 700 public camp units in the basin, a camp unit deficit exists particularly around lakes and reservoirs where demand for water-related recreation opportunity increases demand for adjacent camping facilities. The Truckee-Tahoe Sanitation Agency, in determining peak wastewater flows for its regional treatment plant, projected peak recreation demand for the basin. Adjusting these projections to account for winter ski resort use indicates that summer day use will expand from an estimated 265,000 visitors in 1970 to 490,000 visitors in 2000, and that summer camping use will expand from an estimated 165,000 visitors in 1970 to 295,000 visitors in 2000. To meet this projected demand about 350 new camp units will be needed in the basin by the year 2000.

24. Anticipated attendance. - Anticipated attendance for Martis Creek Lake was estimated in general accord with the methodology presented in Engineer Regulation 1120-2-403, "Procedure for Estimating Recreation Use." However, the most similar project approach is not entirely applicable because the Truckee River Basin, rather than individual recreation areas within the Basin, is the major recreation destination. Per capita use rates that were developed are applicable to the entire basin and the impact of Martis Creek Lake on the basin-wide demand is a planning judgement.

The Truckee-Tahoe Sanitation Agency, in determining peak wastewater flows for its regional treatment plant, projected peak population for the Truckee River Basin as follows:

Year	Permanent	Seasonal[1/]	Day[2/]	Overnight[3/]
1970	2,800	3,600	36,300	3,300
1980	3,900	7,500	46,000	4,300
1990	5,200	10,500	56,900	5,200
2000	6,400	13,600	67,400	5,900

1/ includes occupants of hotels, motels, and second homes
2/ peak is in winter - in summer for all other categories
3/ campground occupants

Assuming that this peak day use is 2 percent of annual visitation and adjusting for the abnormally high peaks brought about by winter sports area use, the annual recreation use of the Truckee Basin is estimated by Sacramento District to be as follows:

Year	Seasonal	Day	Overnight
1970	180,000	265,000	165,000
1980	375,000	305,000	215,000
1990	525,000	420,000	260,000
2000	680,000	490,000	295,000

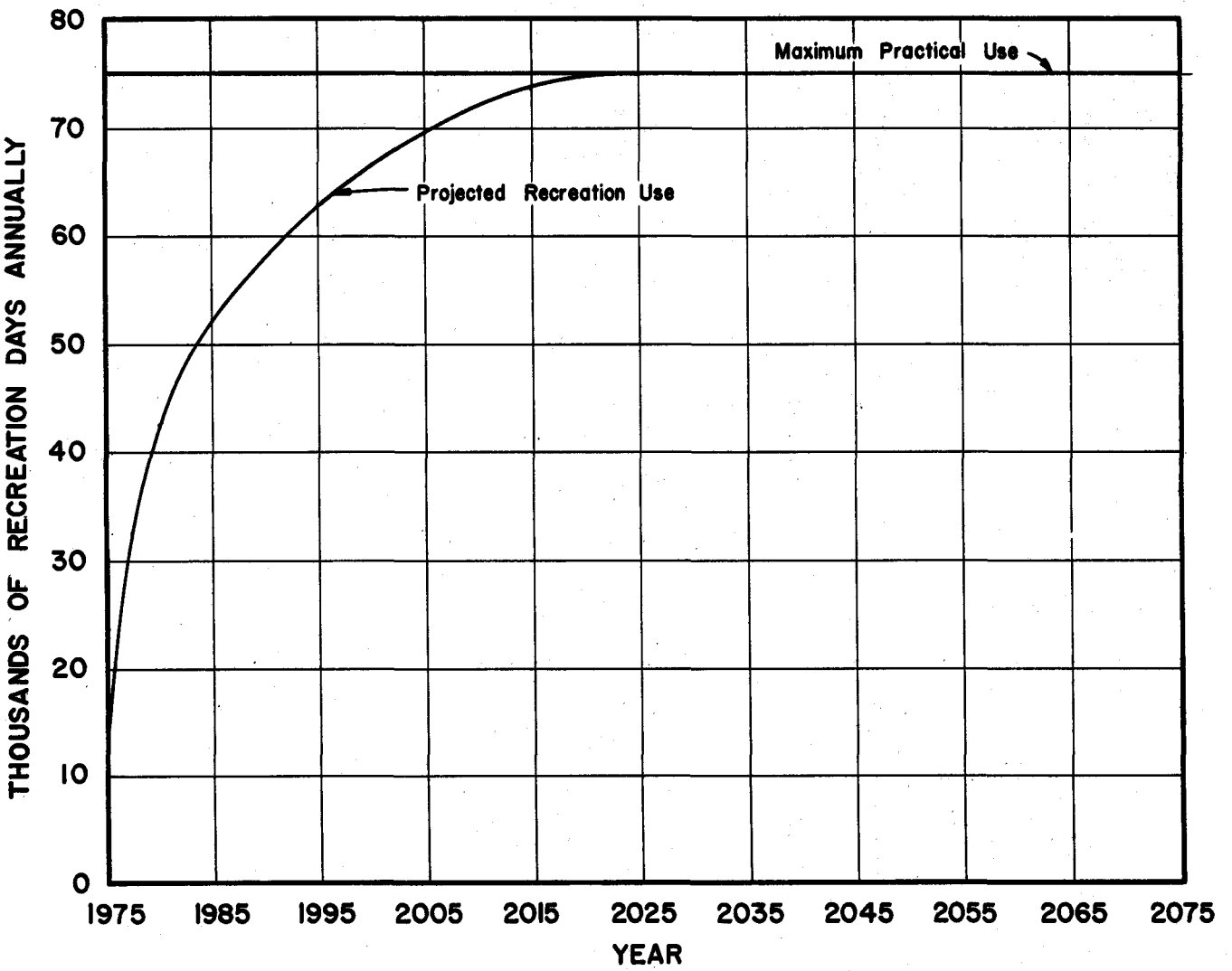
However, the maximum practical use (MPU) that can be expected upon the lands and waters of Martis Creek Lake is estimated to be 75,000 recreation days (paragraph 35). If facilities described in Chapter VII are provided, it is expected that this level of use would be reached by about the year 2025. As indicated in paragraph 23, numerous Federal, state, and local agencies provide recreation opportunity in the Truckee River Basin. The role of all of these agencies in alleviating the recreation facility deficit cannot be ascertained because no comprehensive basin-wide recreation plan has been made. However, since less than 5 percent of the projected recreation demand for the year 2000 could be accommodated at Martis Creek Lake, it is felt that the Martis

Creek Lake recreation use projections are well within balance with the supply which will have to be provided by the remainder of the Truckee River Basin.

The projected visitation curve is presented in chart 2. In order to provide maximum sustained public use of the project lands and waters without environmental degradation, ultimate annual visitation (and development to support such a level of use) should not be allowed to exceed this figure. Presently the existing recreation facilities at Martis Creek Lake are being used at close to capacity. If construction of additional recreation facilities are indefinitely delayed, it may be necessary to limit project visitation.

25. Vectors. - Snow mosquitos (Aedes sp.) are the most commom vector in the Martis Creek area. They breed in woodland and meadow pools resulting from melting snow. Adults do not fly far from their breeding places and do little biting on cold windy days or during the cold nights. Since much of the project lands upstream of the mimimum pool are meadow, excellent mosquito habitat exists, particularly during late spring and early summer. The chipmunk flea (Monopsyllus eumolpi) are intermittent ectoparasites, sucking blood of birds and mammals and are involved in transmission of plague from wild rodents to man. Scattered outbreaks of plague infested rodents occurred in the Sierra Nevada during the summer of 1976. The Truckee River Regional Park, 3 miles west of the project was temporarily closed in late August 1976 because plague infested ground squirrels were present. Procedures for mosquito and rodent control have been incorporated into the operation and maintenance of the project.

26. Exploitation of resources. - Preproject exploitation of resources included timber harvest, gravel mining, and grazing. Reestablishment of trees on lands previously forested has been spotty. Only sagebrush now inhabits the non-forested area to the west of the campground where rotting stumps reveal the previous extent of tree cover. Prior to project completion, gravel extraction was being accomplished at two locations within the project boundary - the western end of the present wildlife area and in the area immediately north of Highway 267 and west of Martis Creek. Both areas were contoured and seeded, and the areas are gradually returning to a more natural habitat but the mining scars are still evident. Since the Gold Rush days, Martis Valley had been utilized as summer cattle and sheep range. More than a century of grazing considerably altered the native habitat. Since completion of Martis Creek project, the project lands have been fenced and domestic animals are excluded but the recovery of the native habitat and vegetative species composition is slow. The developments presented in Chapter VII are not located on areas of wetlands as defined by 33 CFR Part 320.4 and EC 1130-2-157.



MARTIS CREEK LAKE
PROJECTED RECREATION USE

Chart 2

27. Application of legislative and administrative requirements for cost-sharing.

All development and operation and maintenance to date has been at Federal expense. OCE approval of the initial master plan, Design Memorandum No. 15, in 1969 indicated that the Corps of Engineers should accomplish recreation facility development, operation, and administration pending consummation of a suitable agreement with a State or local agency to assume such activities and expense.

Federal policy for provision of funds to construct new recreation facilities at completed projects including Martis Creek Lake, requires participation by a non-Federal entity in accordance with EC 11-2-127. The non-Federal entity must provide at least one-half of the first cost allocated to recreation development and assume responsibility for operation and maintenance of the new recreation facilities. This policy is based on the Federal Water Project Recreation Act, Public Law 89-72, as amended.

Local interests have indicated they are not interested in participating in recreation development or operation and maintenance expense. Coordination is being maintained with the State and with Placer and Nevada Counties as described in Chapter VI, but it is doubtful that they would participate in the foreseeable future. This lack of cost-sharing limits recreation improvements to renovation, repair, modification, and upgrading of existing facilities to acceptable standards. This improvement would be carried out by the Corps of Engineers with funds made available for this purpose. Other sources of funding are possible, such as funding from the California Department of Navigation and Ocean Development for boating improvements, which has occurred at other Corps lakes in California, and programs of other kinds such as Title X of the Emergency Jobs and Unemployment Assistance Act of 1974.

CHAPTER VI
COORDINATION WITH OTHER AGENCIES

28. Federal agencies.

a. Forest Service. During preparation of this Master Plan, the Forest Service was contacted and information was obtained concerning recreation use patterns and anticipated recreation demand for the Truckee River Basin and specifically for Boca, Stampede, and Prosser Creek Reservoirs. This information was utilized in projecting recreation use and demand for Martis Creek Lake and in determining the nature of the recreation experience most suited to the lake. The Service was also helpful in developing a Memorandum of Understanding based on the 1964 Memorandum of Agreement between the Secretaries of Army and Agriculture (see ER 1120-2-400 appendix A) for the management of approximately 65 acres of National Forest at the project. The draft Memorandum of Understanding is provided as Appendix G and will be reviewed and executed by higher authority separately from the master plan. The service reviewed the draft Master Plan and their reply appears in Appendix H.

b. Fish and Wildlife Service. - The Fish and Wildlife Service provided the planning aid letter which is included in Appendix H. Their information was utilized in developing the fish and wildlife management program described in this master plan. They also reviewed the draft Master Plan and their reply appears in Appendix H.

c. Bureau of Reclamation. - The Bureau provided historical recreation use data for their three nearby reservoirs.

d. Bureau of Outdoor Recreation. - The Bureau reviewed the draft Master Plan. Their reply which indicates agreement with project objectives, appears in Appendix H.

e. Advisory Council on Historic Preservation. - The Council reviewed the draft Master Plan. Their reply appears in Appendix H.

f. National Park Service. - The Service reviewed the draft Master Plan. Pursuant to their reply (Appendix H) the California State Historic Preservation Office was consulted and appropriate information was included in the paragraphs discussing cultural resources to reflect the Service's concern about National Register of Historic Properties.

g. Environmental Protection Agency. - The Agency was supplied the draft Master Plan for review and comment. No response was received.

29. State agencies. - The California State Clearinghouse was supplied a synopsis of this master plan update and requested to notify appropriate State agencies. No response was received to this request.

a. Department of Fish and Game. - The Department provided detailed information on their ongoing fish and wildlife management program for Martis Creek Lake and made suggestions for additional habitat improvement measures. Their letter is included in Appendix H. This information and information developed in a meeting also attended by the Fish and Wildlife Service was utilized in developing the fish and wildlife management program described in this master plan. The reply of the Department to their review of the draft Master Plan also appears in Appendix H.

b. Department of Transportation. - Coordination with the Department of Transportation indicated a potential safety problem on State Highway 267 at juncture with the project access road. The solution to this problem is described in paragraph 54 of this master plan. The reply of the Department to their review of the draft Master Plan appears in Appendix H.

30. Local agencies. - The Sierra Planning Organization Clearinghouse was provided a copy of the draft master plan for review by appropriate local agencies. The Clearinghouse notified the following agencies: Nevada County Planning and Public Works Departments, Placer County Planning and Public Works Departments, Tahoe Regional Planning Agency, Nevada and Placer County Resource Conservation Districts, California Department of Transportation, and the Tahoe National Forest. The Planning Organizations reply (Appendix H) indicated that no adverse comments were received.

a. Nevada County Planning Department. - This Department, in conjunction with the Placer County Planning Department, recently completed the Martis Valley General Plan. The General Plan was used in developing this master plan, to insure compatibility of plans. Representatives of the Planning Department were contacted for their ideas on the nature of development best suited for Martis Creek lands and waters. The Department reviewed the draft master plan and their comments appear in Appendix H. Their concerns on traffic volume, sanitation, and historic preservation have been amplified in this master plan.

b. Placer County Planning Department. - Representatives of the Placer County Planning Department were contacted for their ideas on the nature of development best suited for Martis Creek lands and waters. The Department was supplied the draft Master Plan but did not provide comments.

c. Truckee-Tahoe Airport District. - The District was contacted to determine their plans for maintenance and expansion of services and facilities, which includes recreation developments and services for air travelers. Information obtained was considered in siting recreation facilities.

31. Zoning of project lands and waters. - Real estate rights have been obtained by the Corps of Engineers on approximately 1,891 acres for Martis Creek Lake. Of this total about 1,807.5 acres are owned in fee, about 65 acres are withdrawn from the National Forest, and about 18.5 acres are held in easement. All of these lands, with the exception of easement lands and the area in the vicinity of the dam, are available for public use. According to ER 1120-2-400, project land uses are allocated into the following categories: Project operations; Operations: recreation- intensive use; Operations: recreation-low density use; and Operations: wildlife management. These categories enable implementation of the resource use objectives discussed in chapter X. The categories Operations : natural area and operations:reserve forest land were considered but not used because lands which potentially could have been included in these categories have been allocated to other categories. Also, the category Operations : intensive Forest Management was not used because of insufficient quantities of commercial timber in the project area. Plate 3 indicates the zoned areas of project lands and waters and also illustrates immediately adjacent Nevada and Placer County land zoning. Power boats are not allowed on the lake.

32. Recreation plan of development. - The recreation developments (plate 2) will be constructed as funds become available. Facilities designated as Immediate Phase have been identified as needed to satisfy existing recreation demands and demands anticipated over the next 5-year planning period. Facilities designated as Future Phase are long-range planning, subject to periodic review and possible revision to meet actual conditions.

a. Campground. - At maximum practical use, a total of 75 campsites should be provided at Martis Creek Lake. The campground would be in three separate units (plate 4) to facilitate management during non-peak periods of recreation use. The Alpine Meadows Campground unit is existing. Facilities include 25 campsites, a campfire center, two 4-fixture vault restrooms, and water and power distribution systems. Immediate Phase development includes conversion of the existing vault restrooms to flush and construction of a force main to connect with the Tahoe-Truckee Sanitation District's nearby treatment plant. Also in the Immediate Phase is construction of the Highland Campground unit with 25 campsites, two 4-unit flush restrooms, access and circulation roads, and water and electrical distribution systems. A trailer dump station will also be installed. In the Future Phase, the camping area would be further expanded by constructing the Ponderosa Campground unit with 25 campsites, two 4-fixture flush restrooms, access and circulation roads, and water and electrical distribution systems.

b. Picnic area. - Future Phase development provides for construction of the picnic area (Plate 4). Parking for 10 cars, 10 picnic sites, a 4-unit flush restroom, and portable restrooms would be installed.

c. Day use area. - Existing facilities for fisherman access and other public uses of the lake and lakeshore at the below-gross-pool Sierra View Day Use Area (Plate 4) consist of a chip-sealed access road, an unimproved access road, chip-sealed parking for 22 cars, portable restrooms, and a water distribution system. Immediate Phase development consists of gravel surfacing a portion of the unimproved access road, gravel surfacing a 20-car parking lot, and portable restrooms. Future Phase development requires gravel surfacing the remainder of the unimproved road, gravel surfacing a 20-car parking lot and portable restrooms.

d. Wildlife area. - Existing facilities in the wildlife area (Plate 2) includes a gravelled access road and gravelled parking for 10 cars (Photo 4). Immediate Phase development consists of construction of

PHOTO 4 - Wildlife area

1.4 miles of nature interpretive hiking trail. Future Phase development consists of construction of an additional 3.5 miles of nature-interpretive trail.

33. Fish and wildlife plan of development. - Fish and wildlife management programs are accomplished with the advice and cooperation of the Fish and Wildlife Service and the California Department of Fish and Game. The Corps operates and maintains project lands consistent with the overall conservation and management program of the Department of Fish and Game and with the hunting and fishing regulations specified by the California Fish and Game Commission. As discussed in paragraph 15d, Martis Creek Lake has been designated a wild trout lake, the only lake in the state presently so designated. The lake is currently managed for production of wild trout or the rearing of semi-wild trout. Immediate Phase fish habitat improvements may include 2 to 3 foot high cobble rough fish barriers on inlet streams, silt and erosion control check dams on tributary streams and rough fish control by chemical means within the lake. Wildlife management on project lands has been directed toward enhancement of the area for goose nesting (photo 5) and other wildlife

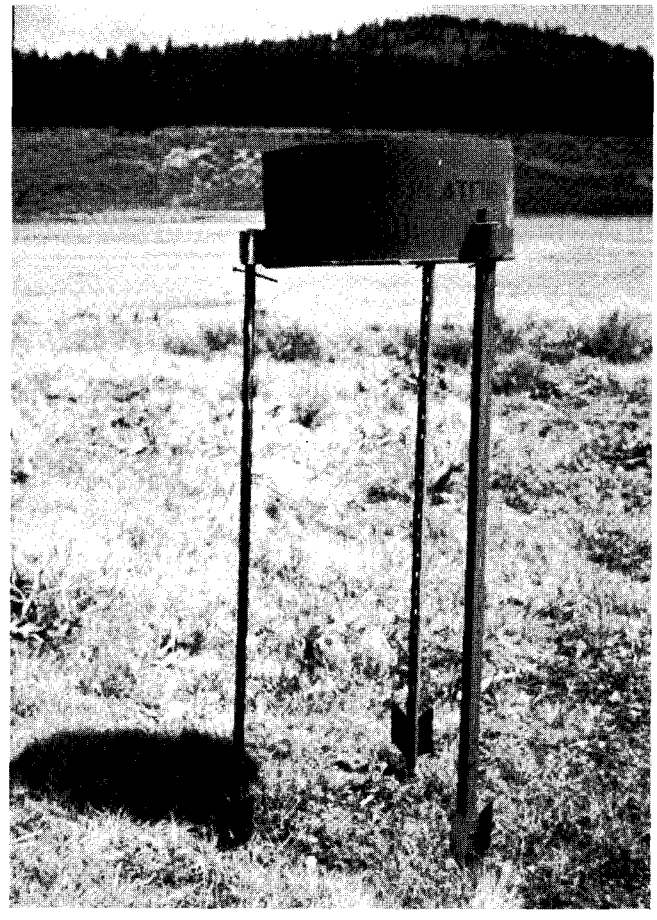


PHOTO 5 - Goose nesting platform

values. Immediate Phase wildlife habitat improvements include development of irrigation systems to enhance production of forage plants and construction of small impoundments (2 to 3 feet deep) on tributary streams to increase amounts of marsh-type habitat on project land. See letter from the California Department of Fish and Game in Appendix H.

34. Cost estimates. - Cost estimates (1 October 1977 price level) of the developments proposed in paragraph 32 are presented in Chapter XII. Total development costs for the Immediate Phase are $670,000 and $400,000 for the Future Phase.

35. Maximum practical use. - Maximum practical use (MPU) is a planning judgement utilizing current data appropriately modified to account for future conditions in estimating the upper limit of recreation use for which facility development should be planned. This concept includes consideration for protection of project natural resources from over use so as to maintain the resources over the long term. Water surface acreage is commonly used as the primary index by which MPU is estimated since the lake is the basic resource which the project has provided. However, at Martis Creek Lake, the water surface area is only 71 acres, boating use is limited to non-motorized craft and swimming is not popular due to cold water temperatures. Consequently, land-based resources which the project provides assumes more importance than water-based resources in determining MPU, and camping opportunity rather than opportunity for water-oriented activities will limit the MPU at Martis Creek Lake. On this basis, the MPU for the lake is estimated to be about 75,000 recreation days. This value was derived using the following rationale in estimating the number of recreation users on a daily and an annual basis:

a. The maximum number of camp units that should be installed considering the available tree cover and without expanding into the wildlife area is 75 units.

b. The average size of a camping party will be similar to that recorded for other Sacramento District lakes (3.4 people). Thus on the basis of 75 campsites there will be 255 campers (75 x 3.4 = 255).

c. Based on comparisons of camping use at nearby Boca, Stampede, and Prosser Creek Reservoirs, camping is estimated to be 45 percent of all activities at Martis Creek Lake. Thus all recreation users at the lake on the average weekend day of the peak month (the design day) would total 567 (255 0.45 = 567).

d. There are 9 weekend days in the average month. Thus the total use on weekend days of the peak month would be about 5103 (9 x 567 = 5103).

e. Weekend use is estimated at 40 percent of total weekly use. At 40 percent, peak month use will account for 12,758 recreation users (5103 0.40 = 12,758).

f. The amount of use that is occuring during peak months of use is about 18 percent. Recreation use is expected to become slightly more

evenly distributed over the year and is estimated at 17 percent in future years. Thus total annual use would be 75,000 recreation days (12,758 0.17 = 75,047 or 75,000 rounded).

36. Design day facility requirements. - The facilities detailed in this chapter are those required to satisfy the design day load anticipated at Martis Creek Lake. The facilities required to serve the anticipated users are estimated by employing such factors as the percentage participation in various activities, number of persons per party, turnover rates in the use of facility units, and the desire of participants to use facilities. The number of parking spaces, toilets, and the size of the accompanying sewage disposal systems may then be estimated. Other facilities, such as roads for access or circulation and trails, have been estimated by on-site inspection. Selection of appropriate sites and layouts in relation to the lake and its adjacent lands were made in accordance with Corps of Engineers general guidelines (Engineer Manual 1110-2-400, Appendix A) as described in Paragraphs 39 through 51. As discussed in paragraph 35, 75 campsites are needed to satisfy the design day load. Ten picnic sites are also needed to meet this load which was determined by applying 30 percent picnicking use to the design day load, accounting for the fact that only 40 percent of visitors desire established picnic facilities, and including a 2.0 turnover factor and a picnic party size of 3.4. (567 x .30 x .40 3.4 2.0 = 10).

37. Siting. - This Master Plan presents only generalized locations for specific facilities at the proposed recreation sites. Specific locations of structures, roads and other facilities would be determined at the time of final design. Although all areas identified for future development are nearly level and have only scattered overstory vegetation, to insure minimal disturbance to the site, picnic and camp sites will be located so as to blend with the natural terrain and available vegetation thereby reducing the need for leveling and vegetation removal. Day and overnight use areas will be separated to maintain maximum recreation enjoyment and to facilitate management. Trails will be located to reduce the need for grading and to maximize scenic diversity and interest. Compatible activities will be grouped together while incompatible activities will be separated. Generally, permanent recreation facilities are located above gross pool. However, since the gross pool elevation of 5838 feet is reached infrequently, some recreation facilities described in this Master Plan which would not be damaged by a limited inundation period are sited below gross pool.

38. General design criteria. - The facilities described in Chapter VII, "Physical Plan of Development" are in accordance with criteria contained in Engineering Manual 1110-2-400 and Engineering Regulation 1110-2-400. State and local public health requirements would be adhered to in the

design and construction of water and sanitary facilities. Cost estimates for the proposed facilities are contained in Chapter XII.

39. Water system. - Water systems would be designed in accordance with Technical Manuals 5-813-1, 5-813-4 and 5-813-5. There is an existing water distribution system available for public use except for the wildlife area access. The pressurized system would be designed for a minimum static pressure of 40 psi and would have a storage tank sized to supply sufficient water for design day load users over a 24-hour period. The capacity is based on allowances of 30 gallons per camper per day, 10 gallons per picnicker and swimmer per day, and 5 gallons per person per day for all other activities. Hose bibbs would be provided on the basis of one for every 400 feet maximum in the Martis picnic area and one for every 8 camping units in the camping areas. Field hydrants would be provided at convenient locations to serve as fill points for fire trucks.

40. Waste collection and treatment. - Existing sanitation facilities at Martis Creek Lake include two 4-unit vault restrooms and 4 portable restrooms. As described in paragraph 32a, the existing vault restrooms would be replaced by flush facilities and sewer connection, which may require some right-of-way easement, provided to the Tahoe-Truckee Sanitation District's treatment plant. This 6,000,000 gallon per day capacity treatment plant is designed to accommodate treatment needs of the northern Lake Tahoe and upper Truckee River Basins until about the year 1983. All replacement and new restrooms will be sized to meet the anticipated sewerage inflow and would be based on 5 gallons per capita per day per fixture in the day use area (assuming 75 people per fixture per day); and 15 gallons per capita per day per fixture in the campground (assuming 20 people per fixture per day). With these assumptions, 1,790 gallons of waste is presently generated during the design day and, with provision of additional facilities, 5,385 gallons of waste would be generated during the design day at maximum practical use levels. Although standard flush facilities were utilized in preparation of the cost estimates (Chapter XII), during sanitary facility design, consideration will be given to installing self-contained, low-flow facilities with the most cost-effective design employed. Portable chemical restrooms would be placed at the Sierra View day use area recreation sites. Restrooms will be sited at least 100 feet from the nearest camp site with portable chemical restrooms sited at least 150 feet distant. Restrooms would be within 300 feet of the most distant camp or picnic site. A trailer dump station facility will be located near the campground entrance. The portable restrooms would be periodically pumped out and the material disposed at an approved facility. Solid wastes are currently collected weekly during the recreation season and disposed of in a sanitary landfill. Increased use may require more frequent collection.

41. Roads. - Paved access and circulation roads would be provided at all recreation areas except at those located below gross pool. Paved roads would be 18 feet wide with additional 2-foot minimum shoulders for two-way traffic and 12 feet wide with additional 2-foot shoulders for one way traffic. The roads would consist of a 1.5-inch bituminous surface applied on a 6-inch stabilized aggregate base. Road shoulders would be oiled to reduce erosion. Design speed for access roads is 20 mph and for circulation roads 5 mph. Roads would be provided with erosion control measures on cuts and fills wherever necessary. All cuts and fills would be designed to blend with the landscape except where trees, shrubs, rock outcroppings or other natural features would be damaged. Culverts would be located as required. Road design includes signs, barriers, and striping on all bituminous surfaced roads for traffic control and safety. Roads below gross pool would have 6-inch stabilized aggregate and would be 18 feet wide.

42. Parking areas. - Parking would be provided at all recreation areas. Parking lots in day use areas would be sited to accommodate design day load use of all the facilities. The parking requirements are generally a parking space for each picnic site or campsite and 5 to 10 parking spaces for fishing areas. Each camp site would be of the pull-through or back-in type and be sized to accommodate a car and camping trailer (10 by 40 feet). Parking spaces in day use areas would be sized 10 by 20 feet. All parking facilities above gross pool would have a 1.5 inch bituminous surface on 6 inches of stabilized aggregate. Parking in areas below gross pool would consist of 6 inches of stabilized aggregate. Concrete wheel stops or other barrier and striping would be used for safety and traffic control. Curbs and gutters would be used in the parking lots where necessary, to control surface runoff. A parking space in each parking lot would be marked with the international handicapped symbol.

43. Picnic units. - Each picnic area would be provided with a wooden table and bench combination. When necessary to prevent erosion, stabilized aggregate pads would be placed under each table. Charcoal grills would be provided at a ratio of one for every two picnic tables. One 30-gallon trash can would be provided at a ratio of one for every four tables and would be anchored to prevent tipping by animals. One site in the picnic area would be designed to accommodate the handicapped by extending the table top and paving the area.

44. Camping units. - Each camp site would be provided with a wooden table and bench combination, a charcoal grill, and a cleared and graded area (15 feet by 15 feet) for a tent pad. When necessary to prevent erosion, stabilized aggregate pads would be placed under each table. One 30-gallon trash can would be provided at a ratio of one for every two tables and would be anchored to prevent tipping by animals. A wastewater drain, not connected to the sewerage system would be provided at a ratio

of one for every four camp sites. A camp site in each campground loop would be designed to accommodate the handicapped by extending the table top and paving the area. The path from the campsite to the restroom would also be paved (photo 6).

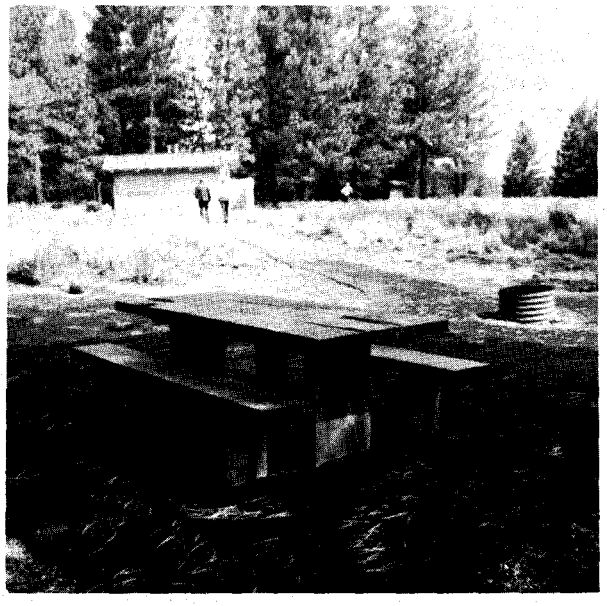


PHOTO 6 - Handicapped camp unit

45. Visitor information. - Display boards would be placed near the campground entrance and at the campfire center. Information provided would be project oriented and present a complete project story. Historic, geologic, archeologic, and ecologic information would be displayed.

46. Electrical distribution. - Electrical service is available at the water pumping station and the permanent restrooms. A public telephone is located adjacent to the water tank near the main entrance. Lighting would be provided at all new permanent restrooms.

47. Trails. - A system of hiking trails would be developed. The trails would be 3 feet wide, be cleared of rocks, brush, and other obstructions for ease of travel, and would be surfaced with crushed fines or wood chips as required.

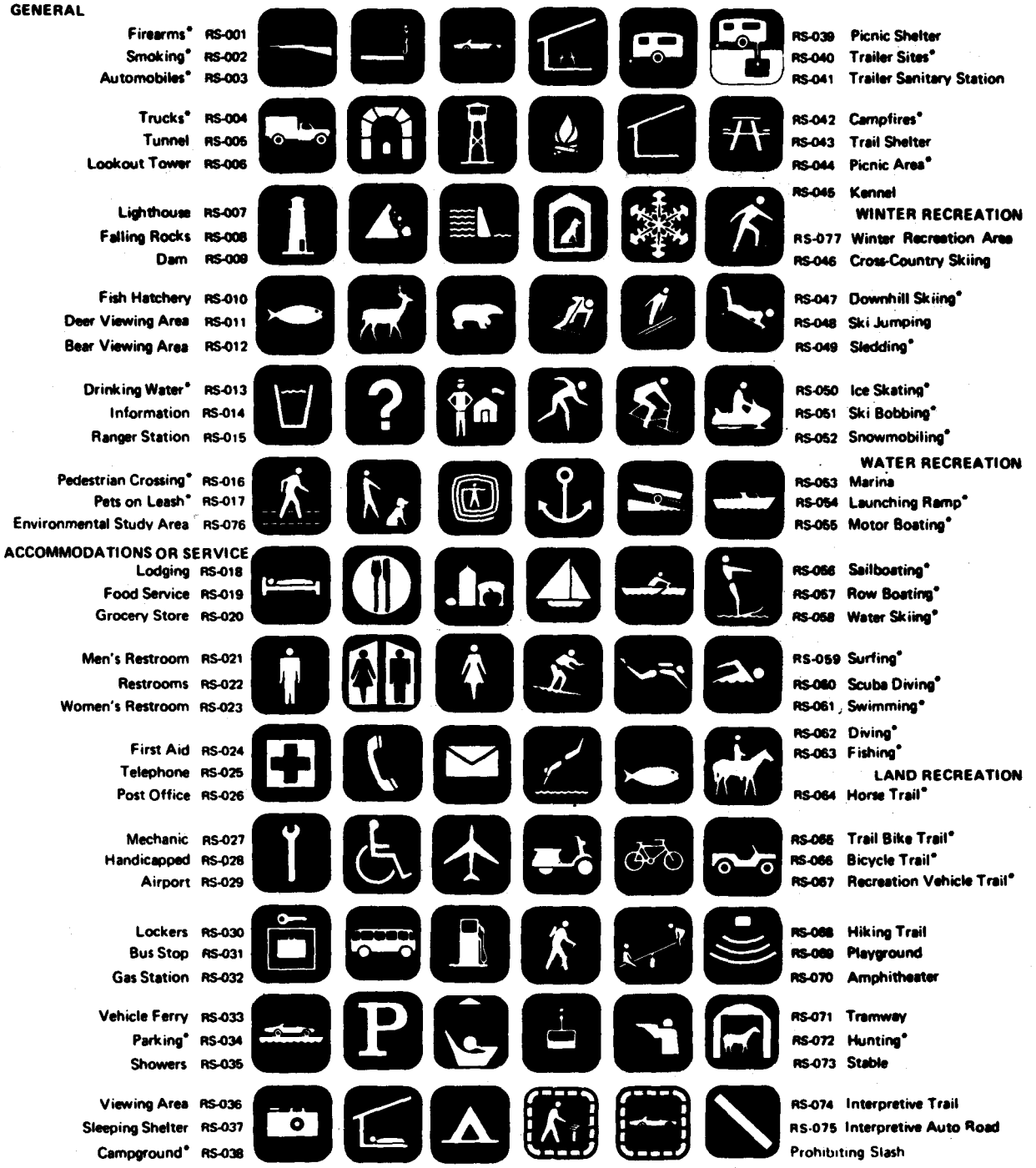
48. Site improvement. - In areas proposed for recreation development where shade is inadequate, a tree planting program would be implemented. This would provide shade for recreation users and would enhance scenic quality. The native species listed in paragraph 16b are considered suitable for planting. Native rock would be used in lieu of concrete where feasible in barriers and retaining walls.

49. Signs. - All signs, other than those for traffic control, designating activity, facility, or direction would be pictorial and lettered, utilizing standard representations. (chart 3). Larger informational signs, particularly those at recreation area entrances, would be of wood with routed lettering. The wooden signs would be painted brown with yellow lettering. Traffic control signs are discussed in paragraph 51.

50. Navigation aids. - A buoy line with white and orange markers is placed upstream from the intake tower to indicate the area where boats are excluded. Hazards to navigation such as snags and rocks would be buoyed as required.

51. Visitor safety. - All new buildings would be equipped with ramps and handrails in lieu of steps, wherever possible, to provide safer access for the elderly and handicapped. One stall in each men's and women's restroom would be provided with handrails to accommodate the handicapped. Architectural barriers such as curbs and steps would be avoided. Signs and markers on roads within project boundaries would conform with American National Standards Institute Standard D6.1, "Manual on Uniform Traffic Control Devices for Streets and Highways." Maximum use would be made of traffic control signs to adequately inform the public of maximum safe speed, road conditions and characteristics. Signs indicating hazards or obstacles would be reflectorized. Service roads, not designed for public access, would be closed by barricades and appropriate warning signs. All safety and public health measures would conform to Engineer Manual 1110-2-400, Appendix A.

INTERNATIONAL PARK AND RECREATION SYMBOLS



**Symbol available with red slash mark to indicate activity is prohibited*

Obtained from "The Park Practice Program" publication dated July 1973, contributed by National Park Service, U.S. Department of the Interior.

CHAPTER IX
SPECIAL PROBLEMS

52. Off-road vehicle use. - Except during flood control operation, Martis Creek Lake remains at minimum pool. Since the lands between the minimum pool and the project boundary are laced with abandoned timber and gravel haul roads, individuals are tempted to cut fences and move barrier logs and rocks to operate their vehicles on these old roadways. Once on these roads, individuals are also tempted to operate their vehicles off of the roads thereby damaging habitat and creating ruts on slopes which become potential erosion gullies. Operation of vehicles off of designated roadways is in violation of Title 36, Code of Federal Regulations and interferes with the resource use objective of protecting and improving project lands for wildlife habitat. This is largely an administrative problem which is reduced by posting signs, providing advice and warnings, and maintaining the fences and barriers to prevent such use. An additional off-road vehicle problem occurs in winter months from snowmobiles. Operation of snowmobiles at insufficient snow depths can damage vegetation and compact the soil which leads to erosion during snowmelt. Snowmobiles have been observed operating on the face of the dam and there have been several instances of snowmobiles breaking through the ice of Martis Creek Lake. Cooperation will be sought from other agencies' personnel in the area such as the California Department of Fish and Game to obtain information and to pass along advice to the public on the Corps' policies.

53. Project operation. - The greatest lake elevation attained since completion of the dam has been 5,805 feet which occurred in the spring of 1974 during testing of the outlet works. A band of dead vegetation principally sagebrush, rabbit brush, and bitterbrush has resulted from that inundation. Although some of this vegetation is now crown sprouting and could be expected to reoccupy the fluctuation zone, future flood control operation of the lake will result in periodic death of woody plant species intolerant of inundation. To maintain adequate wildlife habitat and to reduce the visual impact of a band of dead brush species, grass seed (if possible native species tolerant to inundation) would be sown in barren areas following inundation periods. Woody plants are expected to continue to crown sprout which would reduce the impact on wildlife habitat but the aesthetic impact would remain.

54. Access off of State Highway 267. - A potential problem exists where the recreation area access road intersects State Highway 267. As recreation use of Martis Creek Lake increases, more vehicles will be entering and leaving the access road. Highway 267 is a high speed route connecting Truckee and Lake Tahoe's North Shore and is heavily travelled even during the off season. Currently no left turn lane or acceleration lane exists at the intersection. Coordination with the California Department of Transportation concerning this master plan indicated that, from a safety standpoint, a left turn lane from Highway 267 should be

considered. A left turn lane and acceleration lane will be provided as soon as appropriate arrangements can be made with the California Department of Transportation. Additional discussions will be necessary to develop scheduling and funding arrangements.

CHAPTER X
RESOURCE USE OBJECTIVES

55. General. - Resource use objectives are described in paragraphs 56 to 61. They specify the attainable, publicly acceptable options for resource use determined from analysis of resource capabilities and public needs. The objectives reflect the policy of the Chief of Engineers to provide the public with safe, healthful, and varied opportunities for outdoor recreation and to protect, enhance, and manage all project resources. Guidance for preparation of this chapter is obtained from EC 1105-2-65 (ER 1105-2-XXX).

56. Provide quality outdoor recreation opportunity. - Resource use objective: To provide quality outdoor recreation opportunity with a variety of activities including camping, picnicking, fishing, hiking, cross-country skiing, and wildlife observation subject to limitations imposed by availability of project land and water. The analysis of regional and site specific factors indicates that Martis Creek Lake is located in a region with a rapidly growing demand for outdoor recreation facilities; that most of the land in the Martis Creek watershed is private; that there are insufficient public recreation facilities, particularly camping facilities, in the Truckee River Basin; there is a demand for land for winter sports activities; and that, considering dedication of considerable project land to wildlife habitat management, a maximum of 75 campsites can be provided which will limit annual visitation to 75,000 to protect the resource.

57. Establish and maintain trophy trout fishery. - Resource use objective: In cooperation with the California Department of Fish and Game, establish and maintain a high quality wild or semi-wild trophy trout fishery. The analysis of all factors indicates a high demand for a trophy trout fishery; that the water quality of Martis Creek Lake and its tributaries and other necessary environmental factors are present which would support a wild or semi-wild trout fishery; and the California Department of Fish and Game will provide technical assistance and advice.

58. Establish and maintain a wildlife management area. - Resource use objective: In cooperation with the California Department of Fish and Game, establish and maintain a wildlife management area as mitigation for habitat removed by construction and for the protection and improvement of wildlife habitat. Analysis of all factors indicates that the best use of the southern portion of project land is for management of wildlife; the diverse habitat, from marsh to forest, provides food and cover for many species of wildlife; intensive recreation development would cause habitat loss; an interpretive trail system would minimally disturb habitat; cattle grazing would be incompatible with improvement of wildlife habitat; and the California Department of Fish and Game will provide technical assistance and advice.

59. Preserve scenic quality. - Resource use objective: To preserve aesthetics for the recreating public. The analysis of site factors indicates that off-road vehicle (ORV) use will significantly affect marsh, meadow and sagebrush habitat through compaction of soil and distruction of vegetation; ample nearby Federal multiple use areas are available for controlled ORV use; and ORV use will conflict with other recreation pursuits on project lands.

60. Expand camping opportunity. - Resource use objective: To expand the campground to a size which can be more economically managed. Analysis of all factors indicates a basin-wide demand for additional public campsites; the existing campground unit of 25 sites can be expanded with two additional units of 25 sites each considering available tree cover and without expanding into the wildlife area; and 75 campsites will provide an appropriate balance between camping and other outdoor recreation pursuits.

61. Maintain safe boating conditions.- Resource use objective: To maintain safe boating conditions. Analysis of site specific factors indicates that this project with its small water surface and good water quality is not suitable for power boating; anglers desire to fish from boats as well as from shore and that non-powered boats and canoes can provide this opportunity and boating should be limited to non-powered craft.

CHAPTER XI
PROJECT RESOURCE MANAGEMENT

62. Operational concepts and policies. - The objective of resource management activity at Martis Creek Lake is to assure continued public enjoyment and maximum sustained use of the lands, waters, forests, fish and wildlife, and recreation resources consistent with their carrying capacity and their aesthetic and biological values. Major operational policies include: Protection of visitors and employees; protection of project resources; prevention of visual and physical encroachments; preservation and enhancement of aesthetic integrity; prevention or elimination of unauthorized structures and habitation; assurance of compatibility between uses; improvement of the environment by landscape treatment; assurance that management practices and recreation development are consistent with public demand; and concern with adjacent private developments which may have detrimental effects upon project lands and waters through encouragement of local zoning. All resources will receive equal consideration in management decisions so that optimum public benefits may be obtained. No activities affecting the establishment or development of recreation or fish and wildlife facilities will be accomplished except as may be approved as an item of this Master Plan or other design memoranda. This Master Plan does not significantly alter ongoing resource management practices for which an environmental assessment and negative finding of fact were prepared in 1973 (Appendix F). Significant modification of established management practices or imminent funding of proposed recreation developments will require re-examination of the environmental assessment and preparation of an environmental statement if significant adverse environmental impacts are identified. Specific operational concepts and polices are detailed in appendicies A through E. Appendix A, "Project Resource Management Plan" was approved by the Division Engineer in March 1976. This appendix details existing public use facilities, project operation and maintenance facilities, staffing, operation and maintenance procedures, and law enforcement. Appendix B, "Forest Management Plan" is under preparation. This plan will detail the forest resources and establish silvicultural treatments and programs. Appendix C, "Fire Protection Plan" is under preparation. This appendix will detail fire suppression training procedures, location and availability of tools and equipment, and fire prevention activities. Appendix D, "Fish and Wildlife Management Plan" was approved in March 1976. This appendix contains concepts for management of fish and wildlife resources. Appendix E, "Project Safety Plan" is under preparation. This appendix will set forth policy, assign responsibilities, and prescribe administrative procedures for an accident prevention program for the public and for project personnel.

63. Management of land use zones. - Paragraph 31 and plate 3 delineate land use zones for Martis Creek Lake. Specific management objectives for these zones are as follows:

a. Project operations. - These lands are occupied by or are immediately adjacent to the dam. These lands are restricted from public use to insure safe and efficient operation of the project.

b. Operations: Recreation - Intensive Use. - These lands were acquired for project operation purposes and are allocated for use as developed public areas for intensive recreation activities. A 10-foot-wide firebreak will be cleared around each recreation area. All grass, weeds and brush will be removed from the firebreak and all trees pruned of dead branches to a height of 10 feet. All forest litter and duff will be removed and mineral soil exposed. This system of firebreaks serves as a prevention measure by separating fire sources from fuels and must be maintained annually, preferably in late spring, to retain its effectiveness. Roads and trails may be incorporated into this fuel break to minimize the total land area disturbed.

c. Operations: Recreation - Low Density Use. - These lands were acquired for project operation purposes and are allocated for low density recreation activities. These lands are required for extensive recreation uses (as opposed to intensive recreation uses at the developed sites), for maintenance of resources for public enjoyment of the lake area, and as open space.

d. Operations: Wildlife Management. - These lands were acquired for project operations and allocated as habitat for wildlife. These lands are continuously available for low density recreation activities.

64. Management of the forage resource. - Historically the project area was utilized for summer cattle pasture. Since completion of the project boundary fence, cattle have been excluded except for infrequent trespass occasioned by a broken fence. Establishment of the wildlife management area with special features such as goose nesting platforms makes grazing incompatible with habitat improvement. Consequently grazing will be precluded from all project land.

65. Management of the mineral resource. - Prior to project completion, gravel extraction was being accomplished at two sites within the project boundary. Mining and mineral entry is excluded from all Corps acquired land and from all lands withdrawn from the National Forest. Mining is incompatible with outdoor recreation and with wildlife habitat improvement.

66. Management of the timber resource. - Timber harvest has occurred at various times on project lands. Natural regeneration has resulted in trees becoming reestablished on most areas previously occupied by forests. Much of the project area was historically in meadow or sagebrush habitat and did not support trees. Forest management will include planting of native conifers for shade and aesthetics near the campground, removal of diseased or insect infested trees if their

presence poses serious threats to the health of neighboring commercial timberland, and maintenance of natural succession patterns. Commercial timber harvest will not be permitted.

67. Management of the fish and wildlife resource. - As discussed in paragraph 15d, Martis Creek Lake is being managed for the production of wild or semi-wild trout by the California Department of Fish and Game. The Department views Martis Creek Lake as a key water in their statewide fisheries management program. In contrast to most other waters where management is directed to full exploitation of the game fish resources, at Martis Creek Lake they hope to establish and maintain on a continuing basis a high density trout population of trophy size. Management procedures and angling regulations will be adjusted to meet this objective. Management of the wildlife resource is directed toward both game and nongame wildlife through an increase in the availability of good quality habitat (photo 7). Goose nesting is one specific feature which is being improved by means of nesting platforms and development of ponds and vegetation attractive to geese.

PHOTO 7 - Wildlife area

68. Management of the cultural resource. - Prior to project construction an archeological survey identified 28 separate occupation areas in the lake area or closely adjoining it. Pursuant to ER 1105-2-460, an additional cultural resources reconnaissance will be made of the area within the project boundary shown on plate 2 to assess the condition of the previously identified sites, to locate any additional historic or archeologic sites, and to develop a program for the preservation, restoration and maintenance of the identified cultural resources including an evaluation of significance pursuant to National Register of Historic Places Criteria. An intensive cultural resources survey will be made of all lands within the maximum pool and all lands proposed in this master plan for Immediate or Future Phase recreation development (plate 4).

69. Management of the recreation resource. - The Corps has developed and is operating and maintaining the existing recreation facilities at Martis Creek Lake. Upon approval of this master plan, authority will be established for continued Corps operation and maintenance of recreation facilities as discussed in paragraph 27. As recreation use increases it may be necessary to increase the recreation resource management staff at Martis Creek Lake. Eventually it may be necessary to establish a permanent staff. Although there is often insufficient snow cover to permit winter sports to be enjoyed, occaisionally snow depths are such that snowmobiling and cross-country skiing could be accomodated. Cross-country skiing is currently permitted, but snowmobile use is limited to project roads. Off road use of snowmobiles will be restricted until a permanent staff is based at the lake at which time a study will be made to determine if supervised use could be permitted and, at the same time, avoid damage to the natural resources of the project area.

At such time as a non-Federal public entity participates with the Corps in the development of future recreation facilities, the non-Federal public entity would assume all operation, maintenance and replacement responsibilities for the newly developed areas. Non-Federal interests would be able to assess entrance and user fees on a schedule approved by the District Engineer to offset capital investment and/or operation and maintenance costs. If no non-Federal public entity agrees to participate in development of future recreation facilities and if facilities detailed in paragraph 32 are indefinitely delayed, it may be necessary to limit project visitation in order to provide adequate public health and safety, to cope with expected increasing pressure on recreation resources and to prevent permanent damage to the recreation and environmental resources.

CHAPTER XII
COST ESTIMATES

70. Recreation and fish and wildlife developments. - Cost estimates for development of recreation facilities, both Immediate and Future Phases as described in Chapter VII, are included in this master plan. Table 1 is a summary of the development phases. Table 2 consists of conceptual cost estimates for facilities to be constructed in the Immediate Phase. However, without cost-sharing by a non-Federal governmental entity, the only Immediate Phase feature which could be installed is the conversion of the Alpine Meadows restroom from vault to flush. Table 3 consists of conceptual cost estimates for facilities needed to satisfy future demand. The fish and wildlife developments could be installed by Youth Conservation Corps members utilizing materials available on the site.

71. Basis of cost estimate. - The cost estimate is based on 1 October 1977 price levels. Unit prices used for water supply systems, sanitary facilities, boat-launching ramps, and parking facilities were derived by applying current unit prices to a quanity breakdown. Unit prices for other items were determined by the adjustment of average bid prices received for similar work at nearby areas or a plant, labor, and material breakdown. Due to a lack of detailed studies and limited field surveys and investigations, a contingency allowance of 20 percent was included in the estimate. Suitable allowances are included for engineering and design, and supervision and administration based on costs experienced on similar work in the Sacramento District.

72. Annual operation, maintenance and replacement cost. - Operation and maintenance of recreation facilities are the responsibility of project personnel. Costs for the recreation equipment, personnel, maintenance, and repairs for FY 1977 are estimated to be about $29,000.

MARTIS CREEK LAKE MASTER PLAN
TABLE 1
COST ESTIMATE - SUMMARY
(1 October 1977)

Item	Estimated total cost: Immediate Phase	Future Phase
RECREATION FACILITIES		
Alpine Meadows Camp Unit	$255,000	
Highlands Camp Unit	240,000	
Ponderosa Camp Unit		$208,000
Sierra View Day Use Area	25,000	29,000
Martis Picnic Area		80,000
Hiking Trail	5,000	13,000
Trailer Dump Station	25,000	
Subtotal	$550,000	$330,000
ENGINEERING AND DESIGN	70,000	40,000
SUPERVISION AND ADMINISTRATION	50,000	30,000
TOTAL COST RECREATION DEVELOPMENT	$670,000	$400,000
TOTAL OF BOTH PHASES		$1,070,000

MARTIS CREEK LAKE MASTER PLAN
TABLE 2
DETAILED COST ESTIMATE - IMMEDIATE PHASE
(1 October 1977)

Item	Quantity	Unit	Unit Price	Amount
RECREATION FACILITIES				
Alpine Meadows				
Roads and parking				
Road - 2-lane paved access (Exc. - 10,600 cy/mi)	0.09	Mi	$137,000	$12,330
Road - 1-lane paved access (Exc. - 5,300 cy/mi)	0.06	Mi	142,600	8,556
Sanitary Facilities				
Remove existing vault restroom	2	Ea	2,500	5,000
Restroom 4-fixture flush	2	Ea	35,000	70,000
Gravity sewer - 6"	5200	LF	12.50	65,000
Force main - 4"	1680	LF	12.00	20,160
Pumps 2HP, 120GPM	2	Ea	4,500	9,000
Manhole	15	Ea	800	12,000
Electrical	1	Job	LS	1,750
Obliterate existing road	1	Job	LS	300
Subtotal				204,096
Contingencies 25% ±				50,904
Total Alpine Meadows				$255,000
Highlands Camp unit				
Roads and parking				
Road - 2-lane paved access (Exc. - 10,600 cy/mi)	0.21	Mi	$137,300	$28,833
Road - 1 lane paved circulation (1850 LF) and 15 parking spurs and 10 pullthroughs	1	Job	38,800	38,800
Road - 1 lane gravel access	150	LF	8.30	1,245
Water Facilities				
Water line - 3"	2700	LF	7.50	20,250
Water line - 1"	350	LF	6.00	2,100
Hose bibb	8	Ea	75.00	600
Sanitary Facilities				
Restroom - 4 fixture flush	2	Ea	35,000	70,000
Gravity sewer 6"	1000	LF	12.50	12,500
Manhole	1	Ea	800	800

Item	Quantity	Unit	Unit Price	Amount
Camp unit				
Clear and grub	1250	SY	1.50	1,875
Tent space 15' x 15'	25	Ea	50	1,250
Table	25	Ea	200	5,000
Garbage can w/stand	13	Ea	120	1,560
Barbeque grill	25	Ea	135	3,375
Electrical	1	Job	LS	4,750
Subtotal				$192,938
Contingencies 25% ±				47,062
Total Highlands				$240,000
Sierra View Day Use Area				
Roads and parking				
Road - 2 lane gravel access (Exc. - 2,300 cy/mi)	0.27	Mi	53,000	14,310
Parking incl excavation	920	SY	5.70	5,244
Sanitary Facilities				
Restroom portable	2	Ea	500	1,000
Subtotal				$20,554
Contingencies 25% ±				4,446
Total Sierra View Day Use Area				$25,000
Hiking Trail				
Trail - nature interpretive	7250	LF	0.60	4,350
Subtotal				$ 4,350
Contingencies 25% ±				650
Total Hiking Trail				$ 5,000
Trailer Dump Station				
Roads and parking				
Road - 1 lane paved access (Exc. - 5,300 cy/mi)	0.04	Mi	135,000	5,400
Water Facilities				
Water line - 1-1/2"	100	LF	6.50	650
Hose bibb	1	Ea	75	75

Item	Quantity	Unit	Unit Price	Amount
Sanitary Facilities (Cont'd)				
Gravity sewer 6"	900	LF	12.50	11,250
Manhole	2	Ea	800	1,600
Cleanout	1	Ea	200	200
Drainage pad	1	Ea	1,500	1,500
Subtotal				$20,675
Contingencies 25% ±				4,325
Total Trailer Dump Station				$25,000
TOTAL RECREATION FACILITIES				$550,000
ENGINEERING AND DESIGN				70,000
SUPERVISION AND ADMINISTRATION				50,000
TOTAL COST IMMEDIATE PHASE RECREATION DEVELOPMENT				$670,000

MARTIS CREEK LAKE MASTER PLAN
TABLE 3
DETAILED COST ESTIMATE - FUTURE PHASE
(1 October 1977)

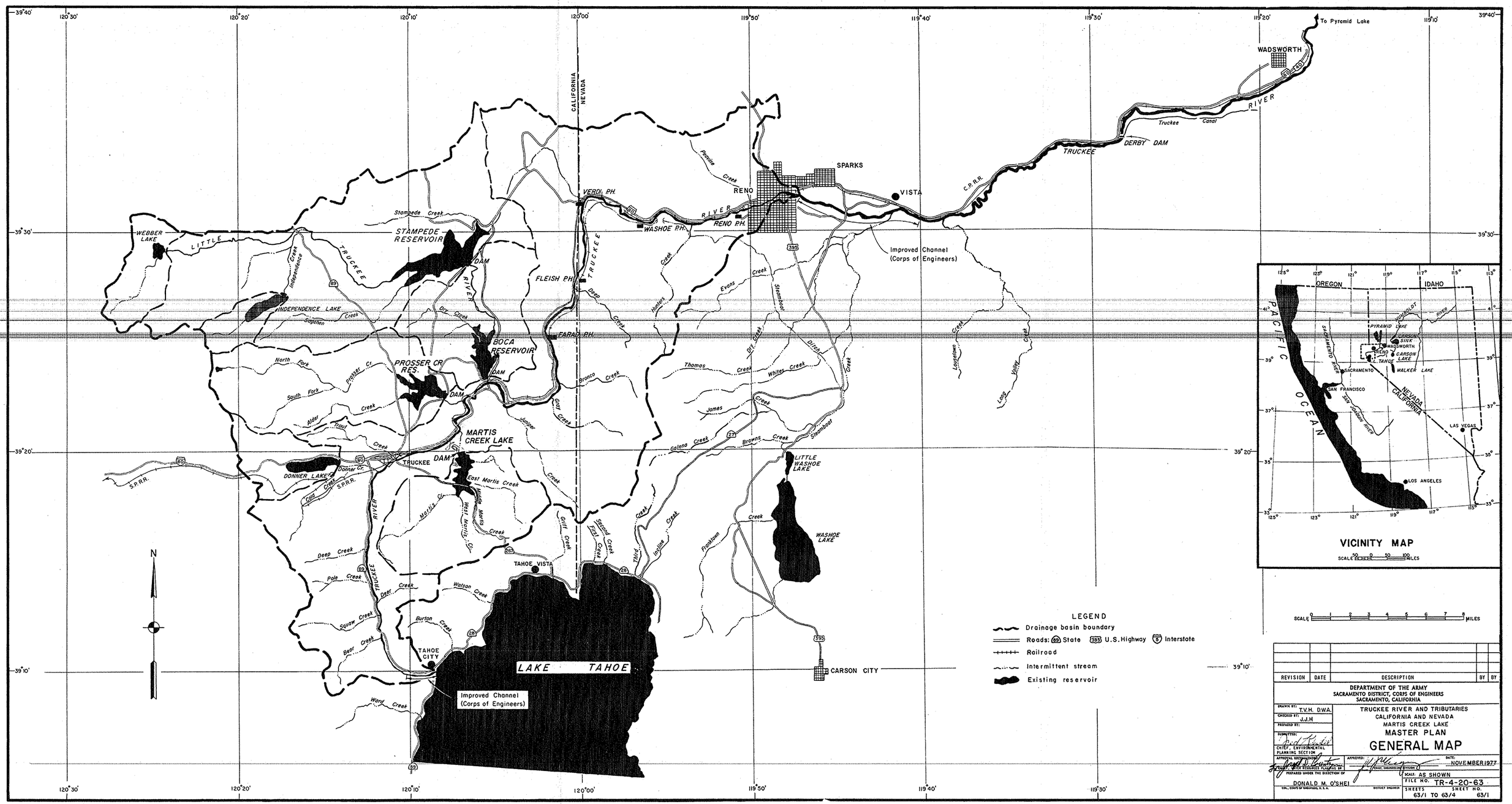
Item	Quantity	Unit	Unit Price	Amount
RECREATION FACILITIES				
Ponderosa Camp unit				
Roads and parking				
Road - 2 lane paved access (Exc. - 10,600 cy/mi)	0.02	Mi	183,700	$ 3,674
Road - 1 lane paved circulation (2400 LF) and 15 parking spurs and 10 pull throughs	1	Job	LS	49,000
Road - 1 lane gravel access	370	LF	9.70	3,589
Water Facilities				
Water line - 3"	2000	LF	7.50	15,000
Water line - 2"	430	LF	6.00	2,580
Hose bibb	8	Ea	75.00	600
Sanitary Facilities				
Restroom - 4 fixture flush	2	Ea	35,000	70,000
Gravity sewer -6"	210	LF	12.50	2,625
Camp unit				
Clear and grub	1250	SY	1.50	1,875
Tent space 15' x 15'	25	Ea	50	1,250
Table	25	Ea	200	5,000
Garbage can w/stand	13	Ea	120	1,560
Barbeque grill	25	Ea	135	3,375
Electrical	1	Job	LS	5,000
Subtotal				$165,128
Contingencies 25% ±				42,872
Total Ponderosa				$208,000
Sierra View Day Use Area				
Roads and parking				
Road - 2 lane gravel access (Exc. - 2,600 cy/mi)	0.30	Mi	55,000	16,500
Parking incl excavation	920	SY	6.40	5,888
Sanitary Facilities				
Restroom portable	2	Ea	500	1,000

Item	Quantity	Unit	Unit Price	Amount
Subtotal				$23,388
Contingencies 25% ±				5,612
Total Sierra View Day Use Area				$29,000
Martis Picnic Area				
Roads and parking				
Parking - paved	470	SY	8.70	4,089
Sanitary Facilities				
Restroom - 4 fixture flush	1	Ea	35,000	35,000
Gravity Sewer - 6"	900	LF	12.50	11,250
Manholes	2	Ea	800	1,600
Restroom portable	2	Ea	500	1,000
Water Facilities				
Water line - 3"	450	LF	7.50	3,375
Water line - 1-1/2"	300	LF	6.50	1,950
Hose bibb	2	Ea	75	150
Picnic Unit				
Table	10	Ea	200	2,000
Barbeque grill	5	Ea	135	675
Garbage can w/stand	3	Ea	120	360
Electrical	1	Job	LS	2,500
Subtotal				$63,949
Contingencies 25% ±				16,051
Total Martis Picnic Area				$80,000
Hiking Trail				
Trail - nature interpretive	18,500	LF	0.55	10,175
Subtotal				$10,175
Contingencies 25% ±				2,825
Total Hiking Trail				$13,000
TOTAL RECREATION FACILITIES				$330,000
ENGINEERING AND DESIGN				40,000
SUPERVISION AND ADMINISTRATION				30,000
TOTAL COST FUTURE PHASE RECREATION DEVELOPMENT				$400,000

CHAPTER XIII
CONCLUSIONS AND RECOMMENDATIONS

73. Conclusions. - Water-oriented outdoor recreation activities constitute a significant use of Martis Creek Lake lands and waters in a region where water-oriented opportunities are needed and where facilities to support such opportunities should be provided. The development and management program described in this master plan would provide for the maximum practical use of the recreation resources at the lake and at the same time safeguard the environmental quality of project lands and waters. The development program would provide sufficient flexibility to permit modifications that may become necessary due to changes in public use patterns or for other reasons. Development and administration of the recreation resource at Federal expense will be in accordance with ER 1120-2-404. Information presented in this master plan is conceptual in nature.

74. Recommendations. - It is recommended that this master plan be approved as the basis for development and management of project resources at Martis Creek Lake.



REVISION	DATE	DESCRIPTION	BY	BY

DEPARTMENT OF THE ARMY
SACRAMENTO DISTRICT, CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

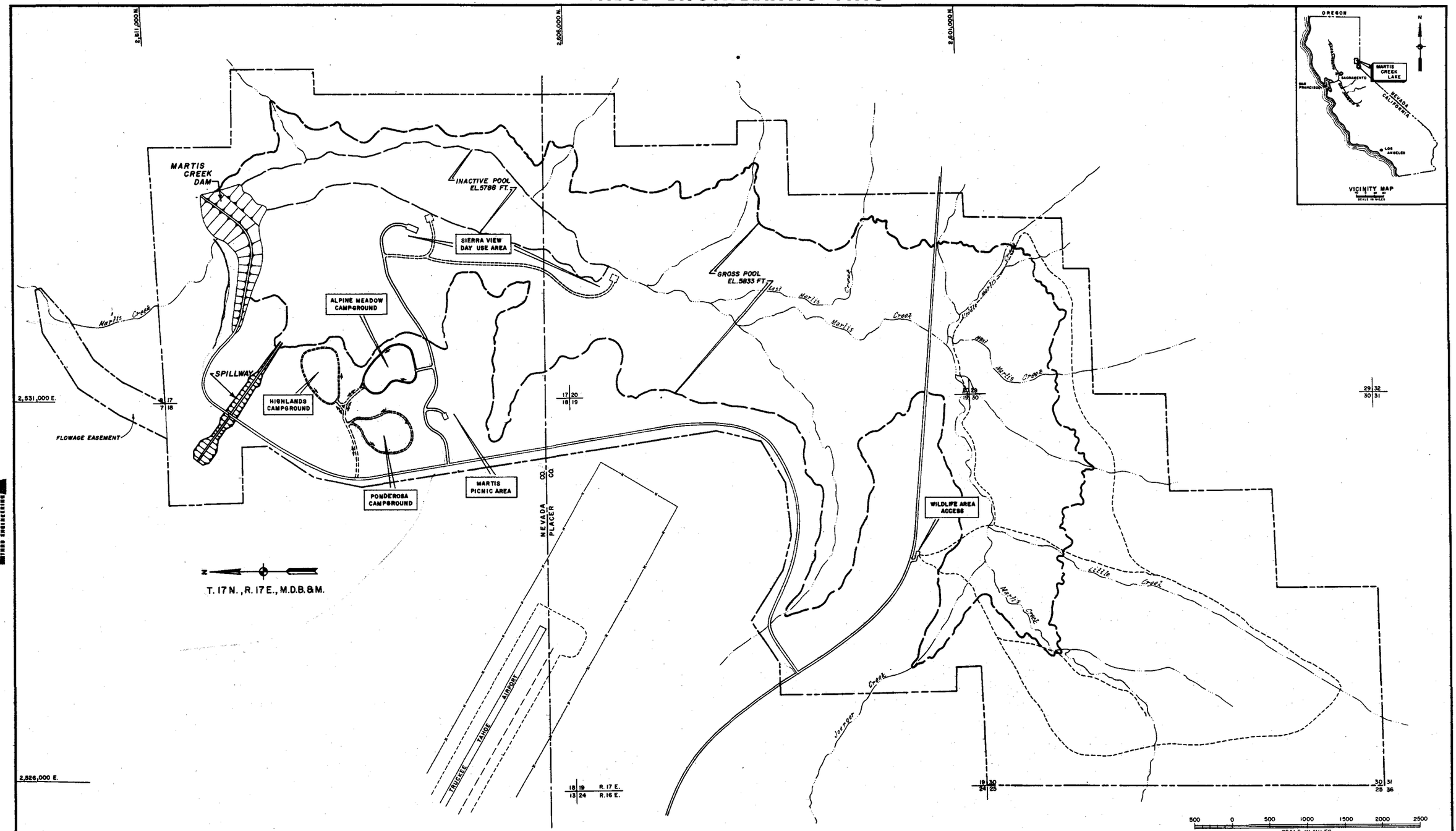
DRAWN BY: T.V.H. D.W.A.
CHECKED BY: J.J.H
PREPARED BY:
SUBMITTED: Chief, Environmental Planning Section
APPROVAL RECOMMENDED: Chief, Water Resources Planning Br.
APPROVED: District Engineer
DATE: NOVEMBER 1977
SCALE: AS SHOWN
FILE NO. TR-4-20-63
SHEETS 63/1 TO 63/4
SHEET NO. 63/1

DONALD M. O'SHEI
COL., CORPS OF ENGINEERS, U.S.A.

TRUCKEE RIVER AND TRIBUTARIES
CALIFORNIA AND NEVADA
MARTIS CREEK LAKE
MASTER PLAN

GENERAL MAP

PLATE 1



LEGEND

- Project Boundary
- Gross Pool Elev. 5833 feet
- Inactive Pool Elev. 5788 feet
- Existing State Highway and Access Road
- Proposed Roads
- Proposed Trails

Notes:

1. *Grid coordinates refer to California State coordinate system, Zone 2.*
2. *All elevations refer to sea level datum of 1929.*
3. *Unless stipulated adjacent land use is zoned - open space by the particular county.*

DEPARTMENT OF THE ARMY
SACRAMENTO DISTRICT, CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

DRAWN BY: D.W.A.
CHECKED BY: J.J.H.
TRACED BY:
SUBMITTED: Chief, Environmental Planning Section
APPROVED: DONALD M. O'SHEI, Col., Corps of Engineers, U.S.A., District Engineer
DATE: NOVEMBER 1977

TRUCKEE RIVER AND TRIBUTARIES, CALIFORNIA AND NEVADA
MARTIS CREEK LAKE
MASTER PLAN

GENERAL RECREATION PLAN

SCALE AS SHOWN
FILE NO. TR-4-20-63
SHEETS 63/1 TO 63/4
SHEET NO. 63/2

PLATE 2

ENVIRONMENTAL ENHANCEMENT THROUGH ENGINEERING

2,611,000 N.

2,606,000 N.

2,601,000 N.

Adjacent land zoned - Forest

Adjacent land zoned - medium density residential 1-3 dwelling units/acre

Adjacent land zoned - Valley residential 2.5 to 10 acres/dwelling unit.

Adjacent land zoned - Forest

MARTIS CREEK DAM

INACTIVE POOL EL. 5788 FT.

GROSS POOL EL. 5833 FT.

SPILLWAY

Martis Creek

East Martis Creek

West Martis Creek

North Fork Martis Creek

2,531,000 E.

17 | 20
18 | 19

20 | 29
19 | 30

29 | 32
30 | 31

NEVADA
PLACER
CO

TRUCKEE - TAHOE AIRPORT

Adjacent land zoned - medium density residential 1-3 dwelling units/acre

Coon Creek

Jaeger Creek

N

T. 17 N., R. 17 E., M.D.B.&M.

2,526,000 E.

18 | 19 R. 17 E.
13 | 24 R. 16 E.

19 | 30
24 | 25

30 | 31
25 | 36

OREGON

CALIFORNIA

NEVADA

SACRAMENTO

SAN FRANCISCO

LOS ANGELES

MARTIS CREEK LAKE

VICINITY MAP

SCALE IN MILES

LEGEND

- Project Boundary
- Gross Pool Elev. 5838 feet
- Inactive Pool Elev. 5780 feet
- Existing State Highway and Access Road

LAND ZONING

- Project Operations
- Operations: Recreation - Intensive Use
- Operations: Recreation - Low Density Use
- Operations: Wildlife Management
- Flowage Easement

Notes:

1. *Grid coordinates refer to California State coordinate system, Zone 2.*
2. *All elevations refer to sea level datum of 1929.*
3. *Unless stipulated adjacent land use is zoned - open space by the particular county.*

500 0 500 1000 1500 2000 2500

SCALE IN MILES

REVISION	DATE	DESCRIPTION	BY	BY

DEPARTMENT OF THE ARMY
SACRAMENTO DISTRICT, CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

DRAWN BY: D.W.A.
CHECKED BY: J.J.H.
PREPARED BY:
SUBMITTED: Chief, Environmental Planning Section
APPROVAL RECOMMENDED: Chief, Water Resources Planning Br. Prepared under the direction of DONALD M. O'SHEI, Col., Corps of Engineers, U.S.A., District Engineer
APPROVED: Chief, Engineering Division
DATE: NOVEMBER 1977
SCALE: AS SHOWN
FILE NO. TR-4-20-63
SHEETS 63/1 TO 63/4
SHEET NO. 63/3

TRUCKEE RIVER AND TRIBUTARIES, CALIFORNIA AND NEVADA
MARTIS CREEK LAKE
MASTER PLAN

LAND USE PLAN

ENVIRONMENTAL ENHANCEMENT HYDRO ENGINEERING

SPILLWAY

MARTIS CREEK DAM

HIGHLANDS CAMPGROUND
25 UNITS
Immediate Phase

PONDEROSA CAMPGROUND
25 UNITS
Future Phase

TRAILER DUMP STATION
Immediate Phase

ALPINE MEADOWS CAMPGROUND
25 UNITS

PARKING/22 CAR

SIERRA VIEW
Day Use Area

PARKING/20 CAR
Immediate Phase

Remove road in immediate phase

PICNIC AREA
10 UNITS
Future Phase

PARKING/10 CAR
Future Phase

PARKING/20 CAR
Future Phase

TRUCKEE-TAHOE AIRPORT

LEGEND

- Gross Pool Elev. 5833 feet
- Inactive Pool Elev. 5788 feet
- Project Boundary
- Developed Facilities
- Proposed Facilities
- Restroom
- Campfire Center

Notes:

1. Elevations are referred to Sea Level Datum of 1929.
2. Date of Survey June 1964, Topography by Kelsh Stereo-Plotter.

SCALE IN FEET
200 0 200 400 600 800 1000

REVISION	DATE	DESCRIPTION	BY	BY

DEPARTMENT OF THE ARMY
SACRAMENTO DISTRICT, CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

DRAWN BY: D.W.A.
CHECKED BY: J.J.H.
PREPARED BY:
RECOMMENDED: Chief, Environmental Planning Section
APPROVED FOR PUBLIC RELEASE: Chief, Water Resources Planning Br.
PREPARED UNDER THE DIRECTION OF: DONALD M. O'SHEI, Col., Corps of Engineers, U.S.A., District Engineer
APPROVED: Chief, Engineering Division
DATE: NOVEMBER 1977
SCALE: AS SHOWN
FILE NO. TR-4-20-63
SHEETS 63/1 TO 63/4
SHEET NO. 63/4

TRUCKEE RIVER AND TRIBUTARIES, CALIFORNIA AND NEVADA
MARTIS CREEK LAKE
MASTER PLAN

RECREATION PLAN

PLATE 4

APPENDIX E

Summary Environmental Assessment and finding of fact

MARTIS CREEK LAKE, CALIFORNIA
(Operation and Management)
Summary Environmental Assessment

Responsible Office: U. S. Army Engineer District, Sacramento, California

1. Name of Action. Administrative

2. Description of Action. Continued operation and management of the existing dam, lake, and project lands for flood control, recreation, fish and wildlife, and other uses. Additional development of recreation and fish and wildlife areas. Control of motor vehicle use on project lands.

3a. Environmental Impact. Continued operation and management of Martis Creek Lake will provide flood protection along the Truckee River, maintain public open space lands and recreation opportunities, and provide a 1,050 acre area for wildlife management. Water level fluctuations will cause some damage to ground cover, and the loss of 12 archeological sites of limited value. Control of vehicle use and grazing will benefit vegetation and wildlife.

3b. Adverse Environmental Effects. Some damage to vegetation and soils and loss of 12 archeological sites of limited value due to flood control operation.

4. Alternatives. Do nothing; elimination of recreation; alternative recreation development plans; alteration of reservoir operation.

5. Coordination. Informal comments were obtained from the Environmental Protection Agency, California Water Quality Control Board, U. S. Fish & Wildlife Service, and the California Department of Fish & Game. None of the comments obtained indicated the need for the preparation of a formal Environmental Impact Statement.

FINDING OF FACT

SUBJECT: Environmental Impact Statement Not Required - Martis Creek Lake, California (Operation, Management, and Development of Project Lands for Recreation and Fish and Wildlife)

1. Reference Paragraph 4b(2) ER1105-2-507, Preparation and Coordination of Environmental Statements.

2. The proceedures for operation, management, and future development of project lands for recreation and fish and wildlife have been examined for possible environmental impacts. This examination included review of current operation and management proceedures, review of AE prepared Environmental Assessment, and coordination with appropriate regulatory agencies. A summary of the results of this examination is contained in the attached Summary Environmental Assessment. This examination found that the proposed actions should not cause any significant adverse environmental impacts. Based on the lack of any significant adverse impacts on the environment, an Environmental Impact Statement is not required for the operation, management, and proposed development of project lands for recreation and fish and wildlife at Martis Creek Lake.

1 Incl
as

F. G. ROCKWELL, JR.
Colonel, CE
District Engineer

APPENDIX G

Memorandum of understanding (Draft)

As forwarded to Higher Authority

MEMORANDUM OF UNDERSTANDING BETWEEN THE CORPS OF ENGINEERS AND THE FOREST SERVICE REGARDING MANAGEMENT OF WATER, LAND, AND RECREATION RESOURCES ASSOCIATED WITH THE MARTIS CREEK LAKE PROJECT, NEVADA AND CALIFORNIA, ON THE TAHOE NATIONAL FOREST, CALIFORNIA.

THIS MEMORANDUM OF UNDERSTANDING is entered into by and between the Corps of Engineers, Department of the Army, Department of Defense, hereinafter referred to as "the Corps," and the Forest Service, Department of Agriculture, hereinafter referred to as "the Service," as of _____, 1977.

Recitals

(1) The Corps operates the Martis Creek Lake project (hereinafter referred to as "the project") on Federal lands along Martis Creek in Nevada and Placer Counties, California, within the exterior boundary of the Tahoe National Forest, the project area being delineated on the map attached hereto as Exhibit A.

(2) The Service administers the National Forest System lands within the exterior boundaries of said National Forest, including about 65 acres of National Forest lands within the project area.

(3) The parties hereto wish to establish joint principles and policies concerning management of lands and resources of the project.

(4) This Memorandum of Understanding is entered into pursuant and supplemental to paragraph 9 of the Memorandum of Agreement, dated 13 August 1964, between the Secretaries of Army and Agriculture, relative to cooperating in the planning, development, and management of water resource projects associated with the National Forest System.

Agreements

The parties hereto agree as follows:

I. A Master Plan for the project will be prepared by the Corps. The portion of the Plan relating to matters agreed upon as the Service responsibilities will be mutually developed and reviewed annually by the Corps project manager and the responsible District Ranger of the Service. The Plan will provide criteria for the development, administration, and management of the project to assure preservation of its scenic, biological, recreational, historical, and archaeological resources, and to assure coordination with interested Federal, State and local agencies.

II. The Corps and the Service will mutually prepare fire prevention and control plans for the project, which will include provisions for fire prevention and fire control clauses in all the Service and the Corps contracts. The Service will be responsible for fire protection on the project lands.

III. The Corps will be responsible for management of all lands within the project area.

IV. The Corps and the Service, pursuant to the provisions of Public Law 84-804 (Act of July 26, 1956; 70 Stat. 656; 16 USC §§ 505a and 505b), and as outlined in the Truckee-Little Truckee Rivers Land Use Plan of the Tahoe National Forest, shall pursue

a policy of interchanging the two parcels of land delineated on Exhibit A and further described in Exhibit B as Tract A-1 and A-2. After the interchange is effected, all the lands within the existing project boundary will still be withdrawn from mineral entry.

V. If needed, the Corps and the Service will jointly prepare rules and regulations governing lands on each side of the project boundary to be used and occupied by the general public. The Corps and the Service through the District Engineer and the Forest Supervisor will coordinate land use proposals on adjacent lands prior to issuing any permits, easements, or initiating any land management activities.

VI. Ancillary operating agreements needed to implement this Memorandum of Understanding may be entered into by the Forest Supervisor of the Tahoe National Forest and the District Engineer of the Corps' Sacramento District, to the extent of the authorities of their respective offices, to set forth mutual understandings, responsibilities, or obligations.

VII. Each party hereto shall have a right to ingress and egress upon the lands of the other for the purposes of carrying out the authorities of their respective agencies.

VIII. This Memorandum of Understanding may be amended at any time by the mutual consent of the parties hereto.

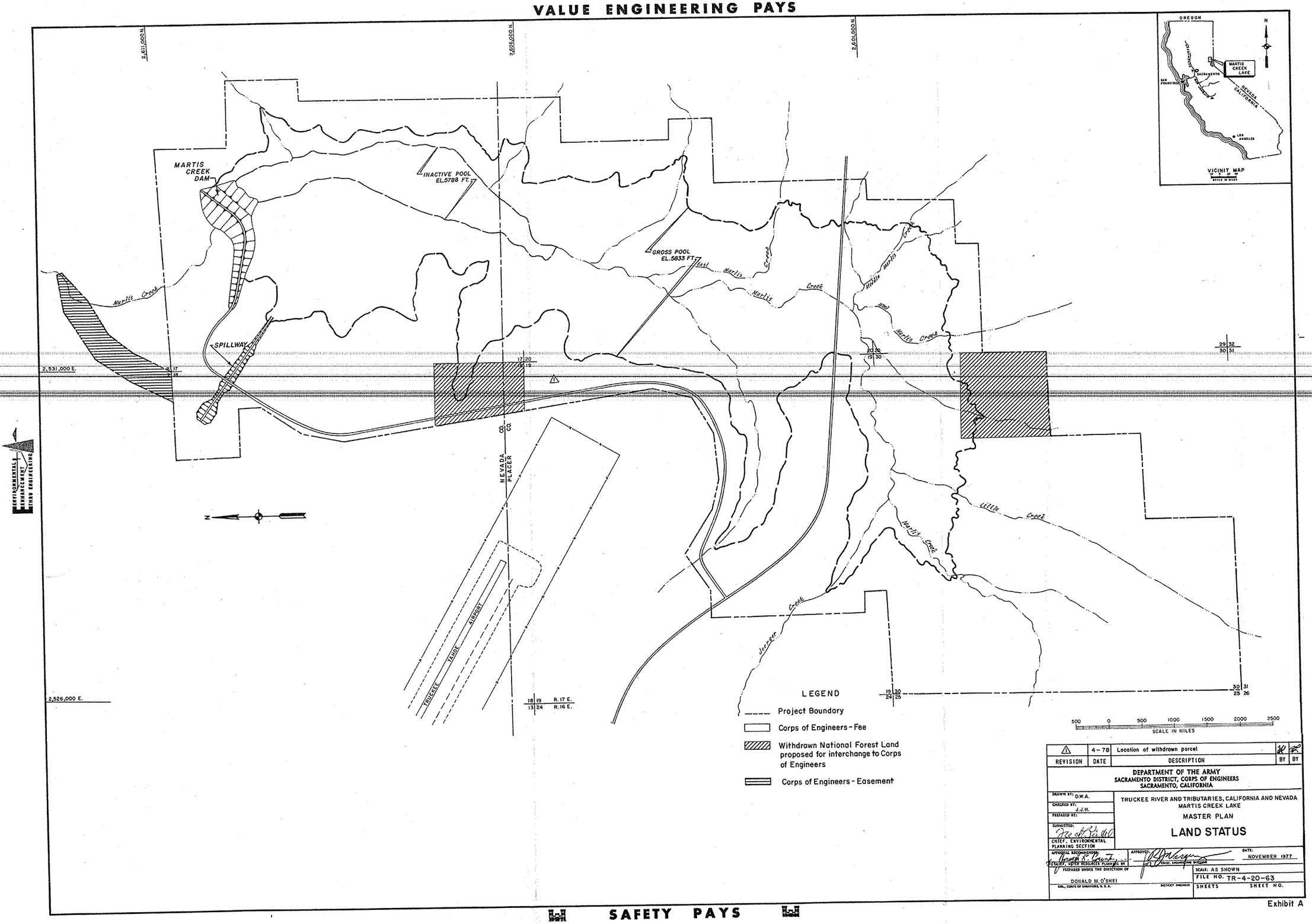
IN WITNESS WHEREOF, the parties hereto have executed this instrument in duplicate as of the date first hereinafter written.

CORPS OF ENGINEERS
DEPARTMENT OF THE ARMY
DEPARTMENT OF DEFENSE

By_____
Chief of Engineers
Corps of Engineers
United States Army

FOREST SERVICE
UNITED STATES DEPARTMENT
OF AGRICULTURE

By_____
Chief, Forest Service



ENVIRONMENTAL ENHANCEMENT THROUGH ENGINEERING

REVISION	DATE	DESCRIPTION	BY	BY
1	4-78	Location of withdrawn parcel	JH	

DEPARTMENT OF THE ARMY
SACRAMENTO DISTRICT, CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

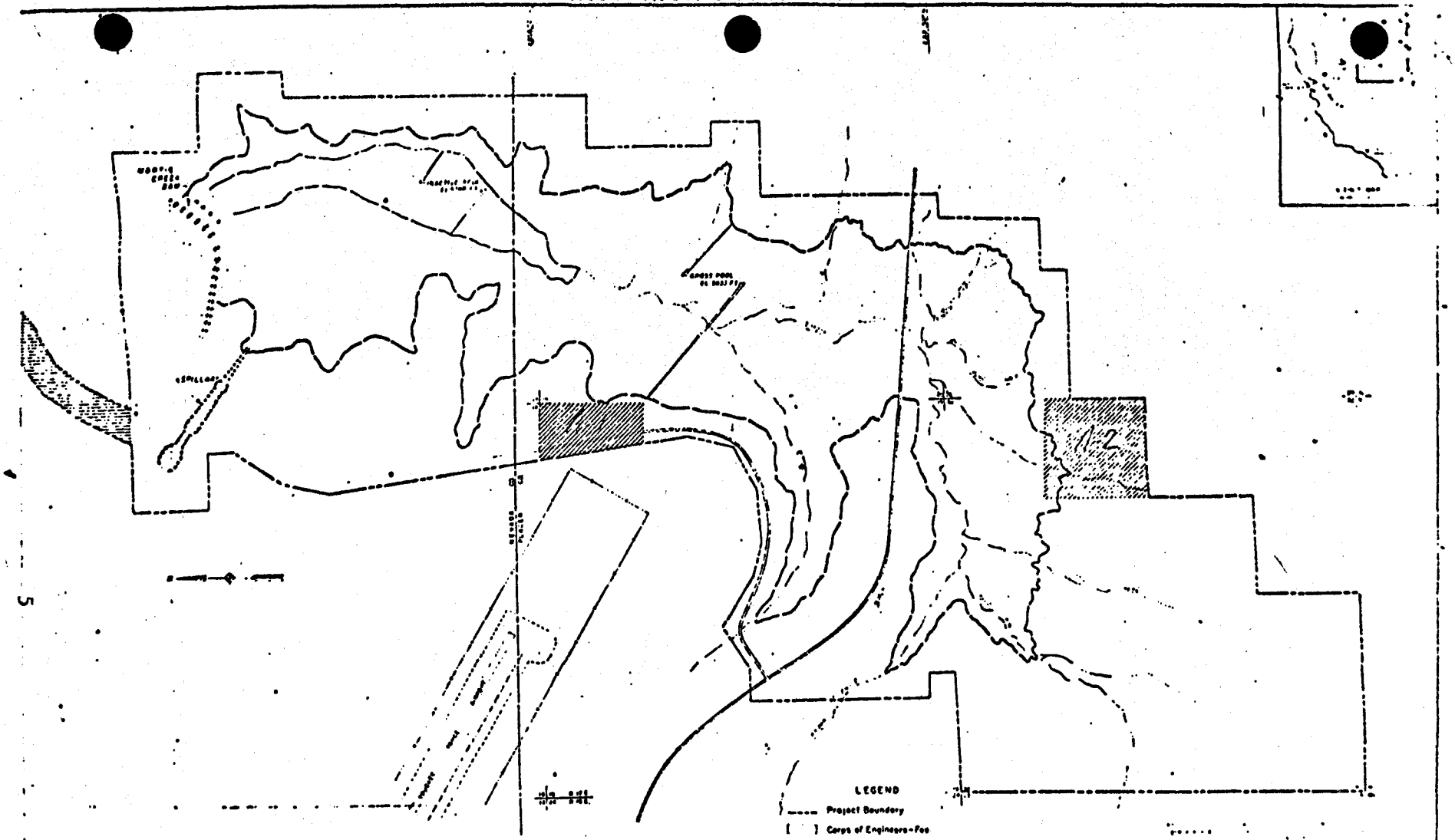
DRAWN BY: D.W.A.
CHECKED BY: J.J.H.
PREPARED BY:
SUBMITTED: CHIEF, ENVIRONMENTAL PLANNING SECTION

TRUCKEE RIVER AND TRIBUTARIES, CALIFORNIA AND NEVADA
MARTIS CREEK LAKE
MASTER PLAN

LAND STATUS

APPROVAL RECOMMENDED: CHIEF, WATER RESOURCES PLANNING BR
APPROVED: CHIEF, ENGINEERING DIVISION
DATE: NOVEMBER 1977
PREPARED UNDER THE DIRECTION OF: DONALD M. O'SHEI, COL., CORPS OF ENGINEERS, U.S.A., DISTRICT ENGINEER
SCALE: AS SHOWN
FILE NO. TR-4-20-63
SHEETS
SHEET NO.

Exhibit A



DEPARTMENT OF THE ARMY
SACRAMENTO DISTRICT CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

MASTER PLAN

LAND STATUS

Exhibit B

TRACT A-1

A portion of the SE 1/4 of Section 18, T. 17 N., R. 17 E., M.D.M., in the Counties of Nevada and Placer, State of California, and described as follows:

BEGINNING at the corner common to Sections 17, 18, 19, and 20 of said Township and Range:

THENCE, (1) S 88° 26' 42" W, 725.63 feet along the South line of said Section 18 to the Westerly line of a proposed access road;

THENCE, (2) N 9° 25' 46" W, 1333.78 feet along said Westerly line to the East-West center line of the SE 1/4 of Section 18;

THENCE, (3) N 88° 06' 48" E, 917.57 feet along said East-West center line to the East line of Section 18, the S 1/16 corner between Sections 17 and 18;

THENCE, (4) S 1° 09' 29" E, 1326.54 feet along said East line to the point of BEGINNING and containing 24.97 acres, more or less.

TRACT A-2

SE 1/4 NE 1/4 of Section 30, T. 17 N., R. 17 E., M.D.M., containing 40 acres, more or less.

PROJECT: Martis Creek Reservoir

TRACT NO: A-1 & A-2

OWNER: U.S.A. - F.S.

DATE: June 9, 1967

REVISED: November 1, 1967

MEMORANDUM OF UNDERSTANDING BETWEEN THE CORPS OF ENGINEERS AND THE FOREST SERVICE REGARDING MANAGEMENT OF WATER, LAND, AND RECREATION RESOURCES ASSOCIATED WITH THE MARTIS CREEK LAKE PROJECT, NEVADA AND CALIFORNIA, ON THE TAHOE NATIONAL FOREST, CALIFORNIA.

THIS MEMORANDUM OF UNDERSTANDING is entered into by and between the Corps of Engineers, Department of the Army, Department of Defense, hereinafter referred to as "the Corps", and the Forest Service, Department of Agriculture, hereinafter referred to as "the Service", as of _____, 1977.

Recitals

(1) The Corps operates the Martis Creek Lake project (hereinafter referred to as "the project") on Federal lands along Martis Creek in Nevada and Placer Counties, California, within the exterior boundary of the Tahoe National Forest.

(2) The Service administers the National Forest System lands within the exterior boundaries of said National Forest, including about 65 acres of National Forest lands within the project.

(3) The parties hereto wish to establish joint principles and policies concerning management of lands and resources of the project.

(4) This Memorandum of Understanding is entered into pursuant and supplemental to paragraph 9 of the Memorandum of Agreement, dated 13 August 1964, between the Secretaries of Army and Agriculture, relative to cooperating in the planning, development, and management of water resources projects associated with the National Forest System.

Agreements

The parties hereto agree as follows:

I. A Master Plan for the project will be prepared by the Corps. The portion of the Plan relating to matters agreed upon as the Service responsibilities will be mutually developed and reviewed annually by the Corps project manager and the responsible District Ranger of the Service. The Plan will provide criteria for the development, administration, and management of the project to assure preservation of its scenic, biological, recreational, historical, and archeological resources; and to assure coordination with interested Federal, State and local agencies.

II. The Corps and the Service will mutually prepare fire prevention and control plans for the project, which will include provisions for fire prevention and fire control clauses in all the Service and the Corps contracts. The Service will be responsible for fire protection on the project lands.

III. The Corps will be responsible for management of all lands within the project boundary shown on Exhibit A.

IV. The Corps and the Service, pursuant to the provisions of Public Law 84-804 (Act of July 26, 1956; 70 Stat. 656; 16 USC § 505a and 505b), and as outlined in the Truckee-Little Truckee Rivers Land Use Plan of the Tahoe National Forest, shall pursue

a policy of interchanging the two parcels of land delineated on Exhibit A and described in Exhibit B. After the interchange is effected, all the lands within the existing project boundary will still be withdrawn from mineral entry.

V. If needed, the Corps and the Service will jointly prepare rules and regulations governing lands on each side of the project boundary to be used and occupied by the general public. The Corps and the Service through the District Engineer and the Forest Supervisor will coordinate land use proposals on adjacent lands prior to issuing any permits, easements, or initiating any land management activities.

VI. Ancillary operating agreements needed to implement this Memorandum of Understanding may be entered into by the Forest Supervisor of the Tahoe National Forest and the District Engineer of the Sacramento District, to the extent of the authorities of their respective offices, to set forth mutual understandings, responsibilities, or obligations.

VII. Each party hereto shall have a right to ingress and egress upon the lands of the other for the purposes of carrying out the authorities of their respective agencies.

VIII. This Memorandum of Understanding may be amended at any time by the mutual consent of the parties hereto.

IN WITNESS WHEREOF, the parties hereto have executed this instrument in duplicate as of the date first hereinabove written.

CORPS OF ENGINEERS
DEPARTMENT OF THE ARMY
DEPARTMENT OF DEFENSE

By _____
Chief of Engineers
Corps of Engineers
United States Army

FOREST SERVICE
UNITED STATES DEPARTMENT
OF AGRICULTURE

By _____
Chief, Forest Service

Exhibit B

TRACT A-1

A portion of the SE 1/4 of Section 18, T. 17 N., R. 17 E., M.D.M., in the Counties of Nevada and Placer, State of California, and described as follows:

BEGINNING at the corner common to Sections 17, 18, 19, and 20 of said Township and Range:

THENCE, (1) S 88° 26' 42" W, 725.63 feet along the South line of said Section 18 to the Westerly line of a proposed access road;

THENCE, (2) N 9° 25' 46" W, 1333.78 feet along said Westerly line to the East-West center line of the SE 1/4 of Section 18;

THENCE, (3) N 88° 06' 48" E, 917.57 feet along said East-West center line to the East line of Section 18, the S 1/16 corner between Sections 17 and 18;

THENCE, (4) S 1° 09' 29" E, 1326.54 feet along said East line to the point of BEGINNING and containing 24.97 acres, more or less.

TRACT A-2

SE 1/4 NE 1/4 of Section 30, T. 17 N., R. 17 E., M.D.M., containing 40 acres, more or less.

PROJECT: Martis Creek Reservoir

TRACT NO: A-1 & A-2

OWNER: U.S.A. - F.S.

DATE: June 9, 1967

REVISED: November 1, 1967

APPENDIX H

Letters and Reports of Other Agencies

CONTENTS

STATE OF CALIFORNIA—RESOURCES AGENCY EDMUND G. BROWN JR., Governor

DEPARTMENT OF FISH AND GAME
1416 NINTH STREET
SACRAMENTO, CALIFORNIA 95814
(916) 445-3535

December 30, 1976

Mr. George C. Weddell
Chief, Engineering Division
Sacramento District
Corps of Engineers
650 Capitol Mall
Sacramento, California 95814

Dear Mr. Weddell:

In response to your letter of September 27, 1976, requesting updated information on fish and wildlife considerations for Success and Martis Reservoirs for use in your master plan revision, we herewith submit the following:

Martis Creek Lake

Fisheries Management Program

The California Fish and Game Commission in November 1974 added Martis Creek Reservoir to the wild trout program which now includes 16 streams and one lake (Martis Reservoir).

Designated wild trout lakes are managed for the production of wild trout (produced by natural reproduction) or the rearing of semi-wild trout (from fingerling plants). At Martis Creek Reservoir the establishment of a trophy trout fishery (consisting of many trout over 14 inches in length) will be given major emphasis. Hatchery reared catchable-sized trout stocked for immediate capture will not be used in the management of this water.

The special status designation of Martis Creek Reservoir is accompanied by a two-trout limit and a winter fishing closure. Although Martis Creek Reservoir is very fertile and possesses excellent spawning tributaries, it is not known whether natural recruitment will be adequate to maintain good fishing. An evaluation will determine whether supplemental fingerling plants will be necessary or whether the abundant nongame fish population will need to be controlled.

Currently the species managed in Martis Creek Reservoir are trout, including brown, rainbow and one or more strains of cutthroat x rainbow hybrids. As our continuing study progresses, the species and/or strains of trout used in management may change.

Habitat improvements that could be important parts of management are (1) a rough fish barrier on the inlet stream, (2) silt control and stream bank erosion control on the tributary streams and within the reservoir basin, and (3) rough fish control by chemical means within the reservoir. No specific plans have been developed on these items but all are under consideration.

We view Martis Creek Reservoir as a key water in our statewide fisheries management program. In contrast to most other waters where management is directed to full exploitation of the game fish resources available at Martis, we hope to build and maintain on a continuing basis a high density trout population of trophy size. Management procedures and angling regulations will be adjusted to meet this objective. Because of its strategic location and the unique nature of the program, Martis Creek Reservoir could become a showcase area.

At issue is the degree the public will accept this type of fishery; this in turn is critical to your planning for public use. It will be some years before we have an answer to this.

Wildlife Management Program

At Martis Creek Reservoir, wildlife management has been directed to the enhancement of the wildlife management area as a goose-nesting site. Measures already in effect are vehicle exclusion, fencing to reduce disturbance, and installation of nesting structures.

Under discussion is the possible use of portable pumps and irrigation equipment to enhance production of forage plants. This proposal would require support from local cooperators, sportsmen, or Sikes Act-funded employees and would benefit game and nongame wildlife by increasing the availability of good quality forage adjacent to water and shelter. The game species of wildlife expected to benefit are Canada geese, deer, rabbits and upland game birds. Nongame species include song birds and shore birds.

Public access in the wildlife mitigation area should continue to be based on foot rather than vehicular travel.

Success Lake

Success Lake and associated project lands provide valuable fish and wildlife habitat as well as opportunities for recreational enjoyment of these resources by the public.

A significant amount of habitat has been developed on the wildlife area through the mutual efforts of the Department and the Corps. Maintenance of this habitat is carried out by Corps personnel in consultation with our Wildlife Management personnel. The most popular uses of the wildlife area are hunting dog field trials under permit from the Corps, and upland game hunting during the regular season. The Tulare County Sportsman's Council annually releases pheasants on the area which attracts hunters in good numbers dependent upon the number of birds released. For the sake of safety and maintenance of quality hunting, we recommend the number of hunters allowed on the area at one time be limited to 100. This number has been exceeded in the past, particularly on the opening weekend of pheasant season.

Operation and maintenance of the wildlife area is satisfactory in most regards. In relation to habitat, we feel conditions could be improved by selective spring discing of certain areas which could be planted to grain crops preferably wheat for the purpose of increasing the amount of edge throughout the area. Alternate fallow strips should be disced in the spring and allowed to grow mullein. We would gladly work with the Corps in planning this type of habitat improvement project.

With regard to the fishery existing in Success Reservoir, our biologists have provided the following list of problems.

1. Water level fluctuation in spawning seasons (April-May) exceeds the limits for successful spawning in about 40 percent of years. (Upward - 5 feet per month; downward - 3 feet per month).

2. Very little vegetative cover is present to provide escape cover for juvenile gamefish.

3. The annual exploitation rate of largemouth bass exceeds 50 percent which is indicative of overharvest.

4. Overpopulation on non-game fish (primarily carp) reduces gamefish production.

Some measures which could reduce the above problems or improve fish conditions are listed below: (Numbers coincide to problem).

1. Maintain water elevations within specified limits during the months of April and May. These limits should not exceed 5 vertical feet of rise or 3 vertical feet of drawdown in any 30-day period. This would promote

early-spawning of black bass and other gamefish. Increased survival of juveniles would result. Large gravel spawning beds would also enhance the spawning habitat for bass.

2. Carry out a revegetation program in which beneficial (for fishlife) plants are established throughout the reservoir where practicable. Some plants which are known to be valuable and create minimal problems in downstream waterways are: Willows (Salix) various species, Lady's Thumb (Polygonum persicaria), bottombush (Cephalanthus occidentalis). Artificial cover can also benefit fish populations, such as brush shelters and tire reefs.

3. A 12" minimum length limit on black bass could help to reduce the harvest of largemouth bass. We will be gathering information to support a change to 12" minimum for Success Lake.

4. Several approaches to non-game fish control are possible. Examples are: chemical treatment of the reservoir and upstream drainage, partial treatments of carp spawning areas in the spring, liberalized and encouraged harvest methods such as underwater spearfishing, encouraging commercial harvest and utilization of non-game species for food or fertilizer. Provisions to draw the reservoir down past minimum pool may be helpful in controlling non-game fish populations or for other fish management purposes.

5. Another opportunity for improving fishing may exist where a gravel extraction operation has been proposed on private land just east of the project boundaries and adjacent to the Tule River. The resulting pits, when abandoned, could provide excellent warmwater angling. We should recommend that the master plan provide for purchase and management of the land for wildlife, fisheries and recreation.

If further information is needed, please let us know.

Ec Fullerton

Director

United States Department of the Interior
FISH AND WILDLIFE SERVICE
Division of Ecological Services
2800 Cottage Way, Room E-2727
Sacramento, California 95825

February 1, 1977

District Engineer
Sacramento District, Corps of Engineers
650 Capitol Mall
Sacramento, California 95814

Dear Sir:

This responds to a letter from Mr. George Weddell dated December 9, 1976, requesting updated information on fish and wildlife management for Martis Creek Lake. We discussed this matter with members of your staff and California Department of Fish and Game personnel on January 21, and as a result submit the following comments for your consideration in updating the Master Plan for this area.

Fishery Management Program

The lake is being managed as a wild trout fishery. According to the DFG, it is not yet known if natural recruitment will be adequate to maintain a quality fishery. Although several habitat improvement measures are under consideration, no specific measures can be recommended until our evaluation of the present program has been completed.

Wildlife Management Program

The upper half of the area is being managed for wildlife purposes. Present management includes exclusion of vehicles, fencing to reduce disturbance, and installation of goose-nesting platforms. Public access to this area should be restricted to foot traffic. The Corps' plan for trails in the area would be of benefit to those who wish to observe and photograph wildlife.

Deer hunting is allowed in the project areas. However, this activity may have to be prohibited in the future as residential and other developments adjacent to the reservoir increase.

One activity that could be a problem is snowmobiling. In order to prevent damage to vegetation snowmobiling should be prohibited until

the depth of the snow is sufficient to protect sagebrush and other plants valuable to wildlife. By that time the migratory deer herd is at lower elevations on their winter range.

Improving forage plant production would benefit deer, upland game and nongame species. This, along with the creation of small ponds on tributaries, appears to have merit and should be considered in the overall management of the wildlife area.

We appreciate the opportunity to provide input to the Master Plan for Martis Creek Lake.

Sincerely,

Richard Hurst

for Felix E. Smith
Field Supervisor

cc: ARD-Env. (ES), FWS, Portland, OR

County of Nevada

Planning Department

Courthouse, Nevada City, California 95959 Tel. (916) 265-2461 Ext. 260

June 14, 1977

Mr. George C. Weddell, Chief
Engineering Division
Department of the Army
Sacramento District
Corps of Engineers
650 Capitol Mall
Sacramento, California 95814

Dear Mr. Weddell:

This is in response to your request for comments concerning the Martis Creek Lake Master Plan, September 1977. The following are our comments:

1. Access - There has been some discussion in the past concerning the fact that Highway 267 may be functioning near, at, or over capacity. Certainly the traffic problems at the intersection of Highway 267 and Commercial Row in downtown Truckee are highly visible. This raises the question as to the impact of approximately 75,000 recreation days on Highways 267 and the abovementioned intersection. A greater discussion and understanding of this problem is warranted.

2. Sewage - It appears that the majority of sewage will be disposed of through the Truckee Sanitary District. As I am sure you are aware, the TTSA regional sewerage treatment plant provides for only a limited increase in sewage capacity by the District. With a potential of 75,000 recreation days to be handled by the lake, some discussion is needed of the potential impact on the regional sewerage treatment facility.

3. Archaeological Sites - It is clear that there are numerous archaeological sites on or near the planning area. While an additional cultural resources reconnaissance will answer many questions, a greater discussion is needed concerning mitigation measures to minimize the impact of development upon these sites. It is important that the Truckee-Donner Historical Society, Nevada County Historical Society, and the State Department of Parks and Recreation be involved in such a task.

It may well be that the above points are thoroughly discussed in the Environmental Assessment; however, this department did not review that document.

We appreciate the opportunity to comment on the plan and will be happy to discuss further any of the above points.

Very truly yours,

(Mrs.) Sharon M. Boivin
Planning Director

By: Patrick S. Norman
Patrick S. Norman
Planner II

SMB:PSN/jsd

STATE OF CALIFORNIA—TRANSPORTATION AGENCY EDMUND G. BROWN JR., *Governor*

DEPARTMENT OF TRANSPORTATION
DISTRICT 3
P. O. BOX 911, MARYSVILLE 95901
Telephone (916) 674-4543

03-Pla-267
Martis Creek Lake
Master Plan

July 14, 1977

Col. George C. Weddell
Chief, Engineering Division
Department of the Army,
Sacramento District,
Corps of Engineers
650 Capitol Mall
Sacramento, CA 95814

Dear Colonel Weddell:

Thank you for the opportunity to review the draft of the Martis Creek Lake Master Plan.

The Master Plan does not indicate the traffic circulation problem that exists in Truckee on State Highway Route 267. We assume that an environmental document will be prepared when projects are to be implemented within the Master Plan. The environmental document should assess the transportation problem and the impact of the new recreation facilities on the traffic in the area, as well as possible mitigation measures.

On page 43 of the Master Plan is a discussion of possible left-turn channelization at the intersection of State Highway Route 267 and the recreation access road. An environmental study of the impact of the proposed work on State Route 267 right of way will be required before an Encroachment Permit for the work can be issued by Caltrans.

Very truly yours,

LEO J. TROMBATORE
District Director of Transportation

B E Brockett

B. E. Brockett
District Transportation Planner
Transportation Planning Branch B

STATE OF CALIFORNIA—RESOURCES AGENCY EDMUND G. BROWN JR., Governor

DEPARTMENT OF FISH AND GAME
Region 2
1001 Jedsmith Drive
Sacramento, California 95819
(916) 445-0889

July 19, 1977

Mr. George C. Weddell
Chief, Engineering Division
Sacramento District, Corps of Engineers
650 Capitol Mall
Sacramento, California 95814

Dear Mr. Weddell:

The Department of Fish and Game has reviewed the draft master plan for Martis Creek Lake, Placer and Nevada counties.

The draft adequately discusses and considers the fish and wildlife values of the project and we therefore recommend adoption and implementation of its recommendations.

Thank you for the opportunity to participate in planning for this project.

Sincerely,

Clifford Matthews
FOR
Robert W. Lassen
Regional Manager
Region 2

SIERRA PLANNING ORGANIZATION
A Joint Powers Agency Consisting of

11572 "B" Avenue
DeWitt Center
Auburn, California 95603
(916) 823-4703

Nevada County
Placer County
Sierra County
El Dorado County

July 22, 1977

Dept. of the Army
Sacramento District, Corps of Engineers
650 Capitol Mall
Sacramento, California 95814

Reply attention to: S.P.K.E.D.-W.

Dear Mr. Holmberg:

The Sierra Planning Organization has received and reviewed the synopsis report of the "updated Master Plan for Martis Creek Lake" in Placer and Nevada Counties.

No adverse comments regarding the proposed conservation, development, or public use of Martis Creek Lake have been received from the above-mentioned jurisdictions. We have therefore, determined that the environmental impacts of the updated plan are consistent with areawide environmental policies.

Sincerely,

Frank P. Taylor
Planner

Eng

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE

Tahoe National Forest
Nevada City, CA 95959

2760
July 22, 1977

George C. Weddell
Chief, Engineering Div.
Sacramento Dist., Corps of Engineers
650 Capitol Mall
Sacramento, CA 95814

Your Ref: SPKED-W

Dear Mr. Weddell:

The Draft Master Plan for Martis Creek Lake, Truckee River Tributaries, California and Nevada, enclosed with your letter of June 6, 1977, has been reviewed.

We have no comments or suggestions for your consideration in the development of the final master plan.

Thank you for providing us with the opportunity to review and comment on the plan, which has been well prepared.

Sincerely,

ROBERT G. LANCASTER
Forest Supervisor

Engr.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Division of Ecological Services
2800 Cottage Way, Rm. E-2727
Sacramento, California 95825

July 28, 1977

District Engineer
Sacramento District, Corps of Engineers
650 Capitol Mall
Sacramento, California 95814

Dear Sir:

We have reviewed the draft master plan for Martis Creek Lake, Truckee River and Tributaries, California and Nevada, as requested by Mr. Weddell in a letter to us dated June 6, 1977.

The draft adequately covers plans for the conservation and development of fish and wildlife resources in the project area. We appreciate the opportunity to provide our comments on the plan.

Sincerely,

James D. Carson
for Felix E. Smith
Field Supervisor

CONSERVE AMERICA'S ENERGY

Save Energy and You Serve America!

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Division of Ecological Services
2800 Cottage Way, Rm. E-2727
Sacramento, California 95825

August 10, 1977

District Engineer
Sacramento District, Corps of Engineers
650 Capitol Mall
Sacramento, California 95814

Dear Sir:

Your staff has advised that information is desired with respect to the possible impacts that developments at Martis Creek Lake, as described in your draft master plan, will have on endangered or threatened species. We do not anticipate that implementation of the master plan will adversely affect any species officially listed by the U.S. Government as endangered or threatened.

Sincerely,

James D. Carson

Felix E. Smith
Field Supervisor

CONSERVE AMERICA'S ENERGY

Save Energy and You Serve America!

Advisory Council on
Historic Preservation
1522 K Street N.W.
Washington, D.C. 20005

August 30, 1977

Mr. George C. Weddell
Chief, Engineering Division
Sacramento District
Corps of Engineers
650 Capitol Mall
Sacramento, California 95814

Dear Mr. Weddell:

This is in response to your request of August 15, 1977, for comments on the draft master plan for Martis Creek Lake, Truckee River and Tributaries, California and Nevada. The Council has reviewed the draft master plan and notes that while some cultural resource studies have been completed, the Corps of Engineers recognizes that more detailed studies need to be made as this proposed project advances through the planning stages. We also note that the Corps is fully aware of its responsibility pursuant to Section 106 of the National Historic Preservation Act (16 U.S.C. 470f, as amended, 90 Stat. 1320) as applicable to the proposed undertaking. Accordingly, we look forward to working with the Corps in accordance with the "Procedures for the Protection of Historic and Cultural Properties" (36 C.F.R. Part 800) as appropriate in the future.

Should you have questions or require additional assistance, please contact Michael H. Bureman of the Council's staff at P. O. Box 25085, Denver, Colorado 80225 or telephone number (303) 234-4946. Your continued cooperation is appreciated.

Sincerely yours,

Michael H. Bureman

Louis S. Wall
Assistant Director, Office of
Review and Compliance

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF OUTDOOR RECREATION
PACIFIC SOUTHWEST REGIONAL OFFICE
BOX 36062
450 GOLDEN GATE AVENUE
SAN FRANCISCO, CALIFORNIA 94102

IN REPLY REFER TO:
D6427

SEP 9 1977

Mr. George C. Weddell
Chief, Engineering Division
Sacramento District, Corps of
Engineers
650 Capital Mall
Sacramento, California 95814

Dear Mr. Weddell:

Thank you for the opportunity to review the draft master plan for Martis Creek Lake. We are pleased with the overall objectives that you propose and believe that your efforts to coordinate planning with various agencies and interest groups will result in a comprehensive plan which recognizes and provides for growing recreation demands. We must also commend your office for encouraging recreation use by special groups (e.g., handicapped and elderly) and recognizing the needs of these people in order that they may participate in and enjoy outdoor activities.

We appreciate the opportunity to comment on your study.

Sincerely yours,

Frank E. Sylvester
Regional Director

United States Department of the Interior
NATIONAL PARK SERVICE
WESTERN REGION
450 GOLDEN GATE AVENUE, BOX 36063
SAN FRANCISCO, CALIFORNIA 94102

IN REPLY REFER TO:
L7423
(WR)REA

September 13, 1977

Mr. George C. Weddell
Chief, Engineering Division
Department of the Army
Sacramento District, Corps of Engineers
650 Capitol Mall
Sacramento, California 95814

Dear Mr. Weddell:

This is in response to your review request of August 15 concerning the draft master plan for Martis Creek Lake, Truckee River and Tributaries, California and Nevada.

The previously located cultural resources, and resources identified in the course of an intensive survey in the Martis Creek Lake area, should be evaluated for their significance pursuant to National Register of Historic Places criteria. If they appear to qualify for inclusion, a program to mitigate against any adverse effects should be developed in consultation with the State Historic Preservation Officer and the Advisory Council on Historic Preservation. In addition, the final master plan should contain documentation that the State Historic Preservation Officer has been consulted concerning the presence of properties listed on, eligible for, or pending nomination to the National Register of Historic Places.

Sincerely yours,

Bruce M. Kilgore

Bruce M. Kilgore
Associate Regional Director,
Resource Management and
Planning

cc:
Chief, Western Archeological Center
Interagency Archeological Services, San Francisco

GPO 789-127/04