# Hansen Dam
# Master Plan
# Final

## U.S. Army Corps of Engineers
## Los Angeles District

## December 1991

## PREFACE

This master plan provides guidance for the use, development and management of the natural and man-made resources of the Hansen Dam project area. The Hansen Dam project area offers a unique and large open space within the large and highly developed metropolitan area of Los Angeles, California. Hansen Dam is a completed component of the Los Angeles County Drainage Area (LACDA) Project for flood control.

Because flood control was and remains the primary purpose of the Hansen Dam project, this document considers these requirements first. It also identifies environmentally sensitive areas, and multiple resource management areas for future use. Careful planning is required to balance the sometimes competing needs and desires of the public with environmental protection requirements. If implemented, however, we are confident that this master plan will allow optimal use of the subject natural and recreational resources.

Conceptual guidance is provided in this plan on recreation development for undeveloped recreation areas, and for the immediate expansion of the equestrian center and development of a swimming lake and associated recreational facilities.

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# Introduction

# 1. INTRODUCTION

## PROJECT AUTHORIZATION

1.01 Hansen Dam was constructed by the U.S. Army Corps of Engineers (Corps) under authority of the Flood Control Act of 22 June 1936 for flood control, (Public Law 74-738), and was completed in 1940 at a Federal cost of about $11,000,000.00. The Flood Control Act of 1944, as amended (Public Law 78-534), authorized the Corps to construct, maintain and operate public park and recreational facilities at such water-resource development projects. This law also permitted the Corps to authorize local interests to construct, maintain, and operate recreational facilities.

1.02 Section 847 of Public Law 99-662, November 17, 1986, Water Resources Development Act of 1986, authorized the Secretary of the Army to develop Hansen Dam as follows:

> **"Sec. 847. HANSEN DAM, LOS ANGELES AND SAN GABRIEL RIVERS, CALIFORNIA.**
>
> (a) The Hansen Dam project authorized as part of the flood control project for the Los Angeles and San Gabriel Rivers, California, by section 5 of the Flood Control Act approved June 22, 1936 (49 Stat. 1589), is modified to authorize the Secretary to contract for the removal and sale of dredged material from the flood control basin for Hansen Dam, Los Angeles County, California, for the purposes of facilitating flood control, recreation, and water conservation. All funds received by the Secretary from the removal and sale of such dredged material shall be deposited in the General Fund of the Treasury.
>
> (b) There is authorized to be appropriated for fiscal years beginning after September 30, 1986, an amount not to exceed the amount of funds received by the Secretary from the removal and sale of dredged material under subsection (a). Amounts appropriated under this subsection shall be available to the Secretary--
>
> (1) to construct, operate, and maintain recreational facilities at the Hansen Dam project; and
>
> (2) to the extent consistent with other authorized project purposes, to facilitate water conservation and ground water recharge measures at the Hansen Dam project in coordination with the city of Los Angeles, California, and the Los Angeles County Flood Control District; at full federal expense."

Hansen Dam and the flood control basin are referred to in this master plan as the Hansen Dam project area.

1.03 The Energy and Water Development Appropriations Act, 1991, Public Law 102-104, signed 17 August 1991, directed that the Corps of Engineers is to plan, design, and construct a swim lake and associated recreational facilities at Hansen Dam using appropriated Federal funds.

## PURPOSE OF THE MASTER PLAN

1.04 The subject master plan is intended as a guide for the orderly and coordinated use, development and management of all resources within the Hansen Dam project area. Available land and other resources have been assessed and are considered in a manner that would provide for the best possible use of land in consideration of project purposes.

1.05 ER 1130-2-435, dated 30 December 1987, "Preparation of Project Master Plans," lays out operative policy and procedures:

> "a. Master plans [will] be developed and kept current for all Civil Works projects and other fee owned lands for which the Corps has administrative responsibility for management;
>
> b. The master plan [will] be an essential element in fostering an efficient and cost-effective project and natural resources management program;
>
> c. The master plan provides direction for project development and use and as such is a vital tool for the responsible stewardship of project resources for the benefit of present and future generations; and,
>
> d. The master plan promotes the protection, conservation and enhancement of natural, cultural and man-made resources."

Updating of the Hansen Dam Master Plan is necessitated by the lack of a current master plan that implements the above policy.

## PERTINENT PUBLICATIONS

1.06 Prior publications pertinent to this plan include the following previously issued publications.

| Publication | Date |
|---|---|
| Analysis of Design Hansen Dam - Volume 1 | May 1938 |
| Analysis of Design Hansen Dam - Volume 2 | May 1938 |
| Hydrology in the Los Angeles County Drainage Area | March 1939 |
| Operations and Maintenance Manual Los Angeles County Drainage Area | 1975 |
| Hansen Dam Master Plan Los Angeles County Drainage Area, California | February 1975 |
| Los Angeles County Drainage Area, California Reconnaissance Report on Sediment Storage Capacity at Hansen Dam Under Major Rehabilitation Program | June 1981 |
| Environmental Assessment for Debris Removal Hansen Dam Flood Control Basin | January 1984 |
| Hansen Dam Preliminary Formulation Report | September 1984 |
| Final Report, Review of Water Resources within the Los Angeles County Drainage Area | 1985 |
| Los Angeles County Drainage Area Recreation Review | September 1988 |
| Draft Supplemental Environmental Assessment for Debris Removal Hansen Dam Flood Control Basin | January 1990 |
| Water Control Manual Hansen Dam - Tujunga Wash, Los Angeles County, California | June 1990 |

1.07 Proposed publications include the following:

15-Acre Swimming Lake at Hansen Dam and EIS/EA

## APPLICATION OF PUBLIC LAWS

1.08 The following laws provide for the development and management of Federal projects for various purposes according to the intent of Congress:

1. Public Law 78-534 **(The Flood Control Act of 1944)**, as amended by the Flood Control Acts of 1946, 1954, 1960, and 1962, authorizes the Corps of Engineers to construct, maintain, and operate public park and recreational facilities at water resources-development projects, and to permit local interests to construct, maintain and operate such facilities.

2. Public Law 85-624 **(The Fish and Wildlife Coordination Act of 1958)** requires that the Corps of Engineers and any agency impounding, diverting, or controlling water, consult with the United States Department of the Interior, Fish and Wildlife Service. The Department of the Interior would determine possible damage resulting to wildlife resources and measures needed to prevent such damage, and would be consulted on measures proposed for development and improvement of such resources.

3. Public Law 89-72 **(The Federal Water Project Recreation Act of 1965)**, accompanied by House Committee Report No. 254, requires that the Corps of Engineers and other Federal agencies give full consideration to fish and wildlife enhancement. It also provides for non-Federal participation in land acquisition and in the development and management of recreational facilities and fish and wildlife resources.

4. Public Law 89-665 **(The National Historic Preservation Act of 1966)**, as amended in 1980, directs the Corps of Engineers and other Federal agencies to provide leadership in preserving, restoring and maintaining the historic and cultural environment of the Nation.

5. Public Law 91-190 **(The National Environmental Policy Act of 1969)**, requires that an environmental impact statement be filed by the Corps of Engineers and other agencies describing the environmental effects of each project having a significant impact on the environment, and the means and measures necessary to minimize any adverse effect. An environmental impact statement has been prepared regarding this master plan.

6. Public Law 91-604 **(The Clean Air Act, as amended)**, specifies that any Federal activity which may result in discharge of air pollutants

must comply with Federal, state, interstate, and local requirements respecting control and abatement of air pollution.

7. Public Law 93-205 (**The Endangered Species Act of 1973, as amended**), requires Federal agencies to utilize their authorities to carry out programs for conservation of endangered and threatened species protected by the Act.

8. Executive Order 11988 (**Floodplain Management**, 24 May 1977) requires that the Corps of Engineers and other Federal agencies prevent avoidable adverse or incompatible developments in floodplains by assessing a proposed course of action, considering alternative approaches when adverse effects would result, and formulating designs and project modifications in order to minimize the potential harm.

## APPLICABLE REGULATIONS

1.09 The following regulations provided policy and guidance for preparation of the master plan:

1. ER 1130-2-435 (**Project Operation--Preparation of Project Master Plans**, 30 December 1987) provides policy and guidance for the preparation of master plans for the U.S. Army Corps of Engineers Civil Works.

2. ER 1130-2-400 (**Project Operation--Management of Natural Resources and Outdoor Recreation at Civil Works Water Resource Projects**, June 1986) provides policy and procedural guidance for the administration and management of civil works water resource project only. General policies regarding planning, authorization, development and construction of civil works projects are contained in references and in other regulation and policy statements.

3. ER 1165-2-400 (**Recreation Planning, Development and Management Policies**, August 1985) defines the objectives, philosophies and basic policies for the planning, development and management of outdoor recreation and enhancement of fish and wildlife resources at Corps of Engineers water resource development projects.

4. ER 200-2-2 (**Environmental Quality: Policy and Procedures of Implementing NEPA**, March 1988) provides policy and procedural

guidance to supplement the Council on Environmental Quality final regulations implementing the procedural provisions of NEPA.

## PROJECT SCOPE

1.10 This master plan has been prepared to guide the development of recreational facilities in the Hansen Dam project area. It provides general concepts for development of undeveloped lands, and specific concepts for development of a 15-acre swimming lake. In preparing the master plan, consideration was given to the need for operation and maintenance for flood control, the existing ecology of the reservoir area, the need for recreational development, the amount of recreational development considered desirable, and administration of the recreational area and facilities. The City of Los Angeles Department of Recreation and Parks participated in the preparation of this master plan.

1.11 Specific proposals for development, including specific designs for an approximately 15-acre lake, will require additional evaluation and supplemental environmental documentation.

# Project Description

## 2. PROJECT DESCRIPTION

### LOCATION

2.01 Hansen Dam is located on the confluence of the Big and Little Tujunga Washes along the northern edge of the San Fernando Valley. The basin lies in a developing area of both commercial and residential growth and is rapidly reaching capacity. A map showing project location is provided on Figure 1.

2.02 The area is readily accessible by automobile from several freeways, highways and boulevards: Interstate 5 (Golden State Freeway), Interstate 210 (Foothill Freeway), State Highway 118 (Foothill Boulevard), and San Fernando Road.

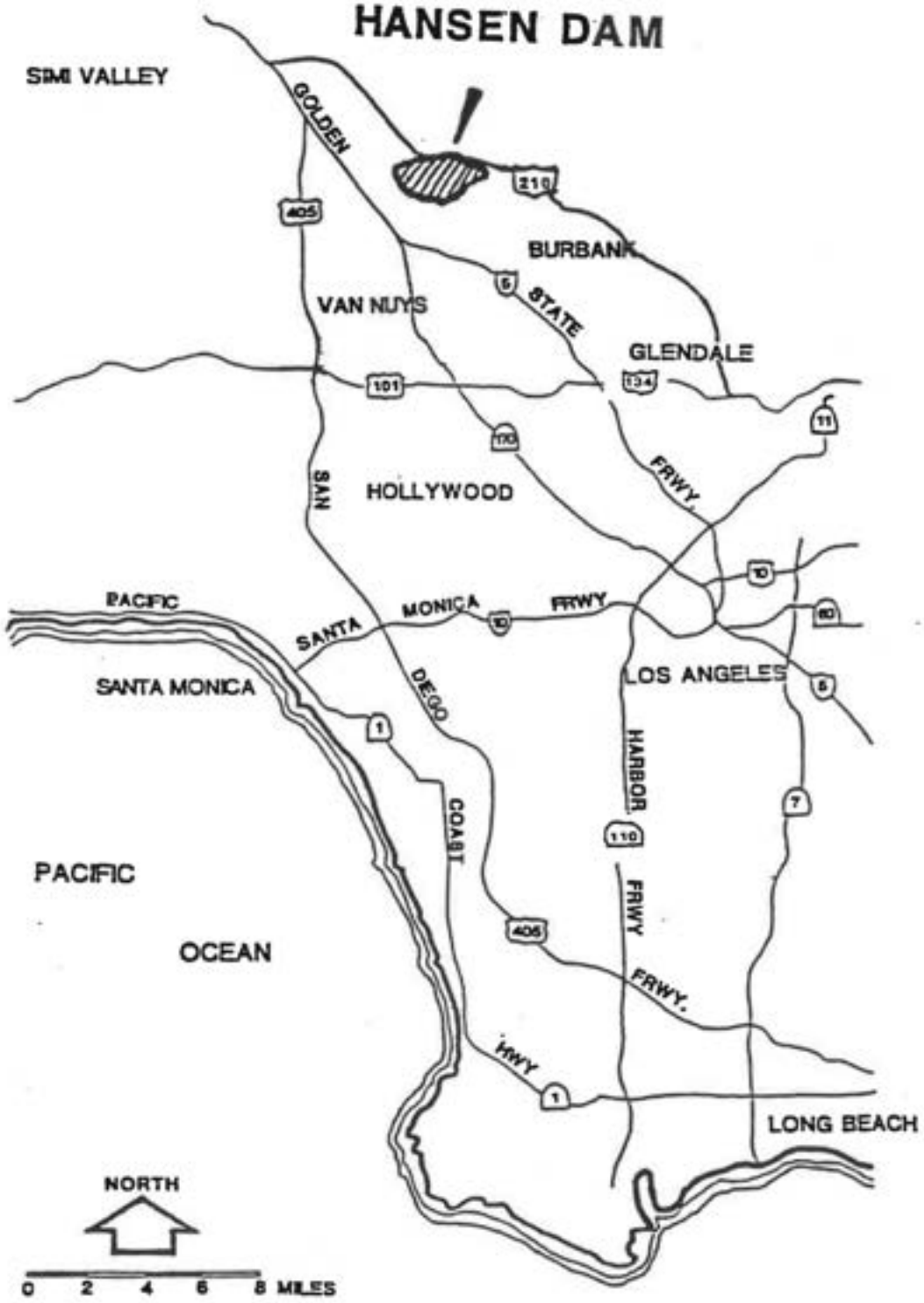
### PROJECT DATA

2.03 On September 5, 1940, the Hansen Dam Flood Control Project was completed at a cost of over $11,000,000.00. With a capacity of over 29,700 acre-feet of flood water storage, the dam forms a major part of the comprehensive plan for the Los Angeles County Drainage Area. The dam is 10,475 feet long with a crest elevation of 1087.0 feet and a maximum height of 97 feet. The dam is oriented in an east-west direction across Tujunga Wash. The axis of the dam is curved in order to connect the abutments of the dam with a prominent rock mesa located on the east end of the dam site.

2.04 Primary project structures other than the dam include an approach channel, spillway, control tower and outlet works, and an outlet channel. The overall basin is about 2.7 miles wide, extends north about 1.3 miles and slopes generally northward at a grade of about 2 percent. The reservoir covers 1,090 acres at the maximum water surface elevation (elev. 1082.0) and 790 acres at the spillway crest elevation (elev. 1060.0). A list of pertinent data for the basin is shown in Table 1. Table 2 shows maximum water surface elevations which have been reached since dam construction.

### BASIN HYDROLOGY

2.05 The drainage area of the dam comprises about 151.9 square miles consisting predominately of relatively steep mountain terrain and comparatively small areas of flat valley floor. The drainage area is about 24 miles long, irregular in shape and varies from 5-1/2 to 9 miles in width. Elevations vary from about 7,124 feet at Mount Pacifico near the upper east edge of the drainage area to 2,000 feet at the west




VICINITY MAP

**Figure 1**

# TABLE 1

HANSEN DAM
TUJUNGA WASH, LOS ANGELES COUNTY, CALIFORNIA

## PERTINENT DATA

| | |
|---|---|
| Completion date | September 1940 |
| Stream system | Tujunga Wash |
| Drainage area, $mi^2$ | 151.9 |
| Reservoir: | |
| Elevation | |
| Debris pool, ft, NGVD | 1,010.5 |
| Flood control pool (spillway crest), ft, NGVD | 1,060 |
| Spillway design surcharge level, ft, NGVD | 1,081.8 |
| Probable maximum flood surcharge level, ft, NGVD | 1,081.2 |
| Top of dam, ft, NGVD | 1,087 |
| Area | |
| Debris pool, ac | 142.4 |
| Spillway crest, ac | 781.4 |
| Spillway design surcharge level, ac | 1,090 |
| Probable maximum flood surcharge level, ac | 1,061.5 |
| Top of dam, ac | 1,136.0 |
| Capacity, gross (based on 1983 sediment survey) | |
| Debris pool, ac-ft | 1,329 (0.17*) |
| Spillway crest, ac-ft | 25,446 (3.28*) |
| Spillway design surcharge level, ac-ft | 42,100 |
| Probable maximum flood surcharge level, ac-ft | 44,990 (5.72*) |
| Top of dam, ac-ft | 51,360 (6.53*) |
| Allowance for sediment (50-year), ac-ft | 10,500 (1.38*) |
| Allowance for sediment (100-year), ac-ft | 21,000 (2.67*) |
| Dam: | |
| Type | Earthfill |
| Height above original streambed, ft | 97 |
| Top length, ft | 10,475 |
| Top width, ft | 30 |
| Freeboard (Revised), ft | 5.8 |
| Spillway: | |
| Type | Ungated ogee |
| Crest length, ft | 284 |
| Probable maximum flood surcharge, ft | 21.2 |
| Design surcharge (Original), ft | 21.8 |
| Probable maximum flood discharge, $ft^3/s$ | 99,700 |
| Design discharge (Original), $ft^3/s$ | 101,000 |
| Outlets: | |
| Uncontrolled | |
| Number and size | 2 - 8'W x 6'H |
| Entrance invert elevation, ft, NGVD | 1,011 |
| Conduit Length, ft | 265 |
| Controlled | |
| Gates - Type | Vertical lift |
| Number and size | 8 - 5'W x 8'H |
| Entrance invert elevation, ft, NGVD | 990 |
| Conduit length, ft | 265 |
| Maximum capacity at spillway crest, $ft^3/s$ | 22,000 |
| Regulated capacity at spillway crest, $ft^3/s$ | 20,800 |
| Reservoir Design Flood (Original): | |
| Total volume (5-day), ac-ft | 70,700 |
| Inflow peak, $ft^3/s$ | 64,800 |
| Standard Project Flood (Current): | |
| Total Volume (4-day), excluding baseflow, ac-ft | 57,200 |
| Inflow peak, $ft^3/s$ | 53,000 |
| Spillway Design Flood (Original): | |
| Maximum 24-hour volume, ac-ft | 76,800 |
| Inflow peak, $ft^3/s$ | 129,600 |
| Probable Maximum Flood (Current): | |
| Total volume (5-day), ac-ft | 246,000 |
| Inflow peak, $ft^3/s$ | 105,000 |
| Historic maximums: | |
| Maximum release, $ft^3/s$ | 18,104 |
| Date | 3-2-83 |
| Maximum water surface elevation, ft, NGVD | 1,039.70 |
| Date | 3-2-83 |
| Maximum storage, ac-ft | 18,743 |
| Date | 1-24-43 |
| Maximum inflow peak (1 hour), $ft^3/s$ | 35,050 |
| Date | 2-10-78 |

* inches of runoff

## TABLE 2

## FLOODS ABOVE WATER SURFACE ELEVATION 1,011.0
## HANSEN DAM LOS ANGELES COUNTY DRAINAGE AREA, CALIFORNIA

| Date of Max. Water | Max. Water Surface Elevation (feet)* |
|---|---|
| 02 March 1983 | 1039.70 |
| 29 January 1983 | 1011.86 |
| 19 February 1980 | 1015.04 |
| 18 February 1980 | 1017.12 |
| 17 February 1980 | 1025.30 |
| 05 February 1978 | 1012.92 |
| 16 January 1978 | 1011.85 |
| 06 March 1978 | 1015.34 |
| 04 March 1978 | 1022.98 |
| 01 March 1978 | 1017.02 |
| 10 February 1978 | 1023.90 |
| 17 January 1978 | 1012.17 |
| 10 February 19731 | 1015.34 |
| 01 April 1969 | 1011.27 |
| 06 March 1969 | 1013.95 |
| 25 February 1969 | 1030.70 |
| 26 January 1969 | 1018.28 |
| 09 December 1966 | 1013.58 |
| 01 January 1966 | 1015.75 |
| 30 December 1965 | 1017.57 |
| 25 November 1965 | 1011.30 |
| 12 February 1962 | 1011.19 |
| 16 April 1968 | 1012.54 |
| 07 April 1952 | 1017.24 |
| 31 March 1952 | 1015.11 |
| 22 January 1952 | 1023.90 |
| 01 July 1944 | 1016.54 |
| 15 June 1944 | 1016.98 |
| 31 May 1944 | 1016.00 |
| 30 April 1944 | 1013.00 |
| 23 February 1944 | 1022.32 |

* Above ungated outlet elevation.

edge, to 990 feet at the dam site. The principal tributaries in the drainage area are the Little Tujunga and Big Tujunga Washes.

2.06 The climate in the drainage area is characterized by long, almost dry summers in which there may be periods up to 125 days or more with no rainfall. Most of the rainfall occurs in the winter months. The mountains above 3,000 feet have comparatively cold winters with occasional snow. Near the basin, the climate is more generally characterized by mild, wet winters and hot, dry summers.

2.07 The meteorological conditions producing precipitation at the basin site are associated mostly with general winter storms moving inland from the northern reaches of the Pacific Ocean. These storms last from a few hours to several days, and cast rain over large areas, often with snow in the higher mountains. Thunderstorms of short duration, which bring intense rainfall over small areas occur occasionally, and may be associated with general winter storms or may occur independently, sometimes during the normally dry, late summer months. On a rare occasion, a tropical storm from off the coast of Mexico may drift north and bring rain to the Hansen Basin. The design flood was computed as outlined in a report "Hydrology - Los Angeles and Rio Hondo Rivers," 15 December 1936. Following the occurrence of the storm of 21-23 January 1943, a revised reservoir design flood was developed. In the revision, the assumption was made that the ground conditions were equivalent to those of the 1938 storm and the rainfall amounts were equal to those of the January 1943 storm. This storm produced a 4 day total of 20.7 inches, with 14.7 inches during the peak 24-hour period. The peak runoff was 74,000 cubic feet per second, and the maximum one day inflow totaled 55,800 acre feet.

## RESERVOIR OPERATION AND MAINTENANCE

2.08 The regulation plan for Hansen Dam is designed to control the reservoir design flood. At peak flow conditions, the basin experiences a peak inflow and volume of 53,000 cfs and with base flow, the total 4-day volume is 92,500 acre-feet with a maximum discharge through the outlet works controlled to 20,800 cfs. Flood control operations are performed by the dam tender upon instructions by the Los Angeles District office. Regulated gate openings are set in accordance with the 1990 Hansen Dam Water Control Manual.

2.09 Operation and maintenance of the recreational development within the basin area is performed by the City of Los Angeles Recreation and Parks Department under lease agreement with the Corps of Engineers and subject to Corps approval. Maintenance of the operations areas is performed by the Corps of Engineers. Periodically, accumulated debris within the basin area is removed by the Corps of Engineers to assure the proper flood control function of the dam.

## VISITATION

2.10 Figures are available for six developed sites at the Hansen Dam project area for fiscal years October 1983 to September 1984 and October 1988 to September 1989. Figures are not available for use of the trails in the Hansen Dam project area, but City and Corps staff have witnessed heavy use of all trails by equestrians, joggers and hikers. Available figures are provided in Table 3.

## TABLE 3

## VISITATION AT HANSEN DAM RECREATION FACILITIES

| Facility | '83-'84 | '88-'89 |
|---|---|---|
| Hansen Dam Park: | | |
| weekends | 500 - 600 | 750 - 1,000 |
| weekdays | 50 - 100 | 100 - 200 |
| Little League Fields: | | |
| per season | 600 - 800 | 1,760 |
| Orcas Park: | | |
| weekends | 500 - 600 | 1,000 - 1,500 |
| weekdays | 50 - 100 | 100 - 200 |
| Hansen Dam Golf Course: | | |
| rounds/year | 87,152 | 100,000 |
| Lake View Terrace Recreation Center: | | |
| per year | 106,211 | 75,000 |
| Sports Center: | | |
| weekends | 500 - 600 | 500 - 800 |
| weekdays | 200 | 200 |

# Project Status

## 3. PROJECT STATUS

3.01 Construction of Hansen Dam was completed in September 1940. Recreation facilities were not developed at that time, but the potential for water-based recreation was promptly realized when a lake was formed behind the dam in a borrow pit created during dam construction.

3.02 In 1946, a preliminary report on recreation potential identified the possibilities at Hansen Dam. In April 1948, the City of Los Angeles leased 1,450 acres within the Hansen Dam project area for recreation use, and initiated phased development of the basin. Recreation construction began in 1952 with initiation by the City of Los Angeles of the West Lake development.

3.03 The original Hansen Dam recreation lake, Holiday Lake, measured 130 acres in size. Water quality and acreage were maintained using a potable water source during the summer. The lake was a popular facility for swimming, boating, water-skiing and fishing activities.

3.04 The borrow area, and therefore, the lake, was located at the lowest elevation of the basin, so it filled with natural flows from the Big and Little Tujunga Washes. Over the years, however, the Big and Little Tujunga Washes also transported sediment from the nearby erodible mountains into the basin and the lake. By 1975, the lake was reduced to approximately 80 acres due to sediment accumulation, and by 1982, it was abandoned as a recreation facility due to further sedimentation. By 1983, the lake was reduced to approximately 30 acres. Today, the lake is completely unusable, and native riparian vegetation has filled in the original lake footprint.

3.05 Construction of recreation facilities at Hansen Dam continued, as funds became available from the City of Los Angeles, over the past 38 years. The City of Los Angeles has funded and constructed all existing recreational facilities, with the exception of the Lake View Terrace Recreation Center, which was funded and constructed jointly by the City and the Corps. The City has also operated and maintained all of the recreational facilities.

3.06 Major recreation development has been concentrated in six locations as follow:

1. **Hansen Dam Park**: an approximately 37-acre park designated as a group picnic area, with two little league fields and a tot lot.

2. **Hansen Dam Sports Center**: an approximately 26-acre park with four baseball diamonds, an amphitheater and two soccer fields.

3. **Hansen Dam Equestrian Center**: an approximately 16-acre equestrian area.

4. **Orcas Park**: an approximately 22-acre picnic area with a tot lot.

5. **Lake View Terrace Recreation Center**: an approximately 22-acre park with the only visitor center in the park. In addition, there are two multi-purpose courts, a tot lot, and two baseball diamonds.

6. **Hansen Dam Golf Course**: an approximately 211-acre, 18-hole golf course, complete with a driving range, a clubhouse with a restaurant and support facilities for the golf course.

# Recreation and Environmental Resource Inventories

# 4. RECREATION AND ENVIRONMENTAL RESOURCE INVENTORIES

## RESOURCE USE OBJECTIVES

4.01 The following resource use objectives have been developed to guide future planning, design, and management of the Hansen Dam project area; and to obtain the greatest possible benefit through meeting the needs of the public and protecting and enhancing environmental quality.

1. Support flood control and recreation project purposes.

2. Derive optimum benefits from recreation resources.

3. Utilize environmental resource values in recreation development and wildlife management.

4. Integrate new development with existing facilities.

5. Preserve existing recreational values of open space.

6. Preserve and improve native vegetation areas for both recreation and wildlife values, when compatible with flood control operation.

7. Minimize potential hazards of sedimentation and excessive flooding of recreation facilities by location and design.

8. Meet public demands for recreation, especially by providing water-based recreation and equestrian opportunities.

9. Preserve and enhance the use of Big Tujunga and Little Tujunga Washes for recreation and wildlife, when compatible with flood control operation.

10. Locate intensive recreation uses on high elevation areas to avoid sedimentation, flooding, safety hazards and conflict with native vegetation.

11. Locate intensive recreation uses near vehicular access.

12. Utilize low density recreation areas to buffer wildlife habitat and residential areas from intensive recreation uses.

13. Locate uses to insure compatibility with existing and adjacent uses.

14. Locate like intensities and like uses together, where possible, to maximize opportunities.

15. Utilize vegetative screening and physical barriers to minimize impacts where different use areas meet.

16. Control access, particularly vehicular access, through the use of a circulation plan and controlled ingress/egress points to ensure maximum safety, access, security, and traffic efficiency.

17. Design recreational facilities to be compatible with and to complement the rustic character of the setting.

18. Design recreational facilities to conserve water and energy.

19. Design recreational facilities to discourage vandalism, overuse, and to avoid impacts on adjacent areas.

20. Consider means to accommodate water conservation measures in future lake designs and management of open space areas.

21. Preserve visual resources, and particularly the mountain views, by developing overlook locations and scenic vistas.

22. Promote restoration to a naturalized state in areas not currently developed for recreational use to derive wildlife benefits in the interim, when compatible with flood control operation.

23. Encourage the development of interpretive and educational facilities and programs to promote the public's understanding of natural and cultural/historical resources.

24. Prevent overuse of recreational facilities and impacts on surrounding natural resources.

25. Participate in all future planning and zoning activities in surrounding areas.

4.02 Existing Recreation and Environmental Resources are evaluated below to assist the planning effort and to achieve the above objectives. Eight plates are provided at the end of this document that graphically display the recreation and environmental resources, analysis of these resources, and the resulting resource plan:

| | |
|---|---|
| Plate 1. | **Recreation Market Area.** Shows the area that the majority of users come from. |
| Plate 2. | **Flood Lines Map.** Shows the flood line elevations within the Hansen Dam project area. |
| Plate 3. | **Real Estate.** Shows current leases, easements and rights-of-ways. |
| Plate 4. | **Existing Land Use.** Shows existing uses within and surrounding the Hansen Dam project area. |
| Plate 5. | **Site Analysis.** Shows the analysis of site conditions. |
| Plate 6. | **Recreation Constraints.** Shows constraints on recreation use and development (see Chapter 5). |
| Plate 7. | **Land Classification Plan.** Displays the assigned land classifications per U.S. Army Corps of Engineers Regulation, ER 1130-2-435 (see Chapter 6). |
| Plate 8. | **Resource Plan.** Shows the proposed plan, with potential lake sites, and land use areas (see Chapter 6). |

## RECREATION RESOURCES

### Existing Recreation Facilities

4.03 Six major recreation facilities have been developed at the Hansen Dam project area. Plate 4, Existing Land Use, shows the locations of these facilities.

4.04 Hansen Dam Park is an approximately 37-acre park, located north of the intersection of Osborne Street and Dronfield Avenue. It includes a group picnic area, two little league fields and a tot lot.

4.05 Hansen Dam Sports Center is an approximately 26-acre park, located south of the intersection of Foothill Boulevard and Fenton Avenue. Park facilities include four baseball diamonds, an amphitheater and two soccer fields.

4.06 Hansen Dam Equestrian Center is an approximately 16-acre facility south of the intersection of Foothill Boulevard and Orcas Avenue, situated between Little Tujunga Wash and Orcas Park.

4.07 Orcas Park is an approximately 22-acre picnic area, with a tot lot, located east of the equestrian center, south of Foothill Boulevard.

4.08 Lake View Terrace Visitor Center is an approximately 22-acre complex located north of Foothill Boulevard and west of Orcas Avenue. It contains the only recreation center in the park, the Lake View Terrace Visitor Center, which is equipped with an indoor gym and meeting room. In addition, the complex contains two multi-purpose courts and two baseball diamonds.

4.09 Hansen Dam Golf Course is an 18-hole golf course, covering approximately 211 acres, located south of the dam structure. The golf course includes a driving range, a clubhouse with a restaurant, and support facilities for the golf course.

4.10 In addition to the major facilities listed above, the Hansen Dam Structure is utilized for trails. The access road along the top of the dam is used as a bicycle and hiking trail. An equestrian trail is located on the downstream face of the dam. The dam structure comprises approximately 125 acres.

### Undeveloped Recreation Lands

4.11 The majority of the Hansen Dam project area lands are leased to the City of Los Angeles for recreation, at a total of 1,450 acres. Approximately 475 acres have been developed in the areas described above. Approximately 975 acres have not yet been developed.

4.12 The undeveloped areas include the Little Tujunga and Big Tujunga Washes, the old Holiday Lake site, and numerous areas adjacent to the peripheral roads and highways (see Plate 4, Existing Land Use). The undeveloped lands currently offer open space, some of which is utilized as wildlife habitat and for equestrian trails.

## ENVIRONMENTAL RESOURCES

### Physical Resources

4.13 Geologic Setting The Hansen Dam project area is located at the base of the foothills of the San Gabriel Mountains. This area is made up of a tiered series of bluffs decreasing in elevation from the north to the south. The Hansen Dam project area

foundation is composed of alluvium consisting of sand, gravel, and boulders lying within the streambeds. Adjacent to the streambeds are overbank materials of similar composition, yet containing greater concentrations of silt and clay. The San Gabriel Mountain Range lies just north of the area, rising to an elevation of 6,000 feet above the valley floor. These mountains were formed by the folding and faulting process of tertiary marine sediments, later modified by periods of heavy erosion. The dam is tied into two outcrops of modelo sandstone foundation. For the most part, the soil at the site is well graded alluvial material receptive to the growth of turf, trees, shrubs and ground covers with minimal supplementation.

4.14 Water Resources The Hansen Dam project area is located at the confluence of Big Tujunga and Little Tujunga Washes. Substantial inflow is ephemeral, however a low to moderate perennial flow issues from the Big Tujunga Wash.

4.15 The Hansen Dam project area is fed primarily by three major sources; Big Tujunga Wash, Little Tujunga Wash and Lopez Channel. These water sources are tributaries to the Los Angeles River, and are considered a portion of the San Fernando Drainage Area.

4.16 Runoff from the watershed into the reservoir is characterized by high flood peaks of short duration that result from intensive rainfall. Flood durations are typically less than 12 hours and always less than 48 hours. Inflow rates drop rapidly between storms and inflow during the dry summer season is usually less than 10 cubic feet per second.

4.17 Water Quality Surface water quality in the Hansen Dam project area is poor. Since the 1970's all water quality data have exhibited high counts of coliform bacteria, plus substantial concentrations of iron, manganese, and mercury.

4.18 Since the Hansen Dam project area is managed for flood control purposes, it plays only an incidental role in groundwater recharge. In addition, high sediment loads make the diversion of water into groundwater recharge ponds difficult.

4.19 The water quality of the old lake is poor overall. The main problems appear to stem from high concentrations of iron, manganese, and various salts plus high coliform bacteria counts. The water quality of Big Tujunga Wash is considered better. The primary water quality problem at Big Tujunga Wash is high turbidity resulting from a high sediment load and substantial bacteria accumulation.

4.20 Most of southern California is a semi-desert environment with low precipitation and runoff. Consequently, existing water volumes are inadequate to support the large populations now residing in the area. Much of southern California's water is imported from northern water resources, extracted from limited groundwater reserves and diverted from the Colorado River in southeastern California.

4.21 Water sources for proposed lakes are affected by the scarcity of water in southern California. Within the Hansen Dam project area exist several municipal water mains, however, that the City of Los Angeles plans to tap as water sources for proposed lakes. Future development will require additional studies to identify suitable water sources, which should include the possibility of reclaimed water.

4.22 Climate The climate of the area surrounding the Hansen Dam project area is generally temperate and semi-arid, with warm, dry summers, in which there are up to 125 consecutive days or more without rainfall, and mild, moist winters. Average daily minimum/maximum summer temperatures (degrees Fahrenheit) range from about 60/85 on the valley floor to about 65/85 in the surrounding mountains. The corresponding winter figures are 40/65 and 33/55, respectively. Within the drainage area, average annual rainfall is 14 inches.

4.23 Evaporation is not a major consideration at this site. Studies for nearby locations indicate that mean daily evaporation ranges about .05 inch in winter to about .105 inch in summer. On days of very strong dry Santa Ana winds, evaporation can be considerably greater than one inch per day.

4.24 Air Quality The quality of air is fair to poor depending on the time of year. Generally, from November to May the air quality is fair to good because of precipitation, heavy winds and cooler weather. Air pollution episodes are more frequent and severe from June to October because of the increase in daylight hours and more frequent temperature inversions that hold photochemical smog within the basin.

**Biological Resources**

4.25 Vegetation The Hansen Dam project area contains several fragmented and isolated plant communities. The most prominent vegetation community is the **willow riparian forest.** This community is located predominately in the southwestern portion of the Hansen Dam project area, along the toe of the dam and adjacent to the remnants of Holiday Lake. Scattered patches of riparian habitat are also located adjacent to and upstream of Orcas Park in the northeast section of the Hansen Dam project area. The riparian community is dominated by mature Black and Arroyo Willows. The shrub understory, comprised primarily of Mulefat, is patchy and dense in scattered locations on the west and on the east side of the outlet.

4.26 A fragmented **alluvial scrub community** is found within the floodplain upstream of Orcas Park. Plant species observed include Laurel Sumac, Our Lord's Candle, California Buckwheat, Scale Broom, Golden Currant, Poison Oak, White Sage, Felt-Leaved Yerba Santa, and Brittle Bush.

4.27 The **coastal sage community** inhabits the upland slopes and terraces on the perimeter of the Hansen Dam project area, including an area east of Orcas Park.

California Buckwheat, California Sagebrush, Prickly Pear Cactus, Black Sage, and Our Lord's Candle are dominant plants within this community. Highly disturbed coastal sage scrub exists on slopes leading to the wash in the southeast section of the Hansen Dam project area, just northeast of the terminus of the dam.

4.28 Old field habitat is located among the turfed park areas at the west end of the Hansen Dam project area, which is a former residential area with scattered exotic species. A barren field which had been disked for overflow parking is located just west of the Hansen Dam Sports Center. Additional old field habitat is located east of Orcas Park adjacent to a nursery.

4.29 The parks are primarily landscaped with turf and a mix of native and exotic trees.

4.30 Three sensitive plants have been identified as potentially occurring in the vicinity of the Hansen Dam project area. None of these plants are expected to occur within the Hansen Dam project area, but they could possibly occur immediately upstream in the alluvial scrub habitat east of Orcas Park.

4.31 Wildlife Wildlife within the Hansen Dam project area occupy various habitats (flood plain, riparian, pond, alluvial scrub, etc.). These sites support many common species of bird, reptiles and mammals; including many animals that typically immigrate to wash environments from the southern California coastal foothills. Riparian areas generally contain the highest wildlife diversity. Wildlife habitat within the Hansen Dam project area, and much of the vicinity, has been modified and adversely impacted by human activities.

4.32 A wildlife corridor has been identified within the Hansen Dam project area. This corridor serves as a bi-directional pathway for migrating fauna traveling between the San Gabriel Mountains and the Verdugo Mountains, and for larger mammals employing their respective foraging strategies. The Big Tujunga and Little Tujunga Washes serve as these access corridors where wildlife movement can occur unobstructed by the 210 Freeway.

4.33 The **least Bell's vireo**, a listed endangered species has been observed in the Hansen Dam project area three times in the past five years. Vireos were not found during surveys conducted in 1989 and 1990, though suitable habitat does exist.

4.34 Existing information may warrant listing of the San Diego horned lizard. Inconclusive information indicates that this species may be in the Hansen Dam project area.

**Cultural Resources**

4.35 Currently there are three recorded archeological sites found within, or adjacent to the Hansen Dam project area. The Big Tujunga Site consists of remnants of a large, complex Gabrielino Indian Village with cultural deposits spanning as much as 2500 years. A Mourning Ceremony site, where prominent village members were honored on anniversaries of their deaths, occurs within the Hansen Dam project area, and a cemetery for other villagers may survive nearby. The third site is a campsite, which was partially impacted by the construction of the dam.

**Land Use Status**

4.36 The primary use of the Hansen Dam project area is flood control. The majority of the Hansen Dam project area, approximately 1,450-acres, is leased to the City of Los Angeles for recreation, which is the secondary project purpose. Developed recreation covers approximately 475 acres, and the remaining 975 acres is currently used for informal recreation and wildlife habitat. The predominant use of the surrounding area is residential with supporting commercial uses. Sand and gravel mining, and other industrial uses occur southeast of the Hansen Dam project area. The 210 Freeway roughly bounds the project to the north, and major arterial roads bound the other sides of the Hansen Dam project area. Currently, a temporary debris removal operation is underway to restore flood capacity lost to sedimentation.

**Demographics**

4.37 Population forecasts were derived from the Southern California Association of Governments (SCAG) regional statistics. The City of Los Angeles proposed land use plan near the Hansen Dam project area indicates an increase in land area devoted to commercial and industrial uses. Despite a reduced percentage of available lands planned for residential uses, past population growth analysis and proposed population growth projections indicate a population growth throughout the recreation market area of about 10 percent. The recreation market area, shown on Plate 1, is approximately 50 square miles (see chapter 5 for the determination of the recreation market area). Projections developed through the year 2000 are shown in Table 4. Table 4 assumes a concentrated future population growth in existing urban centers.

## TABLE 4

## POPULATIONS OF COMMUNITIES WITHIN THE RECREATION MARKET AREA

| Community | 1990 | 2000 |
|---|---|---|
| Arleta/Pacoima | 79,900 | 87,890 |
| Mission Hills/ Panorama City/ Sepulveda area | 163,700 | 80,070 |
| Sun Valley | 74,200 | 81,620 |
| Sunland/Tujunga/ Lake View Terrace/ Shadow Hills | 68,000 | 74,800 |
| Remaining Market Area | 866,700 | 953,370 |
| **Total Recreation Market Area** | **1,252,500** | **1,377,750** |

# Recreation Program and Resource Analysis

# 5. RECREATION PROGRAM AND RESOURCE ANALYSES

## GENERAL

5.01 This chapter analyzes the recreation program, and translates the recreation and environmental resource inventories into constraints and opportunities for recreational development. Flood control requirements are introduced as the primary constraint. The plates at the end of this document provide graphic references for the material in this chapter.

## RECREATION DEMAND

5.02 The **recreation market area** is that area from which a site draws most of its recreation users. The market area is determined by two factors, distance and the type of facilities or recreation resources available. The level of users generated by a facility tends to diminish as the distance from the facility becomes greater. These factors are adjusted up or down according to the type of facility under consideration. Users will travel farther for a unique recreation opportunity or for a facility that is not readily available in a closer area.

5.03 Studies have been conducted to determine the point of origin of Hansen Dam project area visitors. It has been determined that over 90 percent of all Hansen Dam project area visitors originate from areas less than one hour's travel time from the area. Statistical data gathered on the point of origin of park visitors indicates that the majority of park visitors travel 30 minutes or less to the site, so a 30 minute travel time is used as the recreation market area. The Hansen Dam project area will continue to receive a significant number of local weekday visitors due to heavy urbanization in the surrounding area. The general market area is shown on Plate 1, Recreation Market Area.

5.04 The establishment of a recreation market area is necessary to compare available supply of recreation facilities to recreation demand in specified areas. In order to make this comparison, it is necessary to convert supply and demand figures to common measurements expressed here as **annual recreation days.**

5.05 **Activity participation rates** were estimated using attendance figures which were recorded at the Hansen Dam project area and other nearby facilities. These rates give an annual per capita figure that can be multiplied by the population of an area to indicate the relative demand for a particular activity. Each activity participation rate reflects the average annual participation rate. For instance, the activity participation rate for outdoor activities is 3.8, which is an average of all those who actually participate in outdoor activities, applied on a per capita basis. Therefore, given a recreation market area population in 1990 of 1,252,500, there is an estimated demand for a total of

4,759,500 **annual recreation days** for outdoor activities. A recreation day is defined as a participation by an individual in a specific outdoor recreational activity during any part of a day.

5.06 Demand for recreation within the recreation market area is estimated by using activity participation rates. These rates reflect current recreation behavior and, therefore, can falsely read low in the event that a particular facility is in short supply. Table 5 projects recreation demand for the years 1990 and 2000, based on population projections from Table 4, and activity participation rates taken at the Hansen Dam project area and nearby facilities. Due to a 10 percent projected increase in population by the year 2000, there is an increase in recreation demand. The Hansen Dam project area offers approximately 975 acres of undeveloped land available for recreational development to help meet this increased demand.

## FLOOD CONTROL REQUIREMENTS

5.07 The primary purpose of Hansen Dam is flood control. Recreational development cannot interfere with flood control operations. Table 6 describes Corps guidelines for reservoir land use. Most of the available land area is below the 50-year flood line, (see Plate 2, Flood Lines Map), which, according to Table 6, cannot be developed with closed structures. This is the major constraint of development. Some areas on higher ground can have closed, flood-proofed structures. Each specific development proposal should be evaluated against the guidelines in Table 6 to determine what kind of structures are appropriate. In addition to the guidelines in Table 6, no development of any kind is permitted a within a 1,000-foot radius of the upstream spillway centerline to insure that the flood control function is not impeded. The currently proposed lake, and all future development, would be implemented in a manner to avoid loss of flood control capacity of reservoir.

5.08 A debris removal operation has been located at Hansen Dam project area since 1985, and is scheduled to continue for up to four and one half years. The debris removal is necessary to maintain adequate flood capacity, which was lost when winter storms from 1969 through 1983 caused heavy sedimentation of the basin behind Hansen Dam. This activity is temporary, so all undeveloped lands at the Hansen Dam project area are assigned land use categories. Land use planning must consider the possibility of future sedimentation and subsequent debris removal operations.

## ENVIRONMENTAL FACTORS

5.09 A number of environmental factors should be considered during the planning process.

5.10 Topography. Only a few areas within the Hansen Dam project area have prohibitive slopes. Plate 5, Site Analysis, shows four areas. These areas offer views of surrounding mountains and views of the Hansen Dam project area itself. Development or use should utilize these high points for the views they offer. The slope between Hansen Dam Park and the Sports Center offers an opportunity for a cascading stream feature if lake construction occurs within the lake footprints shown on Plate 8, Resource Plan.

5.11 Biological Resources. The most valuable biological resource is the riparian habitat and the wildlife that inhabits it. These resources, as well as other plant communities and wildlife within the Hansen Dam project area, offer educational and recreational values. Interpretive trails, hiking trails, wildlife observation, photography, and a sense of open space are potential benefits and uses of these resources. Riparian habitat in particular, is decreasing rapidly in southern California, so existing riparian habitats have become increasingly valuable. To protect the resources, preserving areas, designing buffers on boundaries, and planning for appropriate adjacent uses should be required.

5.12 Cultural Resources. Cultural resources within the Hansen Dam project area should be protected by review of proposed projects as part of compliance with the National Environmental Policy Act and the National Historic Preservation Act.

5.13 Air Quality. Air quality in the area is often poor. Small contributions to solving this problem could include encouraging cyclists and public transportation by providing adequate access for these modes of transportation; encouragement of non-motorized recreation; and appropriate tree planting.

5.14 Water Resources. Water resources are extremely valuable in southern California. Water efficient methods of irrigating landscaping and providing drinking water and restroom facilities should be utilized. Ways to utilize lake release water for irrigation or groundwater recharge should be explored. Future planning for future lakes should include the possibility of using reclaimed water for water supply, and using released water for irrigation or groundwater recharge.

5.15 The water quality of the Big and Little Tujunga Washes is poor, with high coliform bacteria counts, especially in the vicinity of equestrian facilities. Body contact with this water should be discouraged.

5.16 Climate. The long warm seasons, and large number of sunny days, require extensive use of shade trees and ramadas, and adequate drinking fountains.

5.17 Soils. All improvements, including trails, roads and structures should be sited, designed and built to reduce erosion.

## ADJACENT LAND USE

5.18 The major consideration for development in terms of adjacent land use is the adjacent residential areas. Land use planning should consider avoiding intensive use adjacent to residential areas. In addition, any proposed development adjacent to a residential area must be evaluated for impacts to the residents. Residential use currently adjoins the project on the northeast corner adjacent to Christy Avenue, on the northwest corner adjacent to Osborne Street and Foothill Boulevard, and west of Osborne Street (see Plate 4, Existing land Use).

5.19 Intensive development is appropriate along the Foothill Freeway area and major arterial roads.

## EXISTING USES

5.20 Land use planning and specific developments should be evaluated to ensure compatibility with existing uses. Where possible, new facilities should complement existing ones. For example, equestrian trails could be constructed from an existing equestrian center.

## WATER QUALITY

5.21 Rainfall is not anticipated to be a significant water source, and runoff is anticipated to have water quality problems, so may not be a water source. Potable water will be used for the 15-acre swimming lake.

5.22 Potential levels of bacteria and other pollutants and contaminants will not be an issue associated with lake development because the basin streamflows will not reach neither the proposed swimming lake nor the boating lake footprint. Due to potential water quality problems, in fact, the EIS/R states that the lake is to be graded to prevent runoff from reaching any lake.

## WATER CONSERVATION

5.23 Lake circulation plans should be coordinated with water conservation efforts at the spreading grounds south of the dam structure to maximize water use. Opportunities for water conservation include using future lakes to hold water until the spreading grounds can accept more water, and discharging waters to the spreading grounds.

5.24 This master plan does not address separate impoundment of water behind the dam structure for water recharge. It is assumed, however, that any potable lake water will be

discharged into the downstream recharge facilities for groundwater percolation as part of the circulation plan. Under this scenario, only waters that needed to be discharged to maintain water quality would be discharged.

5.25 The design phase for the proposed swimming lake will require analysis of all these issues. Until design is completed, moreover, we cannot be certain of the optimal design features and operation procedures. Any temporary impounding of water, at low elevations below the proposed lake and behind the dam, will also require additional evaluation and environmental documentation.

## OUTGRANTS

5.26 Numerous rights-of-way, easements, and leases run through the Hansen Dam project area for utilities, communications and roads (see Plate 2, Real Estate). All land use planning and future development will be subject to existing easements and rights-of-ways. Plate 3, Real Estate, does not show all outgrants because many are too small to display on the scale used. Any specific development must be analyzed to insure that these outgrants are observed. The agricultural leases, currently utilized as container plant nurseries, are leased as interim uses until such time as recreation development is proposed. For this reason, land use categories are assigned in the next chapter on these leased lands. The flowage easements under the transmission lines pose constraints for a few locations within the Hansen Dam project area.

## ACCESS

5.27 Access is possible to most of the Hansen Dam project area. Access should be planned to avoid impacts to environmentally sensitive areas, and to avoid erosion. Access should not be sited where there is a high sedimentation risk. Current access points are shown on Plate 5, Site Analysis. Intensive development should be planned where there is easy access.

## TABLE 5

## PROJECTED DEMAND FOR THE RECREATION MARKET AREA

| Population by Year of Recreation Market Area | 1,252,500 | 1,377,750 |
|---|---|---|
| Activity Participation Rates and Recreation Days Demand by Year | | |
| 1. Picnicking Rate | 1.1 | 1.1 |
| Picnicking Recreation Days | 1,377,750 | 1,515,530 |
| 2. Amphitheater Rate | 0.2 | 0.2 |
| Amphitheater Recreation Days | 250,500 | 275,550 |
| 3. Horseback Riding Rate | 0.2 | 0.2 |
| Horseback Riding Recreation Days | 250,500 | 275,550 |
| 4. Bicycling Rate | 1.1 | 1.1 |
| Bycycling Recreation Days | 1,377,750 | 1,515,530 |
| 5. Outdoor Activity Rate | 3.8 | 3.8 |
| Outdoor Activity Recreation Days | 4,759,500 | 5,235,450 |
| 6. Swimming Rate | 2.6 | 2.6 |
| Swimming Recreation Days | 3,256,750 | 3,582,150 |
| 7. Non-motorized Boating/Fishing Rate | 0.7 | 0.7 |
| Non-motorized Boating/Fishing Recreation Days | 876,750 | 964,425 |

**Note:** The activity participation rates are annual per capita use rates multiplied by the population to give annual recreation days. Per capita demand was then multiplied by current and projected population figures for the recreation market area to obtain the recreation demand of the recreation market area for each activity.

## TABLE 6

## MINIMUM GUIDELINES FOR RESERVOIR LAND USE PROJECTS

| Elevation Frequency Range | Development Constraints | Acceptable Land Uses |
|---|---|---|
| Up to 10-year flood line | Subject to prolonged inundation, sedimentation and wave erosion | Structures of any kind are not permitted. Nature trails and open fields are acceptable uses. |
| 10-year flood line to 50-year flood line | Subject to frequent flooding, sedimentation and wave erosion | Open-type or floodable structures and field facilities that can sustain inundation with acceptable maintenance costs. Concession stands with portable contents, bridle trails, shade and picnic ramadas, backstops, goalposts, etc., are appropriate. |
| 50-year flood line to 100-year flood line | Subject to periodic flooding, sedimentation and wave erosion | Floodable structures and multi-purpose paved surfaces that can sustain inundation with acceptable maintenance costs. Floodable restrooms and picnic areas are appropriate |
| 100-year flood line to Standard Project Flood Elevation | Subject to infrequent flooding, sedimentation and wave erosion | Flood-proofed closed structures are permitted. All appreciable structures will be approved by the District Engineer. However, structures conducive to human habitation are prohibited. |

## TABLE 6 (CONTINUED)

## DEFINITIONS

1. **Flood-proofing** - A combination of structural changes and /or adjustments incorporated in the design and/or construction and alteration of individual buildings, structures or properties subject to flooding primarily for the reduction or elimination of flood damages.

2. **Structure** - Walled or roofed buildings, including mobile homes and gas or liquid storage tanks that are primarily above ground.

3. **Facility** - Any man-made or man-placed item other than a structure.

4. **Open Structure** - A structure which may or may not have a sealed roof, but does not have sufficient walls to obstruct the flow of flood waters.

5. **Floodable Structure** - A structure that is able to withstand structural loads due to 100-year flood conditions. Contents and interior finish materials are restricted to types which are neither hazardous nor vulnerable to loss under these conditions. Flood waters will be able to pass through these structures or these spaces will be flooded with flood water by automatic means. Vents will be provided to prevent the formation of air pockets.

# Land Classification and Resource Plans

## 6. LAND CLASSIFICATION AND RESOURCE PLANS

### GENERAL

6.01 To identify critical development constraints and opportunities, available natural and recreation resources at Hansen Dam have been examined in the preceding chapters in light of the project purpose, project authorizations, and operational requirements of the Hansen Dam project. Based on these analyses, and according to the following allocation of land use areas and land classification scheme, a proposed resources plan is presented in this chapter.

### LAND ALLOCATION

6.02 The entire Hansen Dam project area was initially acquired and developed for flood control purposes, which falls under the Operations allocation. See Plate 7.

### LAND CLASSIFICATION

6.03 In compliance with U.S. Army Corps of Engineers regulation, ER 1130-2-435, allocated project lands are further classified to provide for development and resource management consistent with authorized project purposes, plus the provisions of the National Environmental Policy Act (NEPA), and other Federal laws. Land classification categories are presented and described below for Hansen Dam:

a. Project Operations

- o Areas with built project or flood control features
  - Spillway
  - Operations

b. Recreation

- o New recreation area planned for immediate development: Swimming lake and associated facilities
- o Area designated for Phase II expansion of Equestrian Center
- o Existing Recreation Developments
  - Areas for concessions
  - Areas for quasi-public development
  - Includes:
    - -- Hansen Dam Park
    - -- The Sports Center
    - -- Lake View Terrace Visitor (Recreation) Center

-- The Equestrian Center
-- Orcas Park
-- The Hansen Dam Golf Course

- o Areas at high elevations with minimal flood risk
- o Areas near access points
- o Areas near existing recreation developments

c. Mitigation. No lands have been designated for mitigation to date.

d. Environmental Sensitive Areas

- o Wildlife management areas
- o Habitat or vegetation management areas
- o Riparian habitat management areas
- o Cultural resources or aesthetic management areas
- o Wildlife corridors
  - Washes
- o For limited or no public use
  - For development with trails
  - May be used for monitoring
- o See Plate 6

e. Multiple Resource Management Land Use Areas

- o Current undeveloped lands
- o Potential recreation areas
  - Areas adjacent to riparian habitat
  - Areas adjacent to other wildlife habitat
  - Areas adjacent to residential areas
  - Areas with high flooding risk
  - Lake, picnic, and related features
  - Equestrian and hiking trails
  - Primitive camping
  - Wildlife observation
- o Potential general wildlife management areas
- o Potential vegetative management areas
- o Potential habitat management areas
- o Inactive and/or future recreation areas

f. Easement Lands

- o Lands for which Corps holds flowage easement
  - Along Transmission Lines
- o Lands not held in fee title

6.04 Land classifications are displayed at Plate 7.

## RESOURCE PLAN EVALUATION PROCESS

6.05 The following Resource Plan provides specific guidance for the use and development of lands within the following classifications: Environmental Sensitive Areas and Multiple Resource Management -- Inactive and/or Future Recreation Areas. Existing facilities are well used, and realistically will not be changed. Project Operations areas are not available for future development, so are not discussed below in great detail. The Resource Plan, therefore, focuses primarily on lands available for recreation that are not currently developed. They include lands held under agricultural leases, which can be developed. Lands affected by the temporary debris removal operation are also included to guide their use and development when debris removal operation is completed.

6.06 After the preceding classification, this Resource Plan assigns potential land uses to specific areas. Alternatives other than those presented were considered, and are described in the attached Environmental Impact Statement/Report. The subject alternatives included varying combinations of land use areas in juxtaposition to differing lake site footprints. The recommended plan was selected because it offers the largest acreage of potential lake sites combined with the least adverse impact to sensitive environmental resources. The proposed plan is the most feasible of lake plans considered, because it would result in the least adverse impact to environmental resources. Non-lake plans were considered and eliminated following public input.

6.07 Designation of land use areas does not assure approval of specific developments within the subject use areas. Each proposed project feature must be consistent with the Master Plan and must comply with environmental laws and flood control requirements, and must be approved by the U.S. Army Corps of Engineers. Feature Design Memorandums, accompanied by supplemental NEPA documents, will be prepared as specific features, or sets of features, are recommended for consideration.

6.08 The land use allocation and classification alternatives for this master plan are laid out above at Sections 6.02 and 6.03. More specific bases for segregating and actually assigning specific areas to these classes are reviewed below.

### Operations and Related Use Areas

6.09 This allocation refers primarily to areas reserved for active operations, such as spillway structures.

**Environmental Sensitive Areas**

6.10 This allocation refers to areas reserved for preservation of sensitive environmental habitats supporting significant wildlife, vegetation, aesthetic values, or cultural resources. Appropriate uses and improvements will be generally limited to:

- o Equestrian trails
- o Hiking trails
- o Wildlife observation features

**Recreation Areas**

6.11 Intensive recreation is reserved for land areas with a low risk of flooding or sedimentation, easy vehicular access, and that are relatively remote from residential and sensitive environmental areas. By definition, it involves more structural improvements and, or, higher density use than low density recreation (See following section). In assigning areas to this use class, the intent is to set aside areas that will not impact project resources or adjacent land uses. To avoid damages resulting from flooding, only areas with minimal flooding risk are assigned such usage. Example of intensive recreation uses include:

- o Recreation lakes
- o Picnic areas
- o Recreation parking areas
- o Developed campgrounds
- o Tot lots
- o Nature Centers
- o Sports fields
- o Golf Courses
- o Playgrounds
- o Special event facilities
- o Equestrian campgrounds
- o Visitor centers

- o Recreation centers
- o Equestrian centers
- o Resorts

**Multiple Resource Management Use Areas**

**Low Density Recreation**

6.12 Low density recreation is assigned to areas with a low risk of sedimentation and vehicular access. Areas that adjoin environmentally sensitive or residential areas area are also reserved for low density recreation uses to provide a buffer for these areas. Here low density recreation uses refer to development that supports dispersed usage, and that requires only minimal improvements such as trails and primitive campgrounds.

## RESOURCE PLAN

6.13 Undeveloped lands not dedicated to project operation activities are assigned to specific potential land uses according to their resource characteristics and to resource objectives.

**Environmental Sensitive Land Use Areas**

6.14 Two areas, comprising a total of approximately 480 acres, have been assigned Environmental Sensitive classification. Both areas are located in washes and at the lowest basin elevations and, therefore, will remain subject to flooding, sedimentation, and periodic debris removal to support flood control operations.

6.15 The first area, an approximately 3-acre slope east of the overlook on Osborne Street, is environmentally sensitive due to the potential for erosion on the excessively steep slope. The only recommended use is as open space because of the steep slope.

6.16 The large open space extending along the washes and dam structure, and measuring approximately 481 acres, offers valuable resources for wildlife and will be managed to insure protection of these resources. The washes provide wildlife corridors, and the riparian vegetation provides habitat. The bulk of this area falls below the 10-year flood elevation, or is in a wash, and is subject to high sedimentation and frequent flooding. Numerous equestrian and hiking trails cross through this area.

6.17 Due to the sensitivity of this area and flood risks, the only recreational uses for this area will be for trails and wildlife observation. Interpretive trails laid out to explain wildlife values would be especially appropriate. Vehicular access will be prevented by

barriers, and native vegetation buffers of 50-feet developed to buffer the area from adjacent intensive recreation areas.

6.18 Some of this area is crossed along transmission lines by flowage easements. Management and development of these areas must adhere to constraints imposed by existence of the easements.

**Initial Recreation Development**

6.19 One 27-acre area not currently developed is to be developed immediately with a 15-acre swimming lake and associated park and picnic areas. The lake and related recreation facilities are to be constructed in accordance with Public Law 102-104 at full Federal expense (up to the limit of available funds). The local sponsor may provide additional facilities at full local expense, and will operate and maintain them.

6.20 Water for the lake will be provided by the local sponsor from potable sources, will be treated additionally as needed to make it acceptable for body-contact recreation, and will ultimately be made available for use in ground-water recharge downstream of Hansen Dam. Due to the location of this development on a high bench, and to the source of water, sedimentation of the swimming lake will be insignificant. The cost estimate for this development is in Table 7.

6.21 Prior to final design of the proposed lake, studies will be conducted to:

1. Determine the exact location, with consideration for permeability, access and other factors;

2. Review the water source(s), with consideration for water conservation, availability, cost, water quality, and other factors;

3. Design lake configuration, depth, edge treatments, circulation systems, aeration systems, water distribution, and other design features, with consideration for water conservation and water quality;

4. Explore options for and recommend water conservation, groundwater recharge, and reclaimed water use plans; and

5. Develop lake management plan, to include turnover rate, monitoring program, eutrophication mitigation program, mosquito abatement program, and other on-going maintenance procedures.

6.22 These studies would be accompanied by appropriate supplemental NEPA documents.

6.23 An approximately 31-acre area just south of the existing equestrian center is to be developed in the near future. This will be an expansion (Phase II) of the equestrian center developed at the expense of the concessionaire.

**Multiple Resource Management Land Use Areas**

**Future Recreation Areas**

6.24 Fourteen areas have been identified as potential future recreation areas, for a total of approximately 460 acres. These areas are described below and are identified on Plate 8.

6.25 Area 1 - One low density recreation area, of approximately 13 acres, is located west of Osborne Street. It is planned to provide a buffer for adjacent residences from the recreation area along Osborne Street. It should provide a visual buffer for the subject residents, and should not be developed in any manner that would impact residential uses.

6.26 Area 2 - A potential low density recreation area of approximately 72 acres is located east of Osborne Street, where access roads and parking were provided for the former Holiday Lake. The existing roads and parking can be utilized for future development. This large area has the potential to accommodate the full gamut of appropriate recreation facilities. A buffer would be provided along the eastern boundary, however, to prevent impacts to adjacent riparian vegetation.

6.27 Area 3 - A potential low density recreation area, of approximately 9 acres, has been identified north of Foothill Boulevard to serve as a buffer for the area to the northwest, which is zoned for residential use. This area could accommodate all low density recreation facilities, but is constrained by presence of overhead transmission lines for which the Corps has a flowage easement. A buffer would be provided to set off the residential zone to the northwest; and uses, access and parking planned so the residential area is not impacted.

6.28 Area 4 - The largest future recreation area contemplated is an approximately 153-acre area to include a 70-acre lake footprint. This area has tremendous potential for providing a full range of recreation facilities. Proximity to riparian vegetation would provides views of natural areas, a sense of open space, and opportunities for interpretive trails. If a large lake is constructed in the future, numerous possibilities also exist for fishing, boating, water views, trails along the lake edge, and adjoining park and picnic areas. If a large lake is not constructed, or any time before a lake is constructed, the area would be used for any low density recreation uses. The adjacent riparian area would be buffered, and other developments planned to reduce impacts to this sensitive resource. This area is within the 50-year flood elevation, so any development would also have to be planned to withstand periodic flooding. Lake development would also be designed to minimize sedimentation.

6.29 Area 5 - An approximately 5-acre future recreation area is proposed for location at the overlook, in the southeast corner of the Hansen Dam project area. Development of this area would preclude vehicular access, and include picnic facilities and equestrian and hiking trails.

6.30 Area 6 - A proposed future recreation area of approximately 7 acres is located south of Orcas Park. This area could be developed as an extension to the picnic area, or as an extension of or compatible facility to the equestrian center. Access is already provided by the Orcas Park road.

6.31 Area 7 - Another possible future recreation area of approximately 40 acres is located in the northeast corner of the Hansen Dam project area. This area can accommodate park land, trails and picnicking. The adjacent residential area would have to be buffered, and any development planned so access, parking and related activities would not impact the residential area. In addition, the area would have to be designed to avoid unintended access from Christy Avenue.

6.32 Area 8 - An approximately 10-acre, intensive recreation area is proposed for an area west of Osborne Street. This area is bounded by Hansen Dam Park, Osborne Street and a low density recreation buffer.

6.33 Area 9 - An approximately 8-acre intensive recreation area is proposed for location east of Osborne Street, and south of Hansen Dam Park. Because this area is adjacent to an existing intensive recreation area, and a proposed low density recreation area, it has the potential to offer complementary uses for either or both. For example, additional group picnic areas or sports fields could complement the existing Hansen Dam Park group picnic area.

6.34 Area 10 - An approximately 2-acre intensive recreation area is contemplated for location near the corner of Osborne Street and Foothill Boulevard. Due to excellent access and its former commercial use, it is well suited for recreation-related commercial use, or other high use development.

6.35 Area 11 - An approximately 14-acre intensive recreation area is planned for location south of Foothill Boulevard, and along the proposed 15-acre swimming lake footprint. This area has excellent access. When the 15-acre lake is constructed, this water edge area could be utilized for piers, boardwalks, water's edge restaurants, or related commercial/retail development. Views of the water should be utilized.

6.36 Area 12 - An approximately 15-acre, intensive recreation area is proposed for location north of Foothill Boulevard. Transmission lines and associated flowage easement represent a developmental constraint.

6.37 Area 13 - An approximately 58-acre intensive recreation area has been tentatively identified south of Foothill Boulevard, on the west side of the Little Tujunga Wash. It is

a large area that can accommodate a number of uses, including an expansion of the existing Sports Center. Transmission lines and associated easement lands represent a constraint to this development.

6.38 Area 14 - An approximately 25-acre intensive recreation area is located east of Orcas Park.

**Mitigation Lands Set-Aside**

6.39 Future mitigation areas are likely to be located in the 480-acre area set aside as an environmentally sensitive reserve area. The Draft Supplemental Environmental Assessment for Debris Removal for Hansen Dam Flood Control Basin is now being finalized. Any mitigation required by this final document will be located in this area. Mitigation required in association with construction of Phase II of the equestrian center will also be addressed in a supplemental NEPA document.

**Future Development**

**Cost-Sharing of Future Facilities**

6.40 Under the authority of Public Law 89-72, The Federal Water Project Recreation Act of 1965, a cost-sharing agreement can be made between the City of Los Angeles and the United States Government to equally share the costs of future recreation facilities. Facilities approved for cost-sharing are outlined in Public Law 89-72, ER 1165-2-400, and ER 1105-2-100. A benefit-cost analysis for specific recreation developments will be prepared prior to Federal participation under a cost-sharing agreement for such developments.

6.41 In addition to cost-shared facilities, the City of Los Angeles, under the provisions of the recreation lease, can fund and construct recreational facilities, or sub-lease to a concessionaire, who can fund and construct facilities. All facilities, however, must be consistent with the approved master plan and Corps regulations and must be approved by the Corps of Engineers.

**Proposals for Future Development**

6.42 Proposals for future development will require approval from the U.S. Army Corps of Engineers. Approval will be based on adherence to this master plan, compliance with flood control requirements, and compliance with the National Environmental Policy Act and other environmental requirements.

6.43 Proposals for future development will be required to address the following:

1. Security and safety, including provisions for lighting, fencing, patrols, signage, barriers to motorized traffic, and access for emergency vehicles. In addition, lake proposals will require safety features in the lake design, and provisions for lifeguards if swimming is allowed.

2. Circulation, including access, roads, parking, public transportation, handicap access, and bicycle, hiking, jogging and equestrian trails and rest stops.

3. Park design, including linkage with existing facilities, facilities design, landscaping and irrigation with consideration for maintenance and water conservation, plus provisions for adequate rest room and drinking fountain facilities.

6.44 The above items only generally address standards and requirements of the Corps of Engineers and the City of Los Angeles. The intent, however, is to provide an indication of considerations each proposal must address.

**Basin Circulation**

6.45 Circulation within the Hansen Dam basin will not comprise a single continuous route, because developable areas are divided by environmentally sensitive areas, major highways and potential lake sites. All eastern recreation areas will be accessible, however, through the existing access for Orcas Park.

6.46 Christy Avenue is not a viable access point due to adverse impacts to residents. The developable areas around the Sports Center are accessible through the Sports Center. Additional access is possible for the intensive recreation area from the current service road to the container nursery.

6.47 The two developable areas north of Foothill Boulevard are accessible from Gladstone Avenue. The developable areas east of Hansen Dam Park are accessible from Foothill Boulevard and Osborne Street. The two developable areas west of Osborne Street are accessible from Osborne Street. All access points can be individually controlled based on the needs of specific facilities.

6.48 Circulation planning for future development will require traffic analysis, coordination with transportation agencies, adherence to City and Corps standards, and consideration of measures to reduce air quality impacts.

## TABLE 7

## ESTIMATED COST OF PROPOSED 15-ACRE LAKE AND ASSOCIATED FACILITIES

| Item | Unit Cost | Total |
|---|---|---|
| Mobilization and Demobilization* | $ 30,000 | |
| Clear and Grub* | 48,000 | |
| Earthwork (approx. 150,000 cubic yards)* | 500,000 | |
| Lake Structure* | 420,000 | |
| Water Distribution (1,500-feet)** | 20,000 | |
| Mechanical and Electrical Equipment* | 260,000 | |
| Restroom - 1 JOB LS | 100,000 | |
| Landscaping (3 acres; includes irrig.) @ $30,000/acre | 90,000 | |
| Roads (1,000 feet, unpaved) - 1 JOB LS | 40,000 | |
| Parking (50 spaces, unpaved) - 1 JOB LS | 36,000 | |
| Picnic Tables (20) @ $ 1,000 each | 20,000 | |
| Trash Receptacles (20) @ $ 500 each | 10,000 | |
| Barbecues (20) @ $ 350/each | 7,000 | |
| **Subtotal:** | | 1,581,000 |
| Engineering and Design @ 10% | 158,000 | |
| Construction Supervision and Administration @ 6% | 94,860 | |
| **Subtotal:** | | 1,833,960 |
| 15% Contingency | 275,094 | |
| **GRAND TOTAL:** | | $ 2,109,054 |

* These figures were based on the costs of the newly constructed Lake Balboa at Sepulveda Flood Control Basin

** 1,500 feet is the minimum length to an available water source

# Coordination

## 7. COORDINATION

7.01 Coordination has been maintained with appropriate Federal State and local agencies, in compliance with the National Environmental Policy Act and the California Environmental Quality Act. The attached Environmental Impact Statement/Report provides specific information on the coordination. A list of the agencies coordinated with is provided below.

7.02 Federal agencies contacted include:

1. U.S. Fish and Wildlife Service. Correspondence and telephone conversations resulted in the Service issuing a Planning Aid Letter dated July 20, 1990, and an Endangered Species letter dated May 19, 1989, for this master plan.

2. National Park Service. The Park Service was contacted by telephone to inform of the project.

3. Environmental Protection Agency, Region IX, was contacted by phone to discuss written comments on the Draft Environmental Impact Statement/Report.

7.03 State agencies contacted include:

1. California Department of Fish and Game. The Corps has informed the Department of the basic components of the master plan.

2. State Historic Preservation Officer (SHPO). A letter dated August 17, 1990 was sent to SHPO requesting concurrence with the Corps determination that the project will have no effect on properties that are eligible for, or are listed in the National Register of Historic Places. A letter dated October 23, 1990 provided guidance.

3. Regional Water Quality Control Board. The Board was contacted by telephone to inform of the project.

4. Southeast Mosquito Abatement District. The District was contacted by telephone to inform of the project.

7.04 Local agencies contacted include:

1. South Coast Air Quality Management District. The District was contacted by telephone to inform of the master plan.

2. City of Los Angeles Department of Recreation and Parks. The Department has been a participant in the development and preparation of this master plan.

3. City of Los Angeles Departments of Water and Power, and Transportation. The Departments were contacted by telephone to inform of the project.

7.05 In addition to the correspondence and telephone conversations described above, a Notice of Intent was published in the Federal Register on April 4, 1989, and a Notice of Availability was published in the Federal Register on September 14, 1990 when the Draft Hansen Dam Master Plan and Environmental Impact Statement/Report was made available for review and comment.

7.06 All agencies listed above were contacted by phone and by mail to inform of the public workshop held on April 4, 1989, and were contacted by mail to inform of the public meeting held on October 16, 1990 to discuss comments on the draft master plan.

7.07 All agencies listed above, and other interested agencies and organizations received copies of the draft and final master plan. Comments on the draft received from interested parties were reviewed, additional coordination was conducted, and comments were incorporated into the master plan wherever appropriate. Copies of the written comments are included in the attached Environmental Impact Statement/Report.

7.08 Coordination with Federal, State, and local agencies will continue throughout all future design phases.

# Public Involvement

## 8. PUBLIC INVOLVEMENT

8.01 Legal requirements for public involvement have been met in developing this project. A public workshop was conducted on April 4, 1989 at the Lake View Terrace Visitor Center, within the Hansen Dam project area, at the onset of the planning process. Over 2,000 flyers were mailed to advertise the meeting. Flyers were posted at local recreation centers, and a press release was issued. Approximately 150 attended, and expressed their ideas and concerns related to the preparation of this master plan. The overwhelming consensus was to replace the former Holiday Lake. Additional concerns included providing more equestrian trails, more park areas, additional security, and protection for natural resources. The draft master plan incorporated input from this meeting, along with the resources and recreation program analysis, and the evaluation of flood control requirements.

8.02 The draft master plan was mailed to over 200 agencies and organizations (see attached Environmental Impact Statement/Report for the list of recipients). Over 2,000 individuals were informed by mail of the availability of the draft master plan at three local libraries. A Notice of Availability was published in the Federal Register on September 14, 1990.

8.03 A public meeting was conducted on October 16, 1990 to obtain input on how well the master plan addressed the needs of the public. Again, 2,000 flyers were mailed to advertise the meeting, and a press release was issued. No major concerns were expressed. Numerous requests were made for a larger lake and for additional recreation facilities, for which funding is not currently available. Input from that meeting and from written comments were incorporated, where appropriate, into the final master plan. A summary of changes made is provided in Table 8, Summary of Major Changes Between the Draft and Final Hansen Dam Master Plans.

8.04 In addition to the public workshop and meeting, an advisory committee of homeowner and recreation organization representatives was consulted periodically during the master plan preparation.

# Conclusion

## 9. CONCLUSIONS

9.01 This master plan provides guidance for future development at the Hansen Dam project area. It establishes appropriate locations for open space plus recreation, and provides guidance for development of specific areas. The guidance provided in the master plan insures:

1. Compliance with the primary and secondary purposes of Hansen Dam: flood control, recreation and fish and wildlife management;

2. Appropriate distribution of recreation activities by intensity and density, based on flood control requirements, existing and adjacent uses, environmentally sensitive areas, and accessibility;

3. Increased opportunities for recreation development;

4. Protection of environmental resources and open space; and

5. Optimal and balanced recreational use of available land.

9.02 Any specific proposal for recreation development must:

1. Comply with this Master Plan;

2. Comply with flood control requirements; and

3. Comply with the National Environmental Policy Act and other environmental requirements.

The U.S. Army Corps of Engineers, Los Angeles District office will evaluate each proposal based on the requirements listed above.

9.03 This master plan has been coordinated with concerned environmental agencies and local interests.

# Recommendations

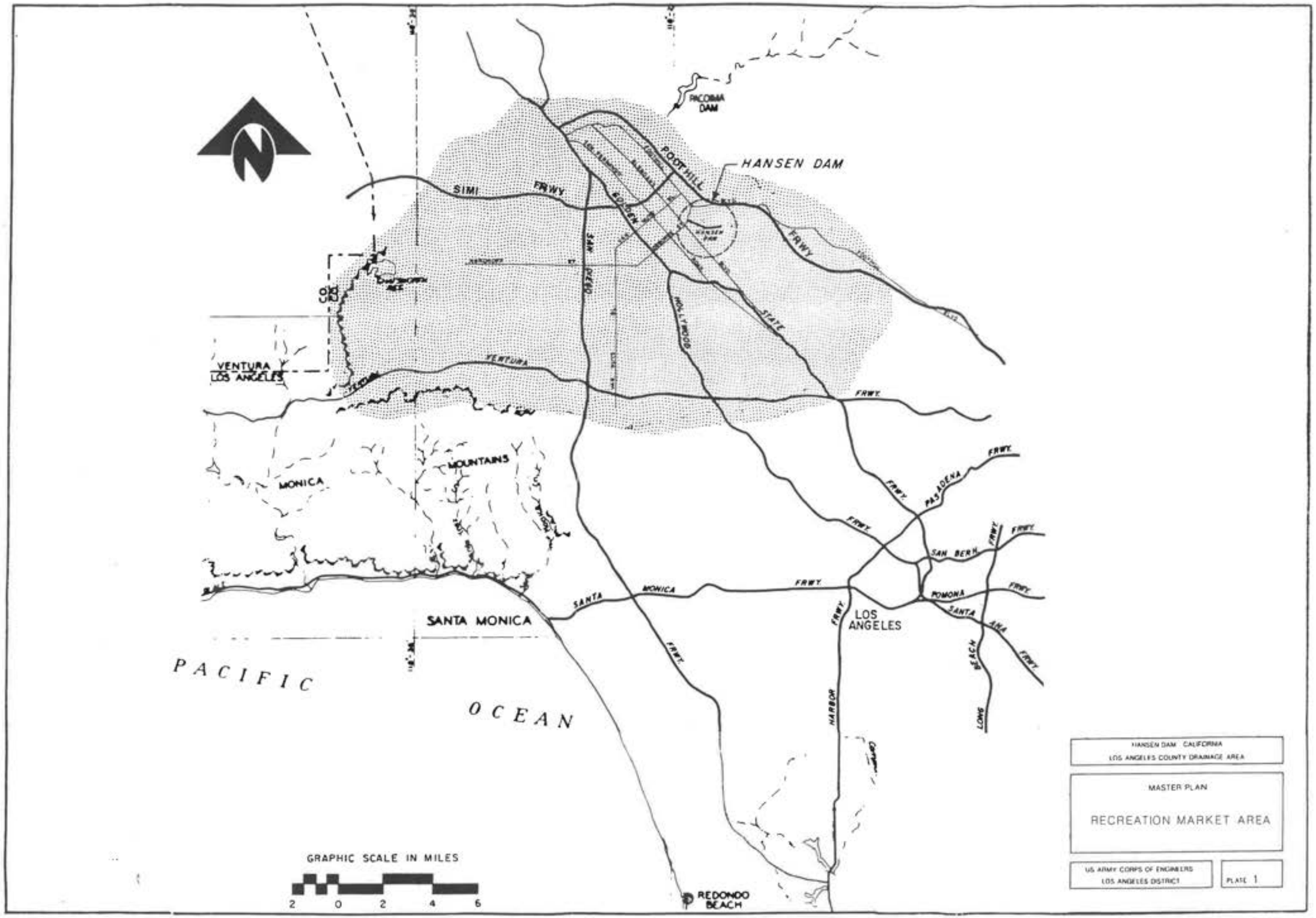
TABLE 8

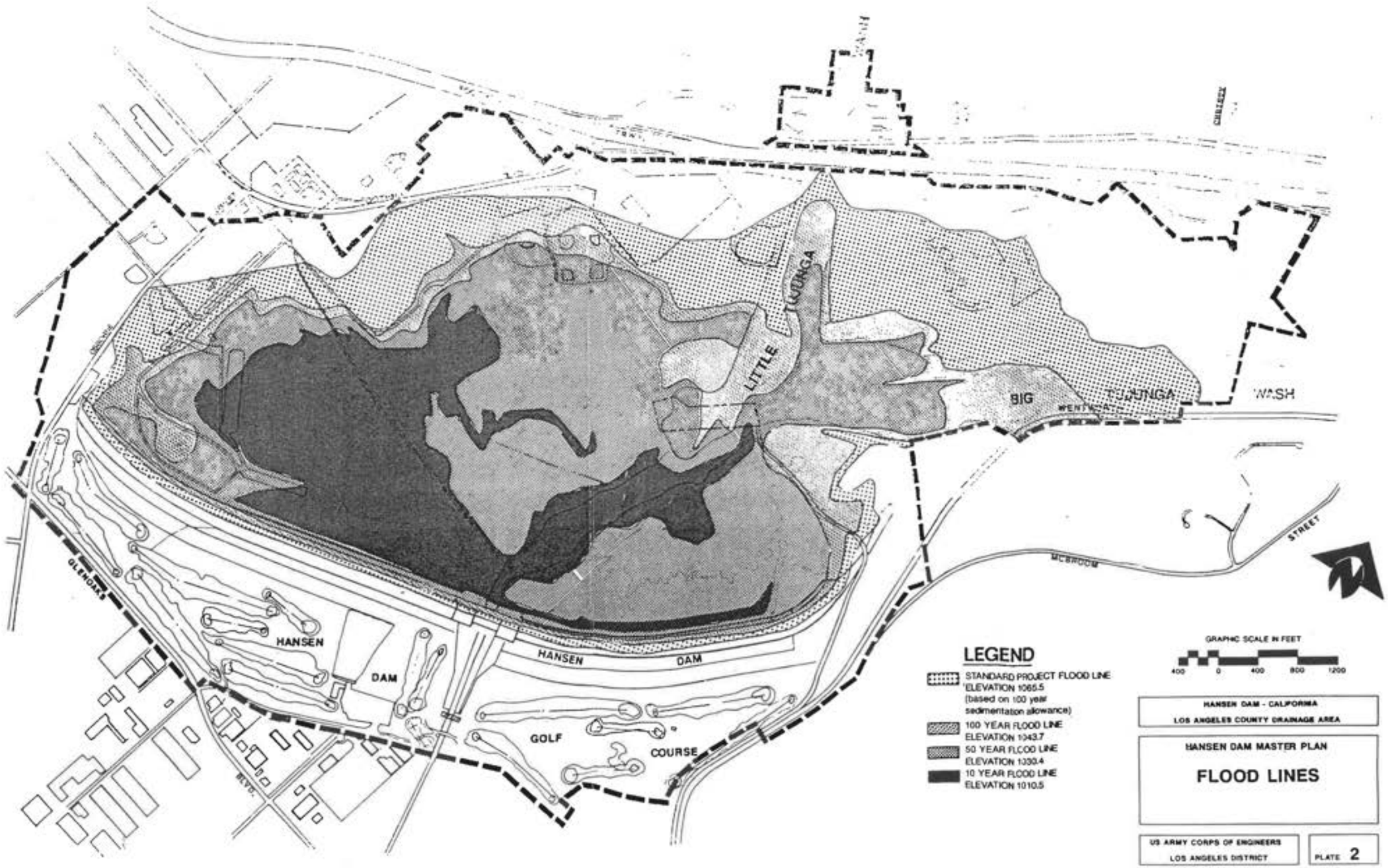
SUMMARY OF MAJOR CHANGES
BETWEEN THE
DRAFT AND FINAL HANSEN DAM MASTER PLANS

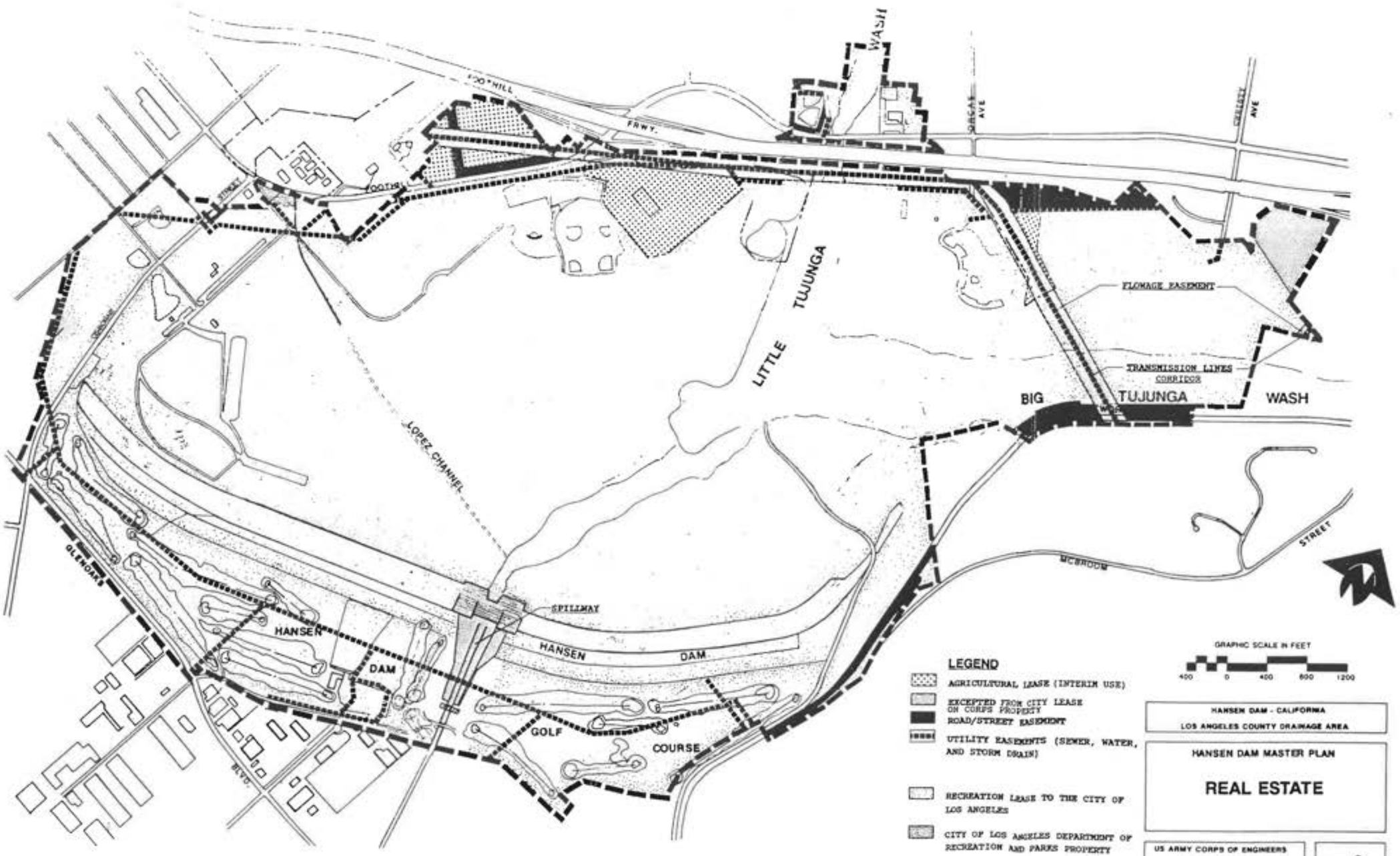
| Major Change | Location (Paragraph) |
|---|---|
| 1. Deletion of Executive Summary | (not applicable) |
| 2. Addition of discussion of decisions made in this document. | Preface, 1.03 |
| 3. Addition of language from the Water Resources Development Act of 1986 to clarify that construction of recreation facilities is at full federal expense. | 1.02 |
| 4. Addition of information from PL 102-104. | 1.03 |
| 5. Addition of discussion on water conservation. | 5.23-5.24 |
| 6. Addition of discussion of debris removal operations. | 5.08, 6.05, 6.39 |
| 7. Land Allocations section changed per U.S. Army Corps of Engineers regulation, ER 1130-2-435. | 6.02 |
| 8. Land Classifications section and Plate 7, Land Classification Plan, modified per U.S. Army Corps of Engineers regulation ER 1130-2-435. | 6.03-6.04, Plate 7 |
| 9. Resource Plan modified per U.S. Army Corps of Engineers regulation ER 1130-2-435; Plate 8, Resource Plan contains information previously contained in Plate 7. | 6.05, 6.48, Plate 8 |

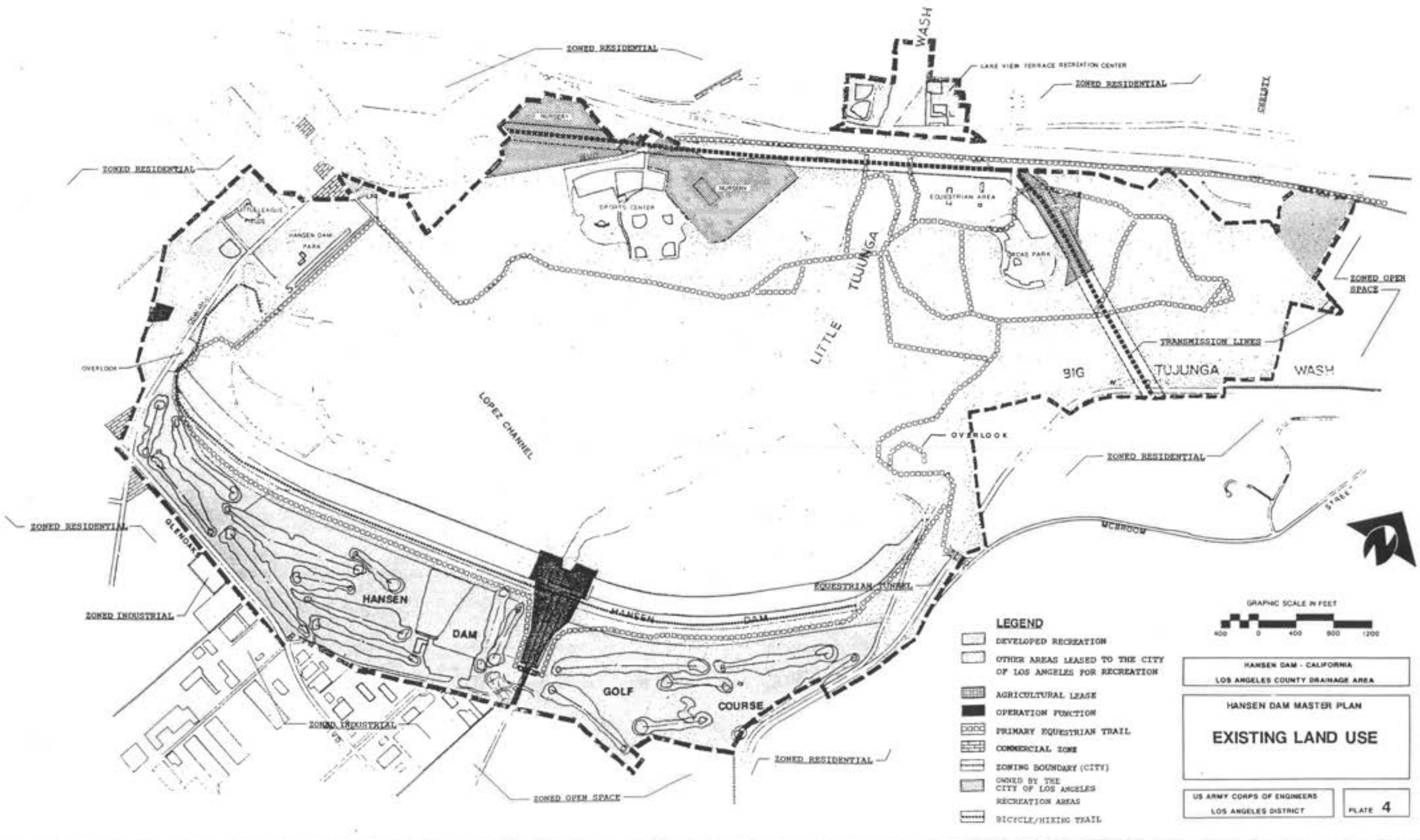
| Major Change | Location (Paragraph) |
|---|---|
| 10. Addition of "special events" and "equestrian campground" to the list of examples of future recreation uses. | 6.11 |
| 11. Addition of a 50-foot vegetation buffer. | 6.17 |
| 12. Addition of a 10-acre recreation land use area, east of Orcas Park | 6.38, Plate 8 |
| 13. Addition of discussion of the Draft Supplemental Environmental Assessment for Debris Removal, Hansen Dam Flood Control Basin. | 6.39 |
| 14. Addition of discussion covering circulation, security, park improvements, lake management and future studies. | 6.47-6.48 |
| 15. Updated discussions of coordination and public involvement. | Chapter 7, Chapter 8 |

# Plates


PACOIMA DAM
HANSEN DAM
FOOTHILL
SIMI FRWY
FRWY
STATE
VENTURA
FRWY
VENTURA
LOS ANGELES
MOUNTAINS
MONICA
SANTA MONICA
PACIFIC
OCEAN
PASADENA
FRWY
SAN BERN.
POMONA
SANTA ANA
LOS ANGELES
HARBOR
REDONDO BEACH
GRAPHIC SCALE IN MILES
2 0 2 4 6
HANSEN DAM CALIFORNIA
LOS ANGELES COUNTY DRAINAGE AREA
MASTER PLAN
RECREATION MARKET AREA
US ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT
PLATE 1


LITTLE TUJUNGA
BIG TUJUNGA WASH
HANSEN DAM
HANSEN DAM
GOLF COURSE
GLENOAKS BLVD.
MCBROOM STREET
LEGEND
STANDARD PROJECT FLOOD LINE ELEVATION 1065.5 (based on 100 year sedimentation allowance)
100 YEAR FLOOD LINE ELEVATION 1043.7
50 YEAR FLOOD LINE ELEVATION 1030.4
10 YEAR FLOOD LINE ELEVATION 1010.5
GRAPHIC SCALE IN FEET
400 0 400 800 1200
HANSEN DAM - CALIFORNIA
LOS ANGELES COUNTY DRAINAGE AREA
HANSEN DAM MASTER PLAN
FLOOD LINES
US ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT
PLATE 2


FOOTHILL
FRWY.
WASH
ORCAS AVE
CRESCENT AVE
FLOWAGE EASEMENT
TRANSMISSION LINES CORRIDOR
LITTLE TUJUNGA
BIG TUJUNGA WASH
LOPEZ CHANNEL
OLEANDER
HANSEN DAM
SPILLWAY
HANSEN DAM
GOLF COURSE
BLVD.
STREET
LEGEND
AGRICULTURAL LEASE (INTERIM USE)
EXCEPTED FROM CITY LEASE ON CORPS PROPERTY
ROAD/STREET EASEMENT
UTILITY EASEMENTS (SEWER, WATER, AND STORM DRAIN)
RECREATION LEASE TO THE CITY OF LOS ANGELES
CITY OF LOS ANGELES DEPARTMENT OF RECREATION AND PARKS PROPERTY
GRAPHIC SCALE IN FEET
400 0 400 800 1200
HANSEN DAM - CALIFORNIA
LOS ANGELES COUNTY DRAINAGE AREA
HANSEN DAM MASTER PLAN
REAL ESTATE
US ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT
PLATE 3


ZONED RESIDENTIAL
WASH
LAKE VIEW TERRACE RECREATION CENTER
ZONED RESIDENTIAL
SHELDY
ZONED RESIDENTIAL
NURSERY
NURSERY
SPORTS CENTER
EQUESTRIAN AREA
LITTLE LEAGUE FIELDS
HANSEN DAM PARK
MEAD PARK
LITTLE TUJUNGA
ZONED OPEN SPACE
TRANSMISSION LINES
OVERLOOK
LOPEZ CHANNEL
BIG TUJUNGA WASH
OVERLOOK
ZONED RESIDENTIAL
ZONED RESIDENTIAL
GLENOAKS
HANSEN DAM
EQUESTRIAN TUNNEL
ZONED INDUSTRIAL
GOLF COURSE
ZONED INDUSTRIAL
ZONED RESIDENTIAL
ZONED OPEN SPACE
LEGEND
DEVELOPED RECREATION
OTHER AREAS LEASED TO THE CITY OF LOS ANGELES FOR RECREATION
AGRICULTURAL LEASE
OPERATION FUNCTION
PRIMARY EQUESTRIAN TRAIL
COMMERCIAL ZONE
ZONING BOUNDARY (CITY)
OWNED BY THE CITY OF LOS ANGELES RECREATION AREAS
BICYCLE/HIKING TRAIL
GRAPHIC SCALE IN FEET
400 0 400 800 1200
HANSEN DAM - CALIFORNIA
LOS ANGELES COUNTY DRAINAGE AREA
HANSEN DAM MASTER PLAN
EXISTING LAND USE
US ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT
PLATE 4

HANSEN DAM MICRO-CLIMATE

TEMPERATURE: (DEGREES FAHRENHEIT)
RECORD HIGH/LOW = 111/21
AVERAGE HIGH/LOW = 74/53

RAINFALL: AVERAGE YEARLY = 14 INCHES

PREVAILING WINDS:
SOUTHWEST - SUMMER
NORTHWEST - WINTER

SUN ANGLE

RECREATION SITE
-MAINTAINED, WELL USED
-PICNIC TABLES (INDIVIDUAL AND GROUP SITES), EXPOSED TO TRAFFIC ALONG OSBORN STREET
-TURF W/ SHADE TREES
-ADEQUATE PARKING, RESTRICTED ELSEWHERE

PANORAMIC VIEWS OF THE SAN GABRIEL MOUNTAINS ACROSS THE BASIN TO THE NORTHEAST

RECREATION SITE (BALL FIELDS)
ADEQUATE CONDITION

SCENIC OVERLOOK

ABANDONED PARKING

RECREATION SITE (GOLF COURSE, 18 HOLES)
-WELL MAINTAINED
-VISUALLY SOFTENS AND ARCHITECTURALLY EMBRACES AN OVERSIZED HARDENED INDUSTRIAL AREA SOUTH OF HANSEN DAM

OVERFLOW PARKING
-UNPAVED, BARE, VOID OF VEGETATION

PANORAMIC VIEWS ACROSS BASIN TO THE SOUTHEAST TO NORTH FACE OF DAM

NURSERY STOCK AREA
-PROVIDES A VEGETATION BUFFER AND SCREEN FROM THE SAND AND GRAVEL OPERATION AND ENTRY HAUL ROAD

RECREATION SITE
-PAVED PARKING
-PLAYLOT, PICNIC TABLES, TENNIS COURTS
-TURF AND SHADE TREES

OVERFLOW PARKING
-UNPAVED, BARE, VOID OF VEGETATION

RECREATION SITES (BALL FIELDS)
INFORMAL EQUESTRIAN STAGING AREA
USED BY THE SAN FERNANDO VALLEY RANCHERS (TEMPORARY USE)

RECREATION SITE
-PAVED AND UNPAVED PARKING
-PICNIC TABLES (INDIVIDUAL AND GROUP SITES)
-TURF AND SHADE TREES
-PLAYLOT

OVERFLOW PARKING
-UNPAVED, BARE, VOID OF VEGETATION

RESIDENTIAL AREA
-NOT SUITABLE FOR SITE ACCESS

RECREATION SITE
-INFORMAL SENSE OF ENTRY
-DUST AND NOISE IS GENERATED FROM VEHICLES ON-HAUL ROAD
-TURF AND SHADE TREES
-ADMINISTRATION
-BALL FIELDS

DENSE, LUSH STANDS OF RIPARIAN VEGETATION, PREDOMINANTLY SALIX WILLOW SPECIES

LOSEE CHANNEL

SAND AND GRAVEL OPERATION (PATTERN)
EXTREME MODIFICATION OF EXISTING DRY STREAM BED IN TERMS OF LANDFORM AND VEGETATION

PANORAMIC VIEWS OF THE SAN GABRIEL MOUNTAINS ACROSS THE BASIN TO THE NORTHEAST

CONSTRICTED VIEW OF EAST END OF BASIN: SAND AND GRAVEL OPERATION DOMINATES VIEW.

WILDLIFE CORRIDOR → BIG TUJUNGA WASH

SCENIC OVERLOOK
-ACCESSIBLE TO HIKERS AND EQUESTRIANS
-PANORAMIC VIEWS ACROSS THE BASIN TO THE SAN GABRIEL MOUNTAINS

EQUESTRIAN TUNNEL

FOOTHILL BLVD.
SAN FERNANDO RD.
WENTWORTH
OSBORN AVE
FOOTHILL AVE
GLENOAKS BLVD.
HANSEN DAM
HANSEN DAM
GOLF COURSE
LITTLE TUJUNGA WASH
MCBROOM STREET

LEGEND

TRANSMISSION LINES
OVERFLOW PARKING
RECREATION SITE
NURSERY STOCK STORAGE AREA

SITE BOUNDARY
ACCESS POINT
ACCESS ROUTE
STEEP SLOPES (GREATER THAN 15%)

VEGETATION
COASTAL SAGE SCRUB
DISTURBED COASTAL SAGE SCRUB
OLD FIELD
RIPARIAN
DISTURBED RIPARIAN
SCARIFIED LOT
OAK WOODLAND

GRAPHIC SCALE IN FEET
400 0 400 800 1200

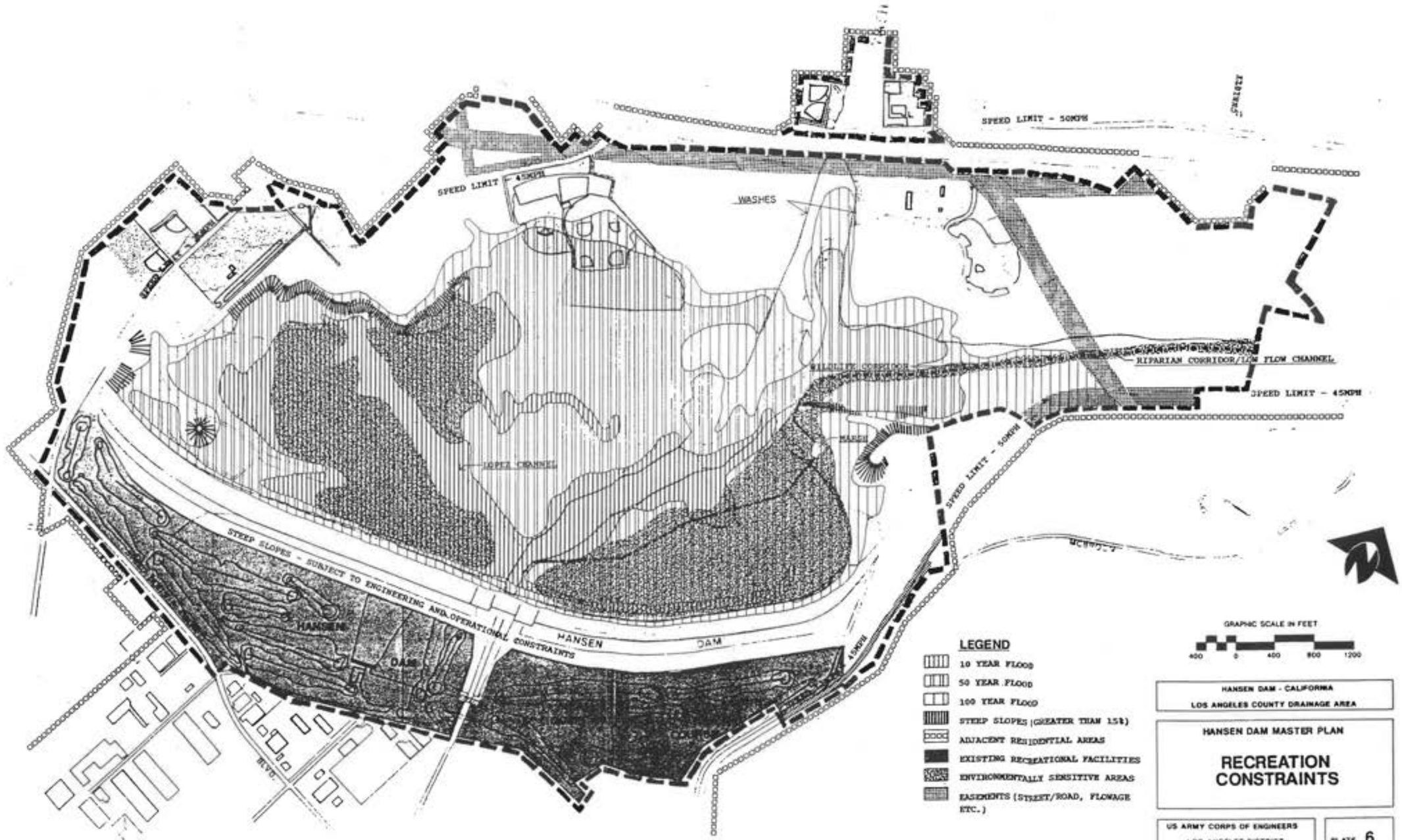
HANSEN DAM - CALIFORNIA
LOS ANGELES COUNTY DRAINAGE AREA

HANSEN DAM MASTER PLAN

# SITE ANALYSIS

US ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

PLATE 5


SPEED LIMIT - 50MPH
SPEED LIMIT - 45MPH
WASHES
RIPARIAN CORRIDOR/LOW FLOW CHANNEL
SPEED LIMIT - 45MPH
SPEED LIMIT - 50MPH
UPPER CHANNEL
STEEP SLOPES - SUBJECT TO ENGINEERING AND OPERATIONAL CONSTRAINTS
HANSEN DAM
HANSEN DAM
45MPH
BLVD.
LEGEND
10 YEAR FLOOD
50 YEAR FLOOD
100 YEAR FLOOD
STEEP SLOPES (GREATER THAN 15%)
ADJACENT RESIDENTIAL AREAS
EXISTING RECREATIONAL FACILITIES
ENVIRONMENTALLY SENSITIVE AREAS
EASEMENTS (STREET/ROAD, FLOWAGE ETC.)
GRAPHIC SCALE IN FEET
400 0 400 800 1200
HANSEN DAM - CALIFORNIA
LOS ANGELES COUNTY DRAINAGE AREA
HANSEN DAM MASTER PLAN
RECREATION CONSTRAINTS
US ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT
PLATE 6

15-ACRE SWIM LAKE AND RELATED RECREATIONAL FACILITIES TO BE DEVELOPED

SPORT CENTER

LAKE VIEW TERRACE

EQUESTRIAN AREA

ORCAS PARK

HANSEN DAM PARK

LITTLE LEAGUE FIELDS

LITTLE TUJUNGA

BIG TUJUNGA WASH

GLENOAKS BLVD.

HANSEN DAM

GOLF COURSE

BLVD.

GRAPHIC SCALE IN FEET

400 0 400 800 1200

LEGEND

- PROJECT OPERATIONS
- RECREATION
- ENVIRONMENTAL SENSITIVE AREAS
- MULTIPLE RESOURCE MANAGEMENT INACTIVE AND / OR FUTURE RECREATION AREAS
- EASEMENTS

NOTE: ALL PROJECT LANDS WERE ACQUIRED FOR OPERATION OF THE PROJECT SO ARE ALLOCATED "OPERATIONS"

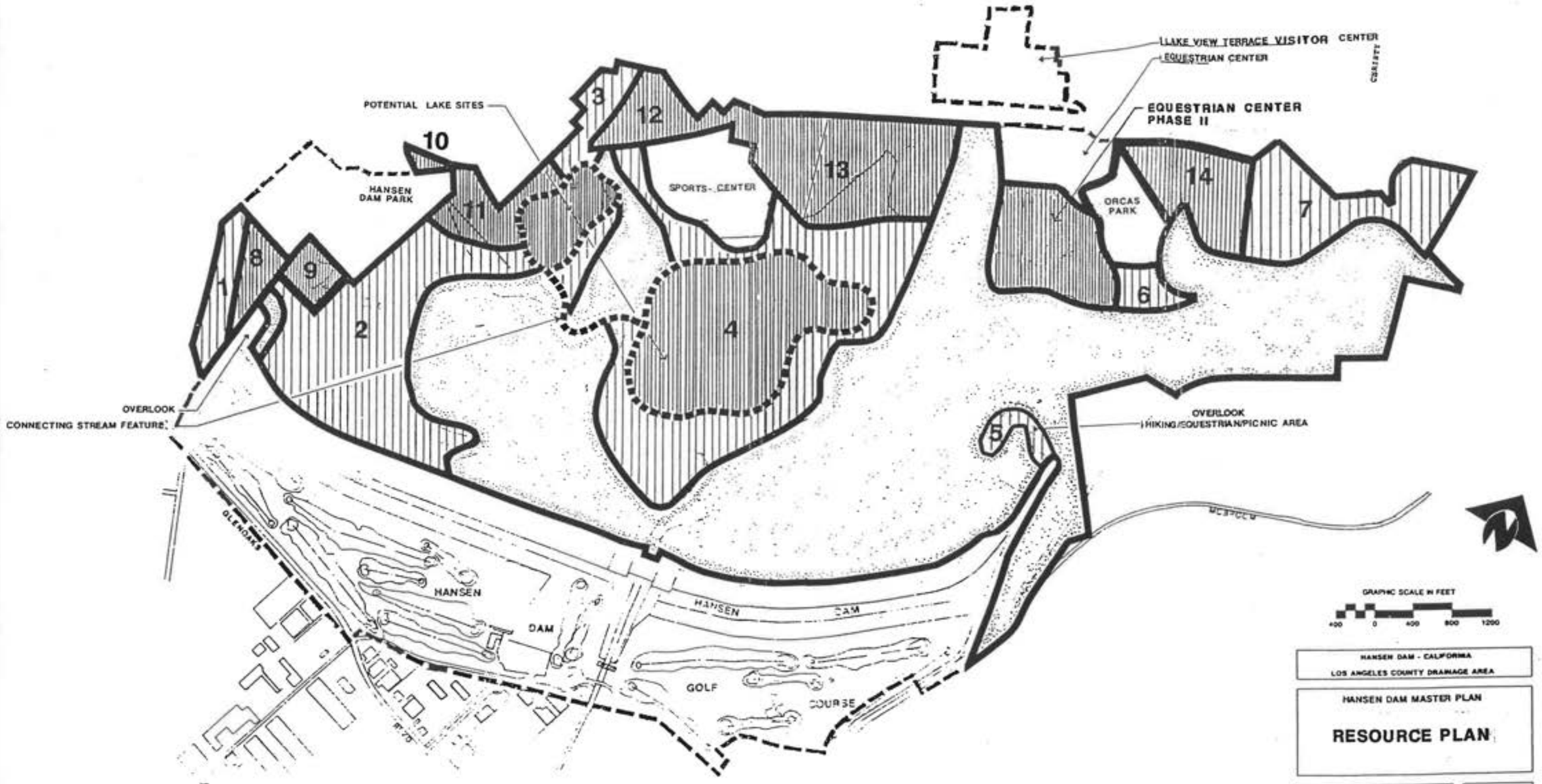
HANSEN DAM - CALIFORNIA
LOS ANGELES COUNTY DRAINAGE AREA

HANSEN DAM MASTER PLAN

# LAND CLASSIFICATION PLAN

US ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

PLATE 7




GRAPHIC SCALE IN FEET

400 0 400 800 1200

HANSEN DAM - CALIFORNIA
LOS ANGELES COUNTY DRAINAGE AREA

HANSEN DAM MASTER PLAN

# RESOURCE PLAN

US ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

PLATE 8

# Final
# Environmental Impact
# Statement / Report
# for
# Hansen Dam
# Master Plan

## U.S. Army Corps of Engineers
## Los Angeles District

## December 1991

**FINAL PROGRAMMATIC**
**ENVIRONMENTAL IMPACT STATEMENT/**
**ENVIRONMENTAL IMPACT REPORT**

**Hansen Dam Master Plan**
**Los Angeles, California**

The responsible lead agency is the U.S. Army Engineer District, Los Angeles.

**Abstract:** Hansen Dam was constructed in 1940 for flood control. Provision of Recreation and Fish and Wildlife habitat were authorized as secondary project purposes in subsequent legislation. The last master plan addressing recreation and environmental resources at Hansen Dam was prepared in 1975. An updated master plan is needed to guide the orderly development and use of the natural and man-made resources at Hansen Dam basin. The proposed plan includes a 15-acre swimming lake plus Phase II of the existing Equestrian Center. Revised environmentally sensitive lands plus multiple resource management and mitigation land areas are also specified.

This Environmental Impact Statement/Report evaluates the proposed plan, as well as the No-Action plan and two alternatives plans with different lake footprints and different land use mixes. The recommended plan offers the maximum potential lake acreage that can be provided without impacting riparian vegetation.

Specific development proposals will require further environmental documentation, because this Master Plan deals per Corps guidance in "..concepts rather than details of design and administration" (ER 1130-2-435, dated 30 Dec 1987. This EIS/R, therefore, is programmatic in nature. Implementation of the plan will require detailed study, impact assessment, and preparation and circulation of supplemental National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA) documents for each set of project features.

SEND YOUR COMMENTS TO THE DISTRICT ENGINEER BY:

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NOTE: Information, displays, maps, etc., discussed in the Hansen Dam Master Plan are incorporated by reference in the EIS/R.

# Summary

# SUMMARY

## MAJOR CONCLUSIONS AND FINDINGS

This Environmental Impact Statement/Report (EIS/R) evaluates the plan presented in the accompanying Hansen Dam Master Plan, along with impacts of two alternatives to the proposed plan. The Hansen Dam Master Plan deals in concepts rather than details of design and administration (ER 1130-2-435, dated 30 Dec 1987. Therefore, this EIS/R is programmatic in nature. Implementation of all elements of the proposed recommended plan will require detailed study, impact assessment, and preparation and circulation of supplemental National Environmental Policy Act (NEPA) and California Environmental Quality act (CEQA) documents.

The current proposed plan includes a 15-acre swim lake and Phase II expansion of the Equestrian Centger for immediate construction. It also includes designation of a footprint for a second lake site (70-acre boating lake), plus land use areas for environmentally sensitive reserves (484 acres), and multiple resource management areas (489 acres) for all undeveloped lands within the Hansen Dam basin. This plan is identified and described as **Alternative A** of this EIS/R. **Alternative B** includes a footprint for a potential 70-acre lake site, and the following land use areas: 518 acres of environmentally sensitive land reserves and 455 acres for multiple resource management to include future recreational development. **Alternative C** includes footprints for two potential lake sites (15 and 100 acre lakes), and the following land use areas: 432 acres of environmentally sensitive open space and 541 acres for multiple resource management. All acreages cited above are approximate. A No-Action alternative was also considered.

Because they provide additional recreation opportunities, improve the aesthetic quality of the basin, and preserve a large acreage of natural open space, all the alternatives would have beneficial impacts. Although all alternatives have a potential to create additional traffic, increase air pollution due to increased traffic, increase foot traffic into natural areas, impact biological resources, and involve development of land that is now open space, albeit disturbed, these are not significant impacts. Alternative C, however, has the potential to adversely impact a portion of existing riparian habitat.

The proposed plan was selected because it offers maximum acreage for potential lakes with a minimum of environmental impacts. The proposed master plan is in compliance with Federal laws, Executive Orders, and State laws as summarized in subsequent sections of this summary. As noted above, each specific development proposal will require preparation of supplemental National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA) documents.

## AREAS OF CONTROVERSY

Areas of concern include impacts to biological resources, additional traffic, and the need for additional security. Controversy, however, would be limited to water supply and possibly water quality. Southern California is a semi-arid area that is currently in a drought cycle. The source of water for the proposed lakes has been a controversial issue that has been resolved. Operation of any lakes to prevent water quality problems is also of concern.

## PREVIOUSLY PREPARED ENVIRONMENTAL DOCUMENTS

Previously prepared environmental documents related to this project are:

| | | |
|---|---|---|
| 1. | Environmental Assessment for Debris Removal, Hansen Dam Flood Control Basin | January 1984 |
| 2. | Draft Supplemental Environmental Assessment for Debris Removal, Hansen Dam Flood Control Basin | January 1990 |
| 3. | Final Hansen Dam Water Control Manual Environmental Assessment | June 1990 |

## RELATIONSHIP OF ENVIRONMENTAL PROTECTION STATUTES AND OTHER ENVIRONMENTAL REQUIREMENTS

Compliance with applicable laws, regulations, and Executive Orders is outlined as follows:

National Environmental Policy Act (P.L. 91-190). The Master Plan and Environmental Impact Statement/Report have been prepared in accordance with the goals and requirements of the Act.

National Historic Preservation Act (P.L. 89-665). By letter to the State Historic Preservation Officer (SHPO), dated August 17, 1990, the Corps of Engineers has requested concurrence with the Corps determination that Hansen Dam Master Plan will have no effect on historic properties. The Plan will not affect cultural resources and concurrence is expected. A SHPO letter dated October 23, 1990 provides guidance. Pursuant to Section 106 of the National Historic Preservation Act, as amended and implemented by 36 CFR 800, the Corps of Engineers will conduct the necessary evaluation and coordination for each separate undertaking under the subject master plan. This will occur prior to the commencement of the undertaking.

Fish and Wildlife Coordination Act (P.L. 85-624). The proposed project has been informally coordinated with the U.S. Fish and Wildlife Service and the California Department of Fish and Game. The Fish and Wildlife Service provided a Planning Aid Letter dated July 20, 1990, to assist in the planning process. The Planning Aid Letter was used during planning of this Master Plan and EIS/R (see Correspondence Section). They did not provide comments on the draft EIS/R. A letter of comment was received from the California Department of Fish and Game, dated October 22, 1990. Their concerns are addressed in the Master Plan and EIS/R (see comment and response section, Appendix C).

Endangered Species Act (P.L. 93-205). The U.S. Fish and Wildlife Service provided a list of endangered, threatened and candidate species of plants and wildlife by letter dated May 19, 1989 (See Correspondence Section). The list consisted of least Bell's vireo and Slender-Horned Spineflower as endangered; the San Diego Coast Horned Lizard and Nevin's Barberry as Candidate 2 species; and the San Fernando Valley Chorizanthe as a Candidate 1 species. These species were not found during site surveys and were not expected within the basin; thus the proposed plan and its alternatives will have no effect on these species. The need to survey for least Bell's vireo and San Diego Coast horned lizard will be assessed at the initiation of design studies for proposed lakes.

Federal Water Project Recreation Act of 1965 (P.L. 89-72). The planning process has included full consideration of fish and wildlife enhancement.

Clean Air Act (P.L. 91-604). Potential impacts to air quality were addressed during planning for this EIS/R, and will be studied and assessed during design phases and presented in supplemental environmental documentation. Air quality impacts are not anticipated to be significant pending examination during the design process. A comprehensive traffic analysis is not possible until specific design features are generated. Upon finalization of specific design features, a comprehensive traffic analysis will be performed. Pursuant to the Clean Air Act, and local air quality standards, a mitigation plan will be developed and presented in the event that adverse air impacts are projected.

Clean Water Act of 1977, as amended (P.L. 95-217). No wetlands will be affected by the proposed action or alternative plans. Water quality requirements will be addressed during the lake design process. Water quality analysis and conformance with applicable water quality standards will be presented in supplemental environmental documents when specific design features are generated.

Executive Order 11988, Floodplain Management, May 24, 1977. The goals of this Executive Order were considered during the planning process for the Master Plan and EIS/R. The basin's flood-control function will not be affected by the proposed plan and alternatives.

California Environmental Quality Act. The Master Plan and this environmental

document were prepared in compliance with the goals and requirements of the Act.

Executive Order 11990, Protection of Wetlands. E.O. 11990 recognizes the significant values provided by wetlands warranting specific measures for their preservation. The goals of this order were considered during the planning process of the Master Plan and EIS/R. The project will not impact any wetlands.

## PAST AND CURRENT PROJECT ELEMENTS

Sediment removal within the basin is necessary to restore the basin's flood storage capacity, which has been depleted by sediment accumulation. The U.S. Army Corps of Engineers has authorized a private contractor to remove sediment from approximately 600 acres of the basin. At least 700,000 cubic yards of material will be excavated annually until the contract ends in October of 1995. This project involves the use of scrapers, conveyors, front-end loaders, crushers, generators and a large fleet of trucks.

The final elevation of the basin would be no lower than the original design contours for the basin. Desilting basins on both the Big and Little Tujunga will be excavated to trap sediment inflow in the upper reservoir areas.

Topographical changes in the basin resulting from this project will not influence or modify the proposed alternative of the Hansen Dam Master Plan and EIS/R. Mitigation features resulting from this project will be accommodated by the Hansen Dam Master Plan and EIS/R.

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# Purpose and Need

# 1. PURPOSE AND NEED

## 1.01 STUDY AUTHORITY

Hansen Dam was constructed under the authority of the Flood Control Act of 1936 (Public Law 74-738) and completed in 1940. The Flood Control Act of 1944, as amended (Public Law 78-534), authorized the Corps to construct, maintain and operate public park and recreational facilities at water-resource development projects. The law permits the Corps to authorize local interests to construct, maintain, and operate recreational facilities. In addition, the Water Resources Development Act of 1986, Public Law 99-662, Section 847, Hansen Dam, Los Angeles and San Gabriel Rivers, California, authorizes the secretary "...to contract for the removal and sale of dredged material from the flood control basin"....." for the purposes of facilitating flood control, recreation and water conservation." The Energy and Water Development Appropriations Act, 1991, directed that the Corps of Engineers is to plan, design, and construct a swim lake and associated recreational facilities at Hansen Dam using appropriated Federal funds. This Environmental Impact Statement/Environmental Impact Report for the Hansen Dam Master Plan is prepared in conformance with the goals of the National Environmental Policy Act of 1969 (Public Law 91-190) and the California Environmental Quality Act. Supplemental environmental documentation will be prepared during site-planning and design of proposed lakes, and during the planning process for any other proposed developments, in the designated intensive or low density recreation areas.

## 1.02 PUBLIC CONCERNS

Public opinion regarding the Hansen Dam Recreation project was solicited during the scoping process. During public meetings, the Corps recorded issues of concern that the public raised. Issues the public wishes to see addressed are listed below. This does not comprise an inclusive list, nor does it represent the ideas of the entire community. It is anticipated that additional issues of concern will arise as the project design is finalized. Additional issues of concern will be addressed in supplemental environmental documentation during design studies for the lake(s) and any future developments. To date, the public has expressed concern regarding the following:

o The lack of recreational areas available in the park, especially a large lake, parklands, and equestrian trails.

o A small lake would not accommodate the demand for water-based recreation.

o Noise generated due to the additional recreation development will have an adverse effect on the residential areas near the park.

o Traffic generated by the lake will exceed the carrying capacity of the streets in the area, negatively alter the level of service offered by the streets, and produce high levels of vehicle pollutants.

o Recreation development will impact natural areas, especially certain plant communities, and may degrade and reduce wildlife habitat.

o Security issues will need to be considered.

## 1.03 PLANNING OBJECTIVES

The Master Plan provides guidance for the use, development and management of the natural and man-made resources of the Hansen Dam project area. The Master Plan considers the requirements of flood control (the primary purpose of Hansen Dam); environmentally sensitive areas; site conditions; and needs and desires of the public. The plan has been developed to:

o Support the project purposes of flood control and recreation.

o Derive the optimum benefit from recreation resources, and optimize competing resource use.

o Protect significant/sensitive environmental resources.

o Utilize environmental resource values in recreation development.

o Integrate proposed development with existing facilities.

o Provide development criteria for environmentally sensitive land reserves, plus intensive and low density recreation use areas.

# Alternatives

# 2. ALTERNATIVES

## 2.01 EXISTING PROJECT

The project is comprised of Hansen Dam and the approximately 2.7-mile-wide and 1.3-mile-long flood control basin behind the dam. The basin is located in the northern San Fernando Valley along the debris cone of the Big and Little Tujunga Washes. The entire area lies on an alluvial plain at the foot of the San Gabriel mountains, and is part of the Los Angeles County Drainage Area (LACDA) (Figure 1 in the Master Plan, page 2-2). Existing recreational facilities associated with the project include:

- Hansen Dam Park: a group picnic area, two little league fields and a tot lot.
- Hansen Dam Sports Center: four baseball diamonds, an amphitheater, and two soccer fields.
- Hansen Dam Equestrian Center: A stable and equestrian staging area.
- Orcas Picnic Area: A large picnic area and a tot lot.
- Lake View Terrace Visitors (Recreation) Center: A visitor center equipped with an indoor gym and meeting room. In addition there are two multi-purpose courts, and two baseball diamonds and a tot lot.
- Hansen Dam Golf Course: an 18-hole golf course, including a driving range, clubhouse/restaurant and support facilities for the golf course.
- Bicycle/hiking and equestrian trails.

## 2.02 MASTER PLAN PROPOSAL

Trends within the greater Los Angeles area, and especially the San Fernando Valley, have been toward increasing mobility, increasing leisure time and a corresponding increase in recreational activity. A basic deficiency of recreational facilities exists throughout the study area. Implementation of the proposed Master Plan would serve a segment of the unmet recreational need in the area (USACOE Hansen Dam Master Plan 1975).

2.03 The U.S. Army Corps of Engineers, in conjunction with the City of Los Angeles Recreation and Parks Department, has prepared a Master Plan that will be used to guide prudent recreational development, and will serve to preserve the integrity of natural

areas within the Hansen Dam Flood Control basin. Proposed elements of the project include the following:

- o Proposed 15-acre swim lake.
- o Proposed Phase II expansion of Equestrian Center
- o Footprint for 70-acre lake site.
- o A resource plan including land use assignments for the entire basin. The assignments will be designed to minimize flood inundation of high intensity recreation areas, and to avoid impact to floral and faunal communities.

## 2.04 ALTERNATIVES ELIMINATED FROM DETAILED STUDY

Alternatives excluding a lake were initially considered, but were eliminated from further consideration after the scoping process and public meetings clearly disclosed that no interested parties would support no-lake alternatives.

2.05 The public requested that a lake be located in the same location of the former Holiday Lake. This alternative was considered but eliminated from further study, because Holiday Lake was located within the lowest elevations of the basin. These elevations are subject to heavy sedimentation from the Big and Little Tujunga Washes. The filling in of Holiday Lake, in fact, resulted from this sedimentation. A large riparian vegetation community has grown within the original Holiday lake footprint. In addition to hydrological problems associated with the Holiday Lake site, in excess of 50 acres of this riparian habitat would have to be removed. This action would significantly impact the natural environment. For these reasons the historic Holiday Lake location was eliminated from further consideration.

## 2.06 ALTERNATIVE DEVELOPMENT

Alternatives were developed in accordance with the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act, 40 CFR Sec. 1502.14, dated 29 Nov 1978, and the California Environmental Quality Act; and in response to a public scoping meeting held on April 4, 1989.

In addition to operations use areas and easements, the alternatives provide:

- o Land use areas for immediate recreation use, future multiple resource management, including recreation uses, environmentally sensitive land

reserves, and mitigation lands.

- o Fifteen-acre swim lake
- o Footprint for potential boating lake site.

2.07 Land Use Areas. All as yet undeveloped areas leased for recreational use are, or will be assigned to one of the following land use classes:

- o Environmental sensitive land use areas
- o Multiple resource management land use areas
  - Future recreation areas
  - Wildlife management: general
  - Vegetative management
- o Mitigation lands set-aside
- o Easement lands

These assignments will guide future recreation development based on analysis of land use and environmental compatibilities and constraints. Land use areas are discussed in detail in Chapter 6 of the Master Plan. Briefly, intensive recreation uses include baseball fields, playfields, playgrounds, and equestrian areas. Low density recreation uses require only minimal modification such as hiking. Reserved environmental sensitive areas are natural areas, appropriately managed to maintain wildlife habitat, trails, and to meet operational needs. Specific development plans within these land use areas are not included in the master plan. Their impacts, therefore, cannot be addressed in this document. Currently, no specific proposals for development have been completed.

2.08 The layout of proposed Master Plan features is now provisional due to many dynamic socioeconomic factors that must be considered throughout the planning process. Because of the conceptual/tentative nature of proposed features, this EIS/R is programmatic in nature. Specific proposals, when developed, will require supplemental environmental documentation.

2.09 Footprints for Potential Lake Areas. The public scoping meeting disclosed overwhelming support for a large lake. In response to this request, the Corps explored all possible locations for both a large and small lake considering such factors as sediment flows, existing land uses, access, adjacent uses, sensitive environmental resources, and flood control. The footprints for potential lake sites shown on the alternative maps show

locations determined to be most feasible. All lake alternatives were specifically designed to preclude any normal sedimentation from the natural drainage in the basin.

2.10 Upper Lake Alternatives. Alternatives A and C propose construction of a "lower" 70-acre lake in the north-central portion of the basin; with an adjoining, 15-acre "upper" lake to the immediate northwest. Alternative B proposes a lower lake in the same area as Alternatives A and C, but does not propose an upper lake.

2.11 The proposed lake footprints are defined as intensive recreation areas. Lake placement within the basin has been planned so that no negative impact to contiguous, viable biological communities will occur.

2.12 Basis for Formulation of Alternatives. The discussion of alternatives to the proposed plan follows the U.S. Army Corps of Engineers procedures mandated by the Council on Environmental Quality for the development and analysis of alternatives (40 CFR 1502.14-16). Alternative formulation included consideration of the following factors: flood control, flood elevation history, recreation demand, public input, sensitive environmental resources, adjacent land use, access, cumulative impacts, and existing land use. Comparative analysis of alternatives has provided a basis for plan/design refinement and selection by:

- o Promoting redesign of plan elements to mitigate impacts determined to be significant; and
- o Fostering elimination or modification of plan elements to avoid or reduce impacts determined to be significant.

## 2.13 ALTERNATIVE PLANS

Summaries of Alternatives A, B, and C, and the No Action plan, are as follow. Note that all the alternatives include Phase II expansion of the Equestrian Center.

2.14 Alternative A. This alternative is the proposed plan, as shown in Plate 1 (Appendix A). Alternative A proposes development of an expansion footprint to accommodate a 70-acre lake. This envisioned 70-acre lake would be used for non-motorized boating and fishing. Connected up-gradient to the 70-acre footprint, via an approximately 370-yard-long meandering stream, is a footprint for a potential 15-acre swimming lake. The proposed 15-acre lake footprint would provide an "upper" swimming lake that would drain down gradient, via the meandering stream, into the proposed 70-acre "lower," non-motorized, boating and fishing lake. Alternative A, in sum, includes the following water-based recreation features:

- o 15-acre lake footprint

- o 70-acre lake footprint

- o Adjoining stream feature

2.15 Alternative A Land Use Areas. Proposed land use areas for alternative A are as follow:

- o 484 acres are designated as environmental sensitive space.

- o 489 acres are designated as multiple resource management areas with uses to include future recreation.

2.16 Alternative A Environmental Effects. The environmental effects of Alternative A, the preferred plan, are summarized briefly in Table 1, at the end of this chapter. Alternative A designates approximately 484 acres as reserved environmental sensitive space, and 489 acres for multiple resource management. Construction of the upper lake, (excavation and hauling) may be accomplished by the ongoing debris removal operation. Such short-term construction impacts as increased noise emissions and dust could be anticipated. Increased visitation could result in impacts to air quality and area traffic. No impacts to cultural resources are anticipated from adoption of the Master Plan. No threatened or endangered plant species will be impacted by implementation of the proposed plan or alternatives. No adverse impact will result to least Bell's vireo habitat (least Bells's vireo were not found during basin surveys in 1989 or during biological appraisals performed in 1990, and it is assumed the vireo does not inhabit the basin). If least Bell's vireo habitat is discovered at or near the lake construction site, a comprehensive vireo survey will be conducted during lake location analysis and design studies. It is assumed that the San Diego Coast horned lizard does not inhabit the immediate area due to lack suitable habitat and area disturbance. If horned lizard habitat is discovered in the area at the time of the 10-acre lake design, a horned lizard survey will also be conducted.

2.17 Environmental commitments for all alternatives are discussed in Chapter 4, Environmental Consequences.

2.18 Alternative B. Alternative B proposes a lake expansion footprint totaling 70 acres, to accommodate a non-motorized boating/fishing lake. Approximately 12 percent more land than proposed in Alternative A would be reserved as environmentally sensitive open space around the lake. Consequently, approximately 12 percent less land would be assigned for multiple resource management to include low density recreational uses. Alternative B does not include an upper swimming lake, or a stream, and allows for an intensive recreation area in place of the upper lake in Alternative A. Alternative B, to summarize, includes the following water based recreation feature:

- o 70-acre lake footprint

2.19 Alternative B reserves approximately 518 acres as environmentally sensitive open space; and 455 acres for multiple resource management to include future recreation uses. This alternative provides the most open space of the three alternatives (See Plate 2, Appendix A). Impacts related to development of the lake are the same as those with Alternative A (See Table 1, Comparative Impacts of Alternatives, at the end of this chapter).

2.20 Alternative C. Alternative C proposes a lower lake with an expansion footprint of 100 acres for boating and fishing. The lower lake footprint is connected to a potential upper swimming lake footprint via a short stream. Alternative C, to summarize, includes the following water-based recreation features:

- o 15-acre upper lake footprint
- o 100-acre lower lake footprint
- o A stream that joins the upper and lower lakes

2.21 Alternative C designates 432 acres as environmentally sensitive reserve land, and 541 acres for multiple resource management to include future recreation uses. This alternative provides the largest lake potential and the least area of reserved environmentally sensitive open space of the three alternatives (See Plate 3, Appendix A). Impacts related to lake development are the same as for Alternatives A and B (See Table 1, Comparative Impacts of Alternatives, at the end of this chapter).

2.22 No-Action Alternative. The "No-Action" alternative would consist of the continuation of existing and committed uses in the basin with no new recreational development. It is estimated that the No-Action alternative represented annual recreation visitation of approximately 1,100,000 for 1989. The No-Action plan commits approximately 1,450 acres to recreation; The No-Action alternative provides a no-lake recreational alternative.

## 2.23 COMPARATIVE IMPACTS OF ALTERNATIVES

Comparative impacts of alternatives are displayed on Table 1.

TABLE 1

COMPARATIVE IMPACTS OF ALTERNATIVES

| RESOURCES | EXISTING CONDITION | ALTERNATIVE IMPACTS | | | |
|---|---|---|---|---|---|
| | | Alternative A | Alternative B | Alternative C | No Action |
| Geology, Topography, Soils | Alluvium, sand and rock washed down from the mountains into a debris basin, high concentrations of silt and clay, no known active faults in the basin. | Minor landscape reconfiguration, slight erosion during construction; approx. 150,000 cubic yards of material moved for lake construction. | Same as A | Same as A | No impact |
| Air Quality | Overall quality of air is fair to poor depending on time of year. Concentrations of ozone exceed Federal and State standards >80 days of the year. | Short term increases in nox, sox due to construction emissions. Minor fugitive dust emissions. Long term auto emissions to be determined. | Same as A | Same as A | No impact |

| RESOURCES | EXISTING CONDITION | ALTERNATIVE IMPACTS | | | |
|---|---|---|---|---|---|
| | | Alternative A | Alternative B | Alternative C | No Action |
| Water Resources | Project site located at the confluence of two rivers. Inflow into the basin is low, usually 10 CFS during summer months. Water quality in the basin is poor due to concentrations of heavy metals and high coliform counts. | No anticipated impacts due to water quality. Outflows from basin may be increased due to lake drainage & circulation conditions. No groundwater impacts. Potable water to be used for 15-acre lake. Source for 70-acre lake not determined. | Same as A | Same as A | No impact |

| RESOURCES | EXISTING CONDITION | ALTERNATIVE IMPACTS | | | |
|---|---|---|---|---|---|
| | | Alternative A | Alternative B | Alternative C | No Action |
| Biological Resources | Vestiges exist of riparian habitat, & a small area of coastal sage scrub. An isolated area of alluvial scrub exists, plus several areas of old field habitat & turfed park. Most habitats are altered & fragmented, & a small pond occurs near the dam toe. The above settings support many common species of birds, reptiles, & mammals that typically inhabit wash areas. No endangered species have occurred in the project area in the past 3 years. Established wildlife corridor exists in Big and Little Tujunga washes. | Possible loss of fringe habitat due to human trampling. Loss of 10 acres of open space to lake. Increased waterfowl habitat. Potential for project to attract wildlife predators with garbage. Possibility for adverse impacts resulting from equestrian units wandering off trails into natural areas. Potential conflict between equestrian use & animals using corridor. Increased human use in all natural areas. | Same as A | Same as A | No impact |

| RESOURCES | EXISTING CONDITION | ALTERNATIVE IMPACTS | | | |
|---|---|---|---|---|---|
| | | Alternative A | Alternative B | Alternative C | No Action |
| Cultural Resources | Three recorded archeological sites found in project area. | Potential for discovery of new archeological resources with lake excavation. No impact to existing resource. | Same as A | Same as A | No impact |
| Land Use | The majority of the basin is used for recreation with 6 developed sites totaling 475 acres. 975 acres remain undeveloped. Surrounding land uses are primarily residential, with some commercial & retail uses. | No impact to flood control with increased recreation area. Less environmenta lly sensitive land reserved. Gain in intensive use areas. Lake would increase visitation numbers & ultimately impact existing facilities. Lake may encourage residential immigration into surrounding neighbor-hoods. | Same as A | Unmet demand for recreation facilities in area. | |

| RESOURCES | EXISTING CONDITION | ALTERNATIVE IMPACTS | | | |
|---|---|---|---|---|---|
| | | Alternative A | Alternative B | Alternative C | No Action |
| Esthetics | The basin provides open space, natural areas & several vistas & overlooks, with some developed parklands. | Would enhance the visual quality of the area. | Same as A | Same as A | No enhancement |
| Traffic | Existing traffic conditions for the area include: the Foothill & Golden State Freeways & 4 medium to heavy volume streets that surround basin. The level of service offered by the major arteries around the basin is good to excellent. The Golden State Freeway offers a fair to poor level of service depending on the time of day. Traffic within the basin stems from approx. 400 trucks/day that are removing debris. There is no congestion or traffic problem within the basin. | Establishment of the lake would generate large volumes of traffic. This may impact the level of service offered by the streets surrounding the basin. No traffic related impacts are expected to result from lake construction. | Same as A | Same as A | No impact |

| RESOURCES | EXISTING CONDITION | ALTERNATIVE IMPACTS | | | |
|---|---|---|---|---|---|
| | | Alternative A | Alternative B | Alternative C | No Action |
| Socio-economic | The area is characterized by affordable housing, multi-unit housing, light industry & commercial development. A large portion of the area is dominated by horsekeeping districts & low density housing zones. There is little room for expansion north of the project area. The average income for the project area is middle to low income. | Primary impact will be increased number of visitors into the area. This could bring additional income & commerce to the locality. Increased visitation may also have adverse impact on existing recreation facilities. The financial cost for maintenance & security may be passed on to the public. Project could serve as a catalyst for further development in area. | Same as A | Same as A | No impact |

TABLE 1

COMPARATIVE IMPACTS OF ALTERNATIVES

| ALTERNATIVES | A (Preferred) | B | C | No-Action |
|---|---|---|---|---|
| Approx. Acreage Devoted To Multiple Resource Management | 489 AC. | 455 AC. | 541 AC. | * N/A |
| Approx. Acreage Reserved as Environmentally Sensitive Open Space | 484 AC. | 518 AC. | 432 AC. | * N/A |

* 963 Acres of Undeveloped Lands

# Affected Environment

# 3. AFFECTED ENVIRONMENT

## 3.01 INTRODUCTION

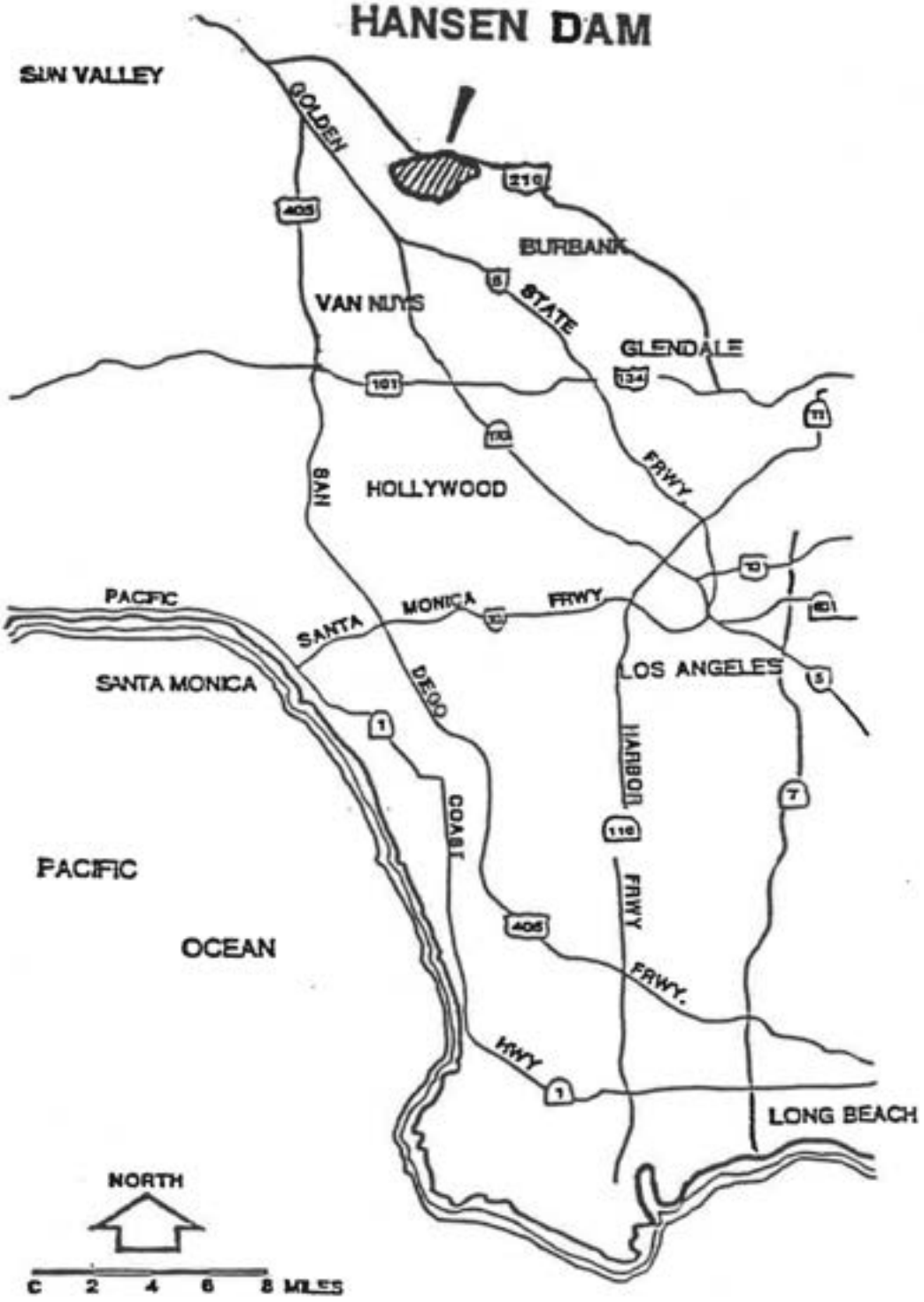
The Hansen Dam Flood Control Basin sits within an urbanized area, characterized by a mix of residential and commercial development within the northern San Fernando Valley of Los Angeles County, California (Figure 1, vicinity map). The primary purpose of the basin is flood control, specifically to minimize flood damages that could occur to portions of the San Fernando Valley along Tujunga Wash. As mandated by the Flood Control Act of 1944, recreation and other uses of reservoir land are a direct result of, and are purposes secondary to, the basin's role as a flood control reservoir.

## 3.02 GEOLOGY, TOPOGRAPHY, AND SOILS

Hansen Dam Recreation Area is located at the base of the foothills of the San Gabriel Mountains. The park is made up of a tiered series of bluffs decreasing in elevation from the north to the south. The Hansen Dam Basin foundation is composed of alluvium consisting of sand, gravel, and boulders. Adjacent to the streambeds are overbank materials of similar composition yet containing greater concentrations of silt and clay. The San Gabriel Mountain Range lies just north of the basin, rising to an elevation of 7,000 feet above the valley floor. These mountains were formed by the folding and faulting process of tertiary marine sedimentation, later modified by periods of heavy erosion. The dam is tiered into two outcrops of modelo sandstone foundation. For the most part the soil at the site is well graded alluvial material.

## 3.03 WATER RESOURCES

Hansen Dam is located at the confluence of Big Tujunga and Little Tujunga washes. Substantial inflow into the basin is ephemeral; however a low to moderate perennial flow into the basin (usually less than 10 cubic feet per second (cfs) during the dry summer season) comes from the Big Tujunga Wash. The drainage area including tributaries to the dam totals 152 square miles in the San Gabriel Mountains. Elevations range from about 1,000 feet at the dam to over 7,000 feet in the mountains. The majority of the watershed is uninhabited National Forest lands. The Los Angeles County Flood Control District's Big Tujunga Dam is located about 15 miles upstream from Hansen Dam. Big Tujunga Dam is used for water conservation and flood control and has a major influence on Hansen Dam. The period of November to April is when the greatest flood hazard exists and when most runoff occurs. The watershed has a high debris production potential, especially after portions of the watershed have burned. Major fires




VICINITY MAP

**Figure 1**

occurred in the watershed during the mid 70's and mid 80's; subsequent debris production was heavy and caused much of the sedimentation within the basin today.

3.04 Three major dams are located upstream of Hansen Dam. Big Tujunga Dam is located on Big Tujunga Wash 15 miles upstream of Hansen Dam. Lopez Dam is a debris basin located approximately 6 miles upstream of Hansen Dam. Pacoima Dam is located upstream of Lopez Dam and is used for flood control and water conservation. During abundant water flows, water is held at Pacoima Dam and released as needed to a spreading ground just below Lopez Dam. Pacoima and Lopez Dams are not tributary to Hansen Dam.

3.05 Surface Water. Hansen Dam is fed primarily by three major sources: Lopez channel, the Big Tujunga Wash and the Little Tujunga Wash. These rivers are tributaries to the Los Angeles River and are considered a portion of the San Fernando Drainage Area in the overview study conducted by Unitex (1986) for the Los Angeles County Drainage Area system (LACDA). Runoff from the watershed into the reservoir is characterized by high flood peaks of short duration that result from high intensity rainfall. Flood durations are typically less than 12 hours and always less than 48 hours. Inflow rates drop rapidly between storms, and inflow during the dry summer season is usually less than 5 cfs.

Lopez Channel is a concrete-lined storm channel that drains Lopez Canyon to the north and a major portion of the community of Lake View Terrace. Flow in the channel is ephemeral resulting from rainfall and urban runoff.

The Little Tujunga is a natural stream that drains the northwestern portion of the watershed, primarily Little Tujunga Canyon and its tributaries. Flow in the Little Tujunga is ephemeral resulting from storm waters.

The Big Tujunga Wash is the major natural drainage stream for the northeast portion of the watershed. The Big Tujunga Wash is fed by several small creeks that drain into the wash above the Tujunga Dam. Below the Tujunga Dam, the Big Tujunga Wash becomes the major inflow source into Hansen Dam. Flow in the Big Tujunga is perennial and usually less than 10 cfs during the dry summer season.

3.06 Groundwater. Downstream of Hansen Dam is a groundwater recharge area; however, because Hansen Dam is managed for flood control purposes, it plays only an incidental role in groundwater recharge. Additionally, high sediment loads make the diversion of water into groundwater recharge ponds difficult. In general, groundwater use within the San Fernando Valley drainage basin is balanced with groundwater recharge. This is accomplished through a groundwater recharge program that utilizes both natural flow and imported water. Water quality is generally fair to poor due primarily to high mineralization in the soils of the area (Unitex 1986).

3.07 Water Quality. Surface water quality in Hansen Dam for remnants of Holiday Lake is poor. Since the 1970's all water quality data has exhibited high counts of coliform bacteria and substantial concentrations of iron, manganese, and mercury. Testing of chemical and physical quality of Hansen Dam surface water by the State of California Department of Health from 1977 through April 1981 provides some data on concentrations of iron, manganese, and pH. Iron and manganese concentrations in the water column regularly exceeded State and Federal standards during this period. State and Federal standards of 0.3 milligrams per liter (mg./1) of iron for freshwater aquatic life were exceeded regularly. Total iron concentrations ranged from 0.10 to 3.50 mg/1. State and Federal standards of .05 mg/1 of manganese for drinking water were also exceeded most of the time. Concentrations as high as 2.4 mg/1 of manganese have been recorded.

3.08 Concern behind the standard for iron in drinking water is for aesthetic reasons rather than toxicological significance. The standard is designed to prevent objectionable tastes and laundry staining; it constitutes only a small fraction of the iron normally consumed by humans. However, low concentrations of iron are toxic to fish and to some insects consumed by fish so that a standard has been set for freshwater aquatic life. As with iron, the standard for manganese in drinking water is based upon esthetics (taste and laundry staining) rather than health concerns.

3.09 Analytical tests performed by the Regional Water Quality Control Board in 1984 exhibited a measurable amount of mercury in the remains of Holiday Lake. Although the detected amount approached unsafe levels, it remained within the safe range. The tests were limited in that they were performed on only three fish of the same species at a time when the water level and configuration of the lake were significantly different than they are today (Holiday Lake no longer exists).

3.10 Overall, the water quality of Holiday Lake was poor; the main problems appeared to have been high concentrations of iron, manganese, various salts, and high coliform bacteria counts. The water quality of Big Tujunga Wash is considered to be better. The main water quality problem with the wash in Big Tujunga Wash is the high turbidity resulting from its high sediment load. A secondary problem associated with the stream is substantial coliform bacteria accumulations due to equestrian related activities within the region in proximity to the wash.

3.11 Water Sources. Most of Southern California is a semi-desert environment with low precipitation and runoff. Consequently, existing water volumes are inadequate to support the large populations associated with the area. Much of Southern California's water is imported from northern water resources, extracted from limited groundwater reserves, and diverted from the Colorado River in southeastern California. Within the project area there exist several municipal water mains that will serve as a water source for the proposed lake.

## 3.12 CLIMATE

The climate of the area surrounding Hansen Dam is generally temperate and semi-arid, with warm, dry summers, in which there are up to 125 consecutive days or more without rainfall, and mild, moist winters. Average daily maximum/minimum summer temperatures (degrees Fahrenheit) range from about 85/60 on the valley floor to about 85/65 in the surrounding mountains. The corresponding winter figures are 65/40 and 55/33, respectively. Within the drainage area, average annual rainfall is 14 inches.

3.13 Evaporation rates were taken from two evaporation measuring stations nearest to the project site (Pacoima Dam and Big Tujunga Dam). Those rates indicate that mean daily evaporation in the vicinity of the project area range from about .05 of an inch in winter to about .105 of an inch in summer (Los Angeles County Department of Public Works, Hydrologic Report 1988-89). On days of very strong dry Santa Ana winds, evaporation can be considerably greater. Evaporation does not appear to be a considerable problem.

## 3.14 AIR QUALITY

The project area lies within the South Coast Air Quality Basin which is monitored by the South Coast Air Quality Management District (SCAQMD). The local weather is determined by the basin's morphology and its geographic location. The basin is a coastal plain with connecting broad valleys and low hills bounded by the Pacific Ocean in the southwest quadrant with high mountains forming the remainder of the perimeter. The general region lies in the semi-permanent high pressure zone of the eastern Pacific. As a result, the climate is mild, tempered by cool sea breezes. This usually mild climate pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds.

3.15 The SCAQMD and the California Air Resources Board (CARB) maintains a network of air quality monitoring stations within the San Fernando Valley. The stations monitor the surrounding air for the presence of: ozone, carbon monoxide, sulfur dioxide, nitrogen dioxide, total suspended particulate, lead, sulfate and nitrate. Except for nitrate, these are pollutants for which the State and Federal governments have established air quality standards and, in some cases, episode criteria. The Reseda monitoring station (source receptor No. 6) is closest to the site and is assumed to represent the Hansen Dam project area. Air quality monitoring data received from this station in 1988 identifies the air quality in the project area. Air quality is defined by State and Federal standard acceptable levels. The number of days exceedance for each pollutant level standard determines the quality of the air. The quality of the air for the Hansen Dam project area for 1986, 1987 and 1988 is displayed in the following tabulation:

| Monitored Pollutant | Days Exceedance | | | | | |
|---|---|---|---|---|---|---|
| | State | | | Federal | | |
| | 1986 | 1987 | 1988 | 1986 | 1987 | 1988 |
| Ozone | 131 | 121 | 137 | 72 | 60 | 71 |
| Carbon Monoxide | 11 | 2 | 4 | 11 | 1 | 3 |
| Nitrogen Dioxide | 0 | 0 | 0 | 0 | 0 | 0 |
| Sulfur Dioxide | 0 | 0 | 0 | 0 | 0 | 0 |
| Suspended Particulate | 0 | nm* | nm | 0 | nm | nm |
| Lead | 0 | nm | nm | 0 | nm | nm |

* nm=not monitored

3.16 Certain pollutants were not monitored during the last two years because the SCAQMD is in the process of changing the monitoring procedures to include the smaller particles that represent a more serious threat to human health. (pers. comm. W/Margaret Holden SCAQMD 6/7/89).

3.17 The South Coast Air Quality Management District, in accordance with the Air Quality Management Plan, has set allowable emission standards for major pollutants that have an adverse effect on the public. These pollutants are expected to be generated from trucks/equipment use during the construction phase of the proposed project. Allowable concentrations are displayed in the following tabulation:

| Pollutant | Allowable Concentration |
|---|---|
| Carbon monoxide (CO) | 550 lbs/day |
| Sulfur oxides (SOX) | 150 lbs/day |
| Nitrogen oxides (NOX) | 100 lbs/day |
| Particulate matter (PM 10) | 150 lbs/day |
| Reactive organic gases (ROG) | 75 lbs/day |
| Dust | 150 lbs/day |

3.18 The overall quality of the air is fair to poor depending on the time of year. Generally, from November to May the air quality is fair to good because of precipitation, heavy winds and cooler weather. Air pollution episodes are more frequent and severe from June to October because of the increase in daylight hours and more frequent temperature inversions holding photochemical smog within the basin.

## 3.19 BIOLOGICAL RESOURCES

Description of the ecological resources is based on: (1) COE and U.S. Fish and Wildlife Service (FWS) spring field studies of the Hansen Dam Flood Control Basin from 1986 to 1989; (2) FWS Planning Aid Letter (PAL) for Hansen Dam Recreation Master Plan/EIS/R, 1990; (3) FWS Planning Aid Letter (PAL) for the Los Angeles County Drainage Area Water Control Study (LACDA), 1987; and (4) the COE'S Biological Resources Report: Special Status Species of the LACDA, 1986. The Planning Aid Letter for the Master Plan is included in the correspondence section.

3.20 Plant Community Description. Vegetation communities in the basin are displayed on Plate 4 (Appendix A). Hansen Dam Flood Control Basin contains several fragmented and isolated plant communities. The most prominent vegetation community is the willow riparian forest which covers approximately 100 acres. This community is located

predominantly in the southwestern portion of the basin, along the toe of the dam and adjacent to the remnants of Holiday Lake. Scattered patches of riparian habitat are also located adjacent to and upstream of Orcas Park in the northeast section of the basin.

3.21 The riparian community in the basin is dominated by mature black and arroyo willows. A one-season sample (taken May 1989) of the riparian community in the area surrounding Holiday Lake disclosed tree canopy cover ranging from 40% - 99%. Tree size classes ranged from 1.5 inches to 9 inches diameter at breast height with a greater portion at the lower size class range; tree heights were from 6 to 35 feet tall.

3.22 The shrub understory, comprised primarily of mulefat, is patchy and dense in scattered locations on the western side of the basin. Fragmented portions of the same understory (mulefat) are found on the east side of the outlet channel.

3.23 The riparian habitat adjacent to the remnant Holiday Lake and Orcas Park degrades into riparian scrub, which has been highly disturbed by the sand and gravel operations. The riparian scrub habitat is dominated by giant reed, mulefat, and ruderal species with some scattered willows and Fremont cottonwoods in portions of the project area.

3.24 Little and Big Tujunga Washes within the basin are highly disturbed due to the current sand, gravel and sediment removal operations as well as scouring winter flood flows; both of these areas are devoid of vegetation. Wash areas upstream of Orcas Park, along the Big Tujunga, contain arroyo willow, mulefat, Fremont cottonwood, and scattered giant reed.

3.25 A fragmented alluvial scrub community is found within the floodplain east of Orcas Park. Plant species observed include laurel sumac, our lord's candle; California buckwheat, scale broom, golden currant, poison oak, white sage, felt-leaved yerba santa, and brittle bush.

3.26 Coastal Sage Scrub and smaller areas of alluvial scrub inhabit the upland slopes and terraces on the perimeter of the basin, including an area northeast of Orcas Park. California buckwheat, California sagebrush, prickly pear cactus, black sage, and our lord's candle are dominant plants within this community. Highly disturbed coastal sage scrub exists on slopes leading to the wash in the southeast section of the basin, just northeast of the terminus of the dam. The slopes are dominated by introduced grasses, California buckwheat, California sagebrush, golden currant, and Mexican elderberry. At the base of a bluff in the southeast portion of the basin, a fragmented, relic coast live oak community is found. The sparse understory of the oak community is comprised of representatives of coastal sage scrub, and chaparral communities. These species include: golden currant, toyon, poison oak, and black sage, Mexican elderberry, western sycamore, and mulefat.

3.27 Old field, (human modified field habitat) is located among the turfed park area at the west end of the basin. Native and ornamental trees are present along some of these fields and slopes west and northwest of the previous Holiday Lake site. Species include California sycamore, walnut, acacia, tamarisk, pine, eucalyptus, and palm. Sandbar willow and mulefat are found at lower elevations near the former lake site. Some shrubs present include coyote brush, felt leaved yerba santa, and black sage. More disturbed areas have patches of castor bean and tree tobacco. Ground cover in these areas consists of introduced grasses, horehound, curly dock, brass buttons, telegraph weed, prickly lettuce, field mustard, filaree, wild radish, and yellow sweet clover. A barren field which appears to have been disked is located just west of the Hansen Dam Sports Complex.

3.28 Additional old field habitat is located east of Orcas Park adjacent to a container plant nursery. The sand and gravel operators are currently using a portion of this field as a stockpile site for organic silts. The stockpiles are overrun by ruderal species including castorbean and tree tobacco. The field adjacent to the stockpiling area is dominated by golden currant and introduced grasses. Other plant species present include California buckwheat, Mexican elderberry, California sage, our Lord's Candle, cacti, and California chicory.

3.29 The parks and Hansen Dam Sports Center are primarily landscaped with turf and a mix of native and ornamental trees. The Sports Complex grounds are landscaped with eucalyptus, Canary Island pine, elm, and other ornamental species. The park above the west end of the basin has a greater density of trees and a wider variety of trees, including California sycamore, eucalyptus, pines, oleander, bottlebrush, and other ornamentals.

3.30 Threatened and Endangered Plants. The U.S. Fish and Wildlife Service (USFWS) has identified three sensitive plants as potentially occurring in the vicinity of the project area. These plants include: the slender horned spineflower (Dodecahema leptoceras), a federally listed endangered species, and the Nevin's barberry (Mahonia nevinii) and San Fernando Valley chorizanthe (Chorizanthe parryi var. fernandina), both Category 1 candidates for listing as endangered species. Category 1 species are those for which enough biological information exists to support a proposed listing as endangered or threatened. None of these plants are expected to occur within the basin itself, but they could possibly occur immediately upstream of the basin in the alluvial scrub habitat east of Orcas Park.

3.31 Both the slender horned spineflower and the San Fernando Valley chorizanthe are found on alluvial benches above the flood scoured wash, with open coastal sage scrub vegetation containing cactus and yucca (USACOE Hansen preliminary study 1984). The alluvial scrub habitat east of Orcas Park was thought to be appropriate habitat for both of these plants. The area was surveyed in 1984 by the Corps and 1986 by the Corps and USFWS; during these surveys the plants were not discovered.

3.32 A sensitive plant survey was conducted outside the project area along the Big Tujunga Wash south of the 210 Freeway in May 1988. The survey disclosed two populations of the slender horned spineflower. This finding represents the rediscovery of this plant within Big Tujunga Wash, and is the largest population east of the Foothill (210) Freeway (MBA,1989).

3.33 Wildlife Ecology. The wildlife within the basin occupy various habitats (e.g., floodplain, riparian, pond, alluvial scrub). These sites support many common species of bird, reptiles, and mammals, including many animals that typically immigrate to wash environments from the Southern California coastal foothills. Riparian areas within the basin generally contain the highest wildlife diversity. However, wildlife habitat within the project area and much of the vicinity has been modified and adversely impacted by human activities. Consequently, wildlife habitat quality is poor throughout much of the project area. Several fragmented areas of quality habitat exist; however these areas are too exiguous to support abundant and diverse species of wildlife.

3.34 A wildlife "corridor" has been identified within the project area. This corridor serves as a bi-directional pathway for migrating fauna and larger mammals employing their foraging strategies traveling between sites both within the basin and into remaining open space areas adjacent to the basin. The Big and Little Tujunga washes serve as access corridors where wildlife movement can occur unobstructed by the 210 freeway.

3.35 Threatened and Endangered Wildlife. The U.S. Fish and Wildlife Service has identified a Federally listed species and a candidate species for listing that have been recorded in the basin or in the vicinity of the project area.

3.36 The least Bell's vireo, a listed endangered species, has been observed in the project area three times in the past 5 years. However, a certified biologist has determined that the last sighting of the vireo was a solitary migrating male. Vireos were not found during surveys conducted in 1989 and biological appraisals performed throughout 1990 and 1991 (May, July, August, and October 1990; January and February 1991). It is believed by Corps biologists that although some patches of suitable habitat do exist within the basin, the vireo does not inhabit these areas due to the proximity of intense human activity to these areas.

3.37 The San Diego Coast horned lizard is a candidate for listing under category II (existing information indicates may warrant listing but substantial biological information to support a proposed rule is lacking). Three juvenile coast horned lizards were observed during a sensitive plant survey conducted by Michael Brandman and Associates (MBA 1989). The observed lizards were not fully mature; consequently, it was not possible to determine if they were the San Diego subspecies. It is presumed that the species does occur north of the Foothill (210) Freeway, most likely in areas of intermediate-phase alluvial scrub (MBA 1989).

## 3.38 CULTURAL RESOURCES

The Hansen Dam area was surveyed for cultural resources in 1977 for the Los Angeles District, Army Corps of Engineers (COE) (Martz 1977); and the results updated by the COE in 1986 and 1989 (Schwartz 1986; 1989). The COE property, held in fee, was divided up into four segments, A-D, for survey purposes. Martz (1977) has documented the results of the survey of those four segments. Two previously recorded archeological sites were relocated, and an additional locus was interpreted as belonging to the large village site CA-LAn-167. Currently there are three recorded archeological sites; CA-LAn-167, CA-LAn-300, and CA-LAn-1525 found within or adjacent to the area of potential effects (APE) for the Hansen Dam Master Plan.

3.39 CA-LAn-167, also known as the Big Tujunga Village Site was first discovered by the former landowner Mr. L. McFee in 1945. The site was known historically both in Spanish and ethnographic records. Excavations and tests performed on the site indicate that it is the remnant of a large, complex Gabrielino Indian village with cultural deposits possibly spanning some 2500 years (Martz 1977:21, 22). Radiocarbon dates that were generated from prior test excavations indicate that the site was definitely occupied, albeit intermittently, from about A.D. 435 through 1800.

3.40 The earlier testing programs at CA-LAn-167 revealed human remains that have been tentatively associated with a Gabrielino memorial rite know as the Mourning Ceremony. Martz (1977:22) noted that these remains had no direct association with a burial ground, but with a ceremonial area where portions of skeletons were reburied during memorial rites. Martz continued that the Mourning Ceremony took place as an anniversary rite observed every two, five, or ten years after the death of a prominent village member. The significance of this fact is that there should be a cemetery in the vicinity that contains remains of less prominent Gabrielino villagers.

3.41 When the California Department of Transportation built the I-210 Foothill Freeway they had CA-LAn-167 nominated for the National Register of Historic Places in 1975. It was formally listed in 1978.

3.42 In 1989, Schwartz (1986) reevaluated the eastern segment of LAn-167, which Martz had determined to be a non-contiguous locus of the site, as a separate site and obtained the new trinomial, CA-LAn-1535 for it. The site is on property whose ownership is divided between the COE, Caltrans, and a private owner. The site is located in a disturbed grassland area covered with castor bean and other vegetation. To date it has not been tested for significance.

3.43 The third archeological site in the APE is CA-LAn-300, a campsite southwest of Lan-167. It is considered to be closely related to the larger Big Tujunga village site. Documentation prepared for the keeper of the National Register of Historic Places in 1977, but never submitted (Martz 1977), suggested a period of occupation ranging from

ca. A.D. 500 to 1500; with the possibility for an earlier component dating from 3000 - 400 years B.P. (Before Present). A large portion of this site was apparently impacted when it was used for borrow during the construction of Hansen Dam in 1940 (Schwartz 1990: personal communication ). CA-LAn-300 was tested by the California State University, Los Angeles, Archeological Field School in 1985 and again in 1989 (Schwartz 1990). Without a final report on the test excavations, however, coordination with the State Historic Preservation Officer has not been completed.

3.44 The current potential significance of these sites as summarized by Martz is: "There is evidence to indicate that the site (Big Tujunga Village complex) may contain additional valuable information concerning the extinct Gabrielino culture, the interaction between the coastal maritime cultures and inland desert cultures, the dynamics of acculturation, and the subsequent development of the area by European and American settlers (1977:22).

3.45 LAND USE

Existing land uses within the reservoir and the Master Plan study area are discussed in the following paragraphs and displayed on Plate 4, Existing Uses, in the Master Plan. (Land Uses in this discussion do not correspond with the "Land Use Area" assignments in the Master Plan.)

3.46 Flood Control. Hansen Dam drains an area of approximately 147 square miles, most of which is mountainous terrain. At maximum design, (water surface elevation 1,082 feet), an impoundment of approximately 1,090 surface acres is created. The Hansen Dam flood control project consists of a currently dry-land reservoir owned, operated and maintained by the U.S. Army Corps of Engineers. With the exception of flood conditions, water is not impounded behind the reservoir because it was not designed to do so and because of sedimentation problems.

3.47 The basin was designed with a total reservoir capacity of 35,800 acre-feet: 28,100 acre-feet is allocated for flood water impoundment, 5,000 acre-feet for sediment storage, and 2,700 acre-feet for inactive storage. Fires denuded the watershed in the early 1980's and subsequent heavy rainfall washed large amounts of sediment into the basin.

3.48 Recreation. Construction of Hansen Dam, completed in September 1940, did not include recreational facilities, and the potential of the Hansen reservoir for water-based recreational facilities was recognized subsequent to completion of the dam. In 1946 a preliminary report for recreational development identified the potential of the project area for recreational use. In April 1948, the City of Los Angeles leased 1,450 acres within the project area for recreational purposes and began a phased program for overall recreational development of the basin. The lake formed naturally behind the dam structure in the borrow pit created by construction of the dam. The City of Los Angeles initiated recreational development in the reservoir in 1952 with development of Hansen

Dam Park.

3.49 The original Hansen Dam recreation lake (Holiday Lake) was 130 acres. Water quality and lake size were maintained with a potable water source. The lake was an extremely popular facility used for swimming, boating and fishing. By 1975, however, the lake had been reduced to approximately 80 acres as a result of sediment accumulation. Due to continual sediment accumulation, the lake was abandoned as a recreation facility in 1982. By 1983 the lake had been reduced to approximately 30 acres. Today the lake is completely nonfunctional as a recreational facility.

3.50 For the past 37 years recreational development has continued within the basin based on available funding from, primarily, the City of Los Angeles. The City and the Corps of Engineers cost-shared the Lake View Terrace Recreation Center. All other development, with the exception of some concessionaire improvements, has been funded, designed and constructed by the City of Los Angeles; subject to approval by the Corps.

3.51 Major development has been concentrated in six locations:

Hansen Dam Park, an area southeast of the intersection of Osborne Street and Dronfield Avenue, is designated as a large group picnic area with two little league fields and a tot lot.

Sports Center, an area just south of the intersection of Foothill Boulevard and Fenton Avenue, contains four baseball diamonds, an amphitheater, and two soccer fields.

Equestrian Center, an equestrian area south of the intersection of Foothill boulevard and Orcas Avenue, is situated between Little Tujunga Wash and Orcas park.

Orcas Park, a large picnic area with a tot lot, is located just east of the equestrian center and south of Foothill Boulevard.

Lake View Terrace Recreation Center (LTRC), north of Foothill Boulevard and west of Orcas Avenue, contains the only visitor center building in the park, equipped with an indoor gym and meeting room. Within the LTRC complex are two multi-purpose courts, two baseball diamonds located west of the Little Tujunga Wash, and a tot lot.

Hansen Dam Golf Course, an 18-hole golf course just south of the outer dam face, is equipped with a driving range, a clubhouse/restaurant, and support facilities.

3.52 Other recreational areas within the basin include unimproved hiking and equestrian trails, an overlook for the entire basin, and a 2-mile paved bicycle/walkway on the crest of the dam.

3.53 Other Reservoir Land Uses. Agricultural leased areas, including container plant nurseries, are located east and north of the sports complex and east of Orcas Park. These agricultural leases are an interim use until the city develops recreational facilities. The Corps has a flowage easement from the Department of Water and Power (DWP) where powerlines cross the basin in a north/south direction at the upper end of Orcas Park. DWP also leases this strip for agricultural use. In addition to Corps sediment removal activity, several areas of sediment removal are located in the vicinity of the basin. The Corps has granted a license to a contractor to remove sand and gravel from the main channel of Big Tujunga Wash in an area northeast of the dam gate. Wildlife management is another use of the basin.

3.54 Surrounding Land Use. All land in the areas surrounding the Hansen Dam basin is within the jurisdiction of the City of Los Angeles. The basin is bounded by the communities of Pacoima to the west, Sun Valley to the south, Shadow Hills and Sunland to the east, and Lake View Terrace to the north. Generally, the communities to the north and east of the basin are more rural and equestrian in character.

3.55 The communities to the west of the basin are more intensively developed. Although there are still large tracts of land which are currently undeveloped, this land could be developed in the near future. The City has established an enterprise zone for much of this area. The enterprise zone designation, which provides tax incentives for both commercial and residential developers to invest and build in the local communities, could result in increasingly dense residential and commercial urban developments west of Hansen Dam.

## 3.56 ESTHETICS

The existing visual resources of the project area retain a predominantly rural nature. The immediate project area consists of an alluvial basin behind a dam, at the confluence of the Big and Little Tujunga Washes. The basin is largely undeveloped despite the presence of excavation equipment in the main wash areas. The project area contains several vestiges of riparian growth that adds to the area's natural appearance. Existing recreation facilities within the project area consist primarily of parkland and landscaped turf areas that add to the pleasant visual ambiance of the area. An 18-hole golf course just below the exterior face of the dam marks the southern boundary of the project area. Adjacent and surrounding scenic resources include the San Gabriel Mountains to the north and the Verdugo Mountains to the southeast.

3.57 Land uses surrounding the project area include the following: To the north is the community of Lake View Terrace, a middle-income single family residential community. The 210 Freeway separates the basin from Lake View Terrace, thereby obstructing any clear view the residents of that community may have of the project area; to the northwest is Pacoima, a moderate-to low-income residential community. Throughout most of the

community of Pacoima, a limited view exists of the project area due to topographical features in the locality. To the south of the project area is the city of Sun Valley. North Sun Valley abuts the golf course that marks the southern boundary of the project area. North Sun Valley is predominantly commercial and light industry. To the southeast of the basin is the community of Shadow Hills, a single family residential area of moderate- to high-income. Most of the community of Shadow Hills has an obstructed, or no view of the project area due to the topographical features of the Verdugo Hills.

3.58 Two roadways and a vista point in the vicinity serve as scenic locations for viewing the entire basin and a panoramic view of the surrounding mountains. Wentworth Street provides views of the basin, the Verdugo Mountains, and the San Gabriel Mountains from the south side of the valley. The 210 Freeway provides a panoramic view of the entire area, including the basin, an eastern view into the Big Tujunga Canyon, and a western view into the Valley. The Hansen Dam vista point provides an extensive view of the project area, most of the basin and the surrounding mountains.

## 3.59 TRANSPORTATION AND TRAFFIC

The Foothill and Golden State Freeways are the two major freeways in the vicinity of the Hansen Dam project area. Foothill Freeway (210), just north of the project area provides access to traffic travelling from east, north, and northwest. The Golden State Freeway (I-5), about 4 miles southwest of Hansen Dam, provides access to traffic from the southwest and northwest and to traffic from the metropolitan Los Angeles area. Four medium-to heavy-volume streets surround the basin: Foothill and Glenoaks Boulevards, and Osborne and Wentworth Streets (identified on plates 1-3, Appendix A). The project area is serviced by public transportation.

3.60 Level of Service. The quality of flow on a street system is typically described in terms of level of service (LOS). LOS range from A to F, with LOS A indicating virtually no delay of congestion and LOS F representing essentially total intersection breakdown with stop-and-go operation. LOS E and F typically are considered unsatisfactory.

3.61 Existing Traffic Volumes and Area Specific LOS's for major traffic arteries are summarized in the following paragraphs:

Foothill Freeway. The 210 Freeway in the vicinity of the project area is far below its carrying capacity. Approximately 35 percent of capacity is utilized during peak periods within the project area (Associated Traffic Consultants 1988).

Golden State Freeway. The I-5 is a major interstate highway that services much of Los Angeles and the San Fernando Valley. This freeway operates near or at maximum traffic carrying capacity 63 percent of the time during a 24-hour period.

Within the project area there is usually uninterrupted traffic flow except during peak traffic hours when capacity is exceeded (USACOE 1984).

Foothill Boulevard. Foothill Boulevard is a four-lane arterial running primarily northwest-southeast which also carries surface street traffic from the east San Fernando Valley towards Pasadena. Traffic volumes on Foothill show typical peak periods associated with the rural, residential, and commercial areas of the City of Los Angeles. The volumes peak during the morning commuter period, show another peak around the noon hour, then peak again during the evening commuter period, which usually has the largest volumes of the peak periods. During a 24-hour period, a total of 6,133 vehicles were counted. It was determined that the LOS for Foothill in the project area is class A. (Los Angeles Department of Transportation 1989).

Osborne Street. Osborne Street is a four-lane primary southwest-northeast arterial which serves the San Fernando Valley from Panorama City south of the basin to Little Tujunga Road to the north of the project area. Osborne is currently the primary corridor used to access the existing recreational facilities. During a 24-hour period, a total of 4,853 vehicles were recorded. Traffic volumes were considered to be below traffic carrying capacity at peak volumes. It was determined that the LOS for Osborne in the project area is class A. (Los Angeles Department of Transportation 1986).

Glenoaks Boulevard. Glenoaks Boulevard is a four-lane northwest-southeast arterial providing local access to residences and businesses within the Pacoima community and areas immediately north and south of the project area. Glenoaks serves as the major corridor for intercommunity traffic originating within the San Fernando Valley, and traveling north and south with proximity to the project area. Within the project area traffic volumes were relatively high. During a 24-hour period 10,906 vehicles were recorded traveling northbound and 8,734 were recorded traveling southbound, a total of 19,640 vehicles in a 24-hour period. Glenoaks has not reached maximum traffic carrying capacity during peak flows and has some ability to accommodate additional traffic during peak flows. LOS for Glenoaks has been established at A to B levels. (City of Los Angeles Department of Transportation 1986).

Wentworth Street. Wentworth Street is a four-lane secondary southwest-northeast arterial. The quality of traffic flow on Wentworth Street is similar to that of Foothill Boulevard, in that peak volumes occur three times a day. Volume of traffic on Wentworth is slightly higher than on Foothill Boulevard. Wentworth Street is classified as a scenic highway and appears to be used most heavily by rural and residential traffic. During a 24-hour period an average of 6,795 vehicles were recorded. It was determined that the LOS for Wentworth in the project area is class A. (City of Los Angeles Department of Transportation 1989).

3.62 In general, the movement of traffic around the Hansen Dam Flood Control Basin is good to excellent, with adequate capacity at all times on all surface streets and the 210

Freeway. Class A and B LOS's generally prevail, and there is a limited ability for the routes to absorb additional traffic without a significant decline in the level of service. The Golden State Freeway is the exception to these generally smooth-flowing traffic conditions. During peak traffic hours, the capacity of this freeway is exceeded along much of its length including the vicinity of the Hansen Dam Flood Control Basin.

## 3.63 NOISE

Noise measurements were not taken for this project because no significant impacts are anticipated. Background noise levels within the park vary with time of day, location and use. Quiet areas of the park have low noise levels similar to a rural area while the playing fields have higher noise levels. The closest sensitive receptors consist of single family residences located approximately 2,000 feet from the construction zone, and approximately 1,000 feet from the Foothill Freeway. No other sensitive receptors such as schools, hospitals, or churches are located nearby. Table 3 displays average noise levels for construction equipment.

## 3.64 ENERGY

Implementation of the Master Plan would require energy expenditure in three areas:

Construction energy. Diesel fuel will be used by the construction equipment while developing the lake, and facilities. Electrical energy will be used to light the project area if necessary.

Facility energy. Electrical energy will be required for lighting, cooling, and heating of any structures that may be
built as a result of the project.

Visitation energy. Secondary energy expenditure will occur as a result of fuel consumption for transportation of recreation users.

## 3.65 SOCIOECONOMIC RESOURCES

Hansen Dam is located in northeastern San Fernando Valley. Although this region is topographically isolated from central Los Angeles, it nevertheless is within the political jurisdiction of the City of Los Angeles. The northeastern portion of the San Fernando Valley has remained, until recently, one of the last remaining open space areas within the City. As such, having recently undergone considerable suburbanization, it remains one of the last remaining areas within a reasonably short distance from Los Angeles where

affordable new housing is available. This has brought a tremendous influx of new residents into the area that surrounds Hansen Dam and in the areas adjacent to Hansen to the northwest.

3.66 Hansen Dam basin is located socio-economically between two markedly different areas of the City. The area to the east of the basin is dominated by horsekeeping districts and low density housing zones. The areas to the west and south of the basin are much more densely populated, being dominated by higher density housing zones, multi-unit housing, and light industry and commercial uses. Average income for the residents of this area tends to be significantly higher than the area to the east of the basin. The San Gabriel Mountains are to the north of the basin and the majority of the range lies within the boundaries of Angeles National Forest, thus there is little room for the expansion of development in this direction.

3.67 The projected rate of population growth, utilizing data from the Southern California Association of Governments (SCAG), within the projected market area (see Table 4 in Master Plan) is estimated to be ten percent from the years 1990 to 2000, with a total projected population of almost one and one half million residents living in the vicinity of Hansen Dam. In addition to ongoing increases in the resident population, the City of Los Angeles' proposed land use plan near the Hansen Dam area indicates an increase in land area devoted to commercial and industrial uses.

## 3.68 HEALTH AND SAFETY

There is currently no formal/scheduled patrol of Hansen Dam area and trails.

Table 2

COMPARATIVE IMPACTS OF ALTERNATIVES ON RECREATION

| | Alternative A (Preferred Plan) | Alternative B | Alternative C |
|---|---|---|---|
| Golf Course | No impact | No impact | No impact |
| Overlook Area | Possible parking impacts | No impact | No impact |
| Hansen Dam Park (West Lake Development) | o Possible parking impacts<br>o Increased usage | o Increased usage<br>o Possible parking impacts | Possible increased usage |
| Pacoima Little League Ball Field | Possible expansion of facilities | No impact | No impact |
| Holiday Lake - currently riparian vegetation | No impact | No impact | No impact |
| Sports Complex | o Possible expansion of facilities<br>o Increased usage<br>o Possible parking, noise and visual impacts | No impact | No impact |
| Lakeview Terrace Visitor's (Recreation) Center | No impact | No impact | No impact |
| Equestrian Center | o Expansion of facilities<br>o Possible noise impacts from Orcas expansion | No impact | No impact |
| Orcas Park | o Possible expansion of facilities<br>o Possible parking impacts | No impact | No impact |

TABLE 3

AVERAGE NOISE LEVELS FOR CONSTRUCTION EQUIPMENT

| Equipment | Emission Level, dBA at 50 Feet |
|---|---|
| Air Compressor | 81 |
| Concrete Mixer | 85 |
| Concrete Pump | 82 |
| Crane, Derrick | 88 |
| Crane, Mobile | 83 |
| Dozer | 80 |
| Generator | 78 |
| Grader | 85 |
| Jackhammer | 88 |
| Loader | 79 |
| Paver | 89 |
| Pneumatic Tool | 85 |
| Pump | 76 |
| Roller | 74 |
| Saw | 78 |
| Scraper | 88 |
| Shovel | 82 |
| Truck | 91 |

Source: EPA Report NTID 300.1 (December, 1971).

# Environmental Consequences

# 4. ENVIRONMENTAL CONSEQUENCES

## 4.01 INTRODUCTION

This final environmental impact statement/report will address potential impacts resulting from construction of lakes displayed in Alternatives A, B, C, and the No-Action Alternative of the Master Plan (Plates 1, 2, and 3). Where appropriate, it will also address the land use areas. As noted earlier, this document is programmatic in nature. Supplemental environmental documentation will be prepared and coordinated for public review and comment when the specific lake settings are determined and design is in process. At the present time, there are no specific development proposals. Specific development proposals within multiple resource management areas, if and when proposed, will also require preparation and coordination of supplemental environmental documents to address primary, secondary, and cumulative impacts to the resource factors identified in this chapter.

4.02 The following paragraphs address, by resource or factor, the probable impacts associated with construction and use of lakes under Alternatives A, B, and C, and associated with the land use areas, where appropriate. The No-Action alternative is addressed, where appropriate. In general, the No-Action alternative would continue current use patterns in the basin (See Comparative Impacts of Alternatives, Table 1, Alternatives chapter).

## 4.03 GEOLOGY, TOPOGRAPHY, SOILS

Landform configuration may be modified to some degree, depending upon the nature of intensive or low density recreation development implemented in the future. Potential development plans under all alternatives could slightly alter landform configuration. All future development, however, would be implemented in a manner to avoid loss of basin capacity. Erosion and sedimentation are discussed in the following section in conjunction with water quality.

## 4.04 WATER RESOURCES

No significant impacts to water quality are expected to occur as a result of the proposed Master Plan. Water quality studies for proposed lakes will be required to ensure compliance with the Clean Water Act. Careful study and design will ensure that none of the proposed alternatives will have a significant impact on water quality. The No-Action Alternative will continue current uses in the area and no change in water-quality parameters is anticipated. Alternatives were formulated to preclude the potential of lake area inundation from a standard 10-year flood

event. The possibility of erosion from the lake construction area to the Big Tujunga Wash was considered during alternative development. To eliminate the potential of erosion of sediments into the Big Tujunga, protection features such as berms and slope stabilizing vegetation will be implemented during construction. The topography around lake areas will be graded to eliminate the potential of surface drainage inflows into the lake from the surrounding areas. In order to mitigate for potential construction-related water quality problems, specific construction guidance will be conveyed to the contractor(s). Conditions such as an oil and diesel spill contingency plan, designation of a refueling area and an equipment parking area that do not pose a pollution threat to surface or groundwater, construction windows, (limiting construction to dry weather periods), a fugitive dust control watering program, and other related measures will be enforced to avoid adverse impact to surface and groundwater during construction.

4.05 It is anticipated that outlying areas near proposed lakes will experience heavy pedestrian use due to ease of access and the public's desire to seek out less frequented areas surrounding the lake. Due to probable pedestrian and equestrian activity in and around the river, marginal levels of erosion-generated suspended solids may occur within the Big Tujunga River. To deter pedestrian use and discourage avoidable impact to boundary areas, a 50-foot vegetation buffer between environmentally sensitive reserve land and intensive and low density recreation land use areas will be employed.

4.06 Potable water is to provided for the immediately planned 15-acre swim lake. Other water sources for proposed lakes will be presented and assessed in supplemental environmental documentation, including consideration of resource constraints and economic and environmental feasibility. Lake designs, daily water demand, aeration techniques, eutrophication mitigation, mixing patterns and thermal stratification amelioration will be determined during detailed design and presented in supplemental environmental documentation. The possibility for groundwater recharge will be investigated as an element of the project design. If groundwater recharge is determined feasible given the environmental constraints, a recharge process will be incorporated into the project design.

## 4.07 LAKE MANAGEMENT PLANS

The U.S. Army Corps of Engineers (COE) recognizes its responsibility to develop and implement Lake Management Plans (LMPs) that are approved by the Regional Water Quality Control Board. The LMPs will ensure the effective management and long term viability of the lakes. During the design phases of proposed projects, the COE will devise LMPs that will include, but not be limited to, the following elements: clearly stated implementation strategies; monitoring programs that will discuss what parameters will be sampled, why the specific parameters are selected, how often sampling schedules will be fulfilled, and how the data will be used and analyzed; mosquito abatement programs; lake circulation systems; lake bottom drain systems; lake aeration systems; fish

maintenance; algae and aquatic plant controls; emergency response actions; and other elements as determined. Section 319 of the Clean Water Act requires States to develop nonpoint source water pollution management programs. The lake designs and LMPs will be developed pursuant to the Clean Water Act and to attain full compliance with all applicable sections of the Act.

## 4.08 AIR QUALITY

Short and long term anticipated impacts to air quality are discussed in the following paragraphs.

4.09 Lake excavation and construction would produce exhaust emissions from construction equipment and result in fugitive dust generation. The emissions produced during excavation and grading activities will be short-term. Dust suppression watering programs and erosion and sediment control plans will be implemented in compliance with the City of Los Angeles Building Code. Approximately 85 acres of projected lakebeds and surrounding access areas will be potential sources of significant fugitive dust during construction. Approximately 1,000,000 cubic yards (cy) of soil will have to be excavated and removed.

4.10 Projections of emissions and fugitive dust generation resulting from lake construction were calculated in accordance with the Environmental Protection Agency's (EPA) Emission Factors Predictive Formula (EPA-AP-42) and the South Coast Air Quality Management District's (SCAQMD) Air Quality Handbook for Impact Assessments.

4.11 The calculations for pollution generation stemming from the proposed project were based on the labor demand estimations received from an experienced contractor. The contractor is practiced in assessing labor demand requirements for projects of this type.

4.12 Given the scope of the proposed project and considering variables such as number and type of trucks/equipment used, type of earth and moisture content, number of miles traveled on paved and unpaved roads, wind velocity and annual precipitation averages, work hours and project duration, and load weight, and stockpiling dimensions, it was possible to determine approximations of fugitive dust and vehicle emissions generations. Estimated concentrations due to construction are calculated as follows:

| Pollutant | Estimated Concentrations Generated by the Project |
|---|---|
| Carbon Monoxide | 7.64 lbs/day |
| Sulfur oxides | 2.09 lbs/day |
| Nitrogen oxides | 22.26 lbs/day |
| Particulate matter | 2.00 lbs/day |
| Reactive organic gases | 0.64 lbs/day |
| Dust emissions | 109.07 lbs/day |

4.13 Anticipated pollutant emissions resulting from project construction fall well within allowable standards set by the SCAQMD. A watering program will be employed to control fugitive dust generation; it is anticipated that this program will reduce dust generation by 90 percent.

4.14 Long-term air quality impacts related to lake development are associated with anticipated increased park visitation. Peak attendance can be expected on weekends and holidays. It is assumed that the lakes will promote increased visitation. This in turn may have an adverse effect on air quality due to increased auto emissions. It is anticipated, however, that the overall effects would not be significant. Study and data to support this conclusion will be presented in supplemental site-specific environmental documents for the lakes along with coordination results and environmental commitments/mitigation, if appropriate. Air quality impacts associated with development in proposed recreation areas will be addressed when specific proposals are presented. Air quality impacts associated with any future recreation development are not anticipated to be significant. Continued basin use under the No Action plan should not appreciably alter air quality in the area.

## 4.15 AIR QUALITY MANAGEMENT PLAN

In an effort to attain complete conformance with applicable air quality statutes, this project has been fully coordinated with the South Coast Air Quality Management District (AQMD) and the Southern California Association of Governments. The COE understands its responsibility to maintain compliance with the AQMD's Air Quality Management Plan, and has recommended mitigation for any adverse air impacts which might result from the proposed project. Specific project design features will be considered and implemented to assure minimal negative air quality impacts. Features to

be considered include the following: a transportation management plan that will include strategies such as instituting peripheral park-and-ride lots with shuttle services; special parkways for buses and trams; preferential parking and low parking fees to high occupancy vehicles. Measures considered to relieve traffic congestion on surrounding streets include roadway controls such as one-way streets; directional signs; and alteration of traffic signals to induce smoother traffic flow. These and other features will be considered during the design phases of the project to minimize air pollution.

## 4.16 BIOLOGICAL RESOURCES

Potential impacts to biological resources as a result of Hansen Dam Master Plan are outlined in the following paragraphs:

4.17 Plant Communities. Impacts to plant communities were considered for each of the proposed alternatives. The proposed lakes would be constructed in an area that has been denuded due to sand and gravel removal operations. No major plant community, including solitary trees, would be impacted. Limited multiple resource management including only low density recreation has been designated for all areas surrounding intact plant communities. Minimal loss of plant community fringe habitat is expected to result from implementation of the proposed Master Plan due to juxtapositioning of sensitive areas with low density zoning. Data from completed projects similar in scope, however, indicates that lakes would greatly increase visitation numbers. As an outcome of such high visitation numbers, it is anticipated that some marginal adverse impacts may result from pedestrian traffic seeking out more secluded areas. Recreational use or development in significant extant plant communities is not proposed. Plant communities will be assigned instead to environmental sensitive open space and/or wildlife management areas. The No Action Alternative would most likely continue current use patterns and activities (see Comparative Impacts of Alternatives, Table 1).

4.18 Wetlands. A field survey was performed on January 24, 1991, by a Corps ecologist to determine the presence of wetlands and compliance with Section 404(b)(1) of the Clean Water Act. The field survey disclosed that facultative wetland indicator species (FACW) such as mulefat, giant reed and Fremont cottonwoods were present in the basin. Although FACW were present in the basin, no FACW or other wetland indicators were present in the immediate proposed project area. Accepting that final lake locations will remain at the current proposed sites, no wetlands will be impacted by the proposed project. In the event that final project design dictates revised lake locations, a new survey, or surveys, would be conducted, with a Corps Regulatory biologist, to determine the presence of wetlands.

4.19 Wildlife. No direct adverse impact to existing viable wildlife habitat would result from implementation of the proposed Master Plan. It is assumed, however, that lakes would generate high visitation numbers, introducing noise, litter, and intensive human

activity near the wildlife areas. The wildlife corridor would not be impacted by the implementation of the Master Plan. The U.S. Fish and Wildlife Service Planning Aid Letter dated July 20, 1990 has been utilized during the planning process of the Master Plan and EIS/R.

4.20 Threatened and Endangered Species. No threatened or endangered plant species will be impacted by the implementation of the proposed master plan or any of the alternatives. No adverse impact will result from the implementation of the proposed master plan to habitat where the least Bell's vireo might be found. Least Bell's vireo were not found during surveys conducted in 1989. It is assumed that the vireo does not inhabit the basin (see Chapter 3, Section 3.36). If vireo-quality habitat is discovered at or near the construction site, a comprehensive vireo survey will be conducted at the time final lake locations and designs are determined and preceding any construction. It is presumed that the San Diego Coast horned lizard does not inhabit the immediate project area due to the lack of horned lizard habitat and the highly disturbed nature of the area. If horned lizard habitat is discovered at or near construction sites, a horned lizard survey will be conducted at the time final lake locations and designs are determined and prior to any construction.

## 4.21 CULTURAL RESOURCES

No impacts to cultural resources are anticipated. As the area of potential effects is defined for each individual undertaking a complete review of the effects of the project will be conducted pursuant to Section 106 of the National Historic Preservation Act.

## 4.22 LAND USE

Potential impacts to land use are discussed in the following paragraphs.

4.23 Flood Control. Each of the three alternatives of the Master Plan were carefully planned so that none would impinge in any way upon the primary project purpose of flood control. During the planning phase, several precepts were followed from the outset. All recreation and multiple resource management areas identified in Alternatives A, B, and C were located at high elevations within the basin. The primary operational areas, those areas which are at low elevations within the basin and the Big and Little Tujunga Washes, were redesignated as environmentally sensitive space. Transitional areas and buffer zones were generally designated as multiple resource management areas reserved for wildlife or vegetative management, or for low density recreation use. low intensity recreation areas. Any excavation will require evaluation and approval by Corps of Engineers Hydrology and Hydraulics Branch. The net result is no impact to the flood control mission of the reservoir.

4.24 Recreation. Each of the alternatives will have varying degrees of potential impacts to the existing recreation facilities within the basin. Utilizing the same designations for recreation use areas as outlined in Chapter 2 and plates 1, 2, and 3 of this document (Appendix A), the impacts of each alternative may be assessed. Altogether, Alternative A provides 484 acres of environmentally sensitive land reserves and 489 acres for multiple resource management to include selected future recreation uses. Alternative B provides 518 acres of environmentally sensitive reserve lands and 455 acres for multimple resource management to include selected future recreation uses. Alternative C provides 432 acres of environmentally sensitive reserve space and 541 acres for multiple resource management to include selected future recreation uses. All acreage is approximate. Potential impacts of alternatives to specific recreation facilities are outlined in the following paragraphs.

Hansen Dam Park

Alternative A - has a relatively limited allocation of multiple resource management recreation land use areas adjacent to the Park. However, a potential exists for a "spillover" from expected high use of the lake; increasing parking problems and conflicts among recreation users. Careful site planning around the park area should minimize these conflicts.

Alternative B - This alternative most closely duplicates existing conditions in the park. Also, because planned and contemplated future recreation areas form a lengthy contiguous border, with ample space allotted for each intensity, this alternative is expected to have less impact to existing park facilities.

Alternative C - Due to the basic similarity of this alternative with Alternative A, potential impacts are expected to be similar.

Hansen Dam Sports Center

Alternative A - Due to extensive recreation zoning surrounding the Sports Center, it is possible that existing fields could someday be expanded or lie adjacent to a variety of other recreational land uses. User conflict may occur.

Alternative B - This alternative is similar to Alternative A. Consequently, analogous impacts are expected to occur. The sports fields would generally be surrounded by environmentally sensitive land reserves. The environmentally sensitive land reserves would separate the intensive recreation development from potential low density recreation on the eastern border of the sports center.

Alternative C - With Alternative C there is no environmentally sensitive land reserve bordering the sports fields. Eighty percent of the sports field complex is surrounded by multiple resource management areas. This may eliminate the potential for

user group conflict if judicious recreation planning is employed. Implementation of Alternative C would facilitate the loss of potential environmentally sensitive land reserves and provide the greatest amount of potential recreation use areas surrounding the sports fields.

Hansen Dam Equestrian Center

Alternative A - Provides for maximum expansion of the equestrian facilities. As it is already buffered on the east by Orcas Park and by environmentally sensitive land reserves to the west and south, few impacts are expected to occur to this current recreational use.

Alternative B - Provides for a smaller recreation land use area adjacent to the equestrian facility and leaves a low density recreation buffer between recreation use areas and the open space wildlife corridors of the Big and Little Tujunga Washes. Due to the buffering and isolation of the site, few impacts are expected to occur.

Alternative C - In this area of Hansen Dam, the zoning is identical to that under Alternative A, above, with the same outcome expected.

Orcas Park

Alternative A - This alternative identifies a multiple resource management area immediately adjacent to the east of Orcas Park, as do Alternatives B and C below. This has the potential to generate higher visitation numbers around Orcas Park and cause additional conflicts between facility users. The easternmost portion of the multiple resource management use area would be restricted to low density recreation development in the future.

Alternative B - This alternative is similar to Alternative A, but provides additional environmentally sensitive land reserve space to the east of the multiple resource management use area.

Alternative C - This alternative is also similar to Alternatives A and B but includes a multiple resource management area at the extreme eastern portion of the basin. Additional impacts to Orcas Park could be expected with this alternative.

Lake View Terrace Visitor (Recreation) Center. Due to the physical isolation of the Recreation Center from the remainder of the basin, no impacts are expected under the implementation of any of the alternatives.

Hansen Dam Golf Course. The Hansen Dam Golf Course is physically separated from the rest of the basin by the dam structure. This physical isolation will help buffer the golf course from activities associated with the alternative plans. It can be expected,

however, that any alternative which would substantially increase the recreational use and types of activities offered at Hansen Dam will draw a larger number of people and, therefore; increase the likelihood of conflicts with existing recreational use areas. This would have an incidental impact on all other use areas, to include those more physically isolated in their existing locations, such as the Golf Course.

4.25 Table 2 gives a comparison of anticipated impacts with regard to the existing recreation features at Hansen Dam (end of Chapter 3).

4.26 Other Reservoir Land Uses. At this time there are several major types of land uses in the basin other than those which are recreation-related; most notably the sediment removal operation, and agricultural land uses.

4.27 Agriculture is considered an interim use at all Corps of Engineers facilities. Areas that are currently in use as agricultural areas have been assigned to multiple resource management land use areas, and include areas east of the Sports Center, and north of the Sports Center across Foothill Boulevard. These areas have identical zonation for all three alternatives. Agriculture within the basin will be eliminated over time, with or without Master Plan changes.

4.28 Sediment removal is an ongoing operation, the intent of which is to restore and then maintain the basin's original ability to retain floodwater. The sediment removal operations are generally located at lower elevations within the basin, in areas which have been designated as environmentally sensitive open space reserves in the Master Plan. Although there are no impacts directly associated with this activity, care must be taken in assuring public safety in any future recreation developments adjacent to sediment removal activities. This will be accounted for in environmental documentation accompanying future specific recreation development proposals. Additional environmental documentation with regard to the sediment removal operation may be found in the Hansen Dam Sediment Removal Final Supplemental Environmental Assessment (SEA). The SEA is in progress. Upon finalization, any mitigation required by the SEA will be accommodated within the Master Plan.

4.29 Surrounding Land Uses. As previously noted, the greatest single impact that all of the alternatives of the Master Plan will have is that they will effectively bring more people in to use the additional recreation facilities. The additional recreation usage will have some adverse impact on surrounding land uses with respect to air quality, traffic and other environmental quality factors covered elsewhere in this document. Alternatives A, B, and C will provide beneficial impact to residents by providing nearby additional recreation opportunities; and to commercial/retail uses which will receive additional business due to increased visitation.

## 4.30 ESTHETICS

Views from surrounding residential neighborhoods and scenic highways would not be altered by implementation of the project. The topography of the site would change slightly due to grading and the use of berms. It is anticipated that project implementation would increase the visual resource quality of the area. Presently, the project area is visually characterized by sand and gravel processing equipment and associated excavation operations. The area is surrounded by scarified lots overgrown with ruderal species of plants. The proposed lakes would replace most of the sand and gravel operations and a major portion of the scarified lots in the immediate area.

## 4.31 TRANSPORTATION AND TRAFFIC

Approximately 1,000,000 cubic yards of material will be excavated for construction of the proposed lakes. It is anticipated that much of this material will be excavated and hauled from the site as part of the debris removal operation currently in process. Impacts related to basin debris removal are addressed in the Environmental Assessment for Debris Removal, USCOE January 1984, and in the in-progress Supplemental Environmental Assessment for Debris Removal. Traffic-related impacts arising from lake construction (hauling of materials and movement of construction equipment) are expected to be negligible for alternatives A, B, and C, due to the existing removal operations within the basin. It is estimated that material excavated will remain in the basin and be used for lake perimeter grading and landscape reconfiguration. It is estimated that the lakes will occupy upward of 800 acre feet (AF) within the basin. This basin has not attained its original design sediment capacity of 5000 AF since the early 1980's. The debris removal operations currently serving the basin will restore the basin to its original capacity, as well as provide a surplus of flooding capacity AF. Therefore, the 800 AF occupied by the lakes would not have an impact on the flood control ability or on downstream flooding. If later calculations reveal the flood capacity may be impacted, hauling will be required, and the impacts of hauling will be addressed. Review of the lake designs will include review by Corps of Engineers Hydrology staff to insure that the flood capacity is not impacted.

4.32 Based on a projection model used by the San Diego Association of Governments (SDAG 1989), it is estimated that 50 car trips would be generated per 1,000 linear feet of shoreline. Each car would statistically contain approximately 2.5 people. The analysis of 22,400 linear feet of shoreline was used for the proposed project. It is estimated that construction of two lakes, at 15- and 70-acres, would generate annual visitation of approximately 1,023,825 recreation users. Currently, the estimated number of visitors to the site is approximately 1,100,000 annually. It was estimated that most of the 1,023,825 visitors generated by the lake would be a large percentage of the 1,100,000 current visitors. Therefore, it should be noted that the lake would not generate an additional 1,023,825 visitors annually. Instead, and although it would substantially increase the

visitation periods and car trips into the area by current visitors, it would only moderately increase the number of new visitors per year. Further traffic analysis is required to determine if the lake(s) will generate enough traffic to exceed the carrying capacities and/or impede the level of service offered by the streets in the vicinity of the project.

4.33 The Corps recognizes the need for a comprehensive traffic analysis that will adequately describe the potential traffic impacts of the proposed plan alternatives as well as traffic generated by other new developments in the area. Coordination with the City of Los Angeles transportation engineers has determined that a traffic model analysis would be appropriate for this project. At a minimum, the proposed traffic study should include detailed analyses of circulation, parking, access, public transit alternatives, bikeways, and a discussion of mitigation measures. A traffic model of this scope may take 4 to 6 months to develop and will require detailed traffic data based on specific design features of the project. At this stage, the proposed project is programmatic in approach and lacks much of the necessary detail needed to initiate a modeling analysis. Information is currently being collected on access locations, existing traffic patterns, circulation, and peak visitation periods. This information will be used to develop a model and perform a comprehensive traffic analysis that will precede any construction and assist in the final design of the proposed project. The traffic analysis and a mitigation plan to avoid or minimize adverse air quality and circulation impacts will be included in an environmental document that will accompany the basis of design for the project.

## 4.34 NOISE

Construction equipment used to construct the lakes will emit noise which can vary from 74 dBA to 91 dBA depending on the type of equipment being used. (Table 3, Average Noise Levels for Construction Equipment, in Chapter 3, displays the estimated noise emissions associated with various types of construction equipment.) This noise will be intermittent and will be limited to times allowed by the city's noise ordinance, and the provisions of the construction contract. The distance of approximately 2,000 feet from the nearest housing will provide sufficient attenuation, an estimated drop of 18 dBA, to reduce construction noise levels near these houses to within an acceptable level. However, park users, and especially those who wish to use the athletic field, outdoor theater or other areas near the construction zone, could be disturbed by the construction noise. Construction noise will be temporary; no long-term noise impacts are predicted.

## 4.35 ENERGY

Energy consumption resulting from the project or alternatives will have no significant impact on energy resources in the area. Several project features should be employed to reduce any potential energy overhead generated by project implementation; these

features are:

- o Lake excavation plans should minimize haul distance and avoid double-handling of the excavated material.

- o Conveyors should be used whenever possible to transport excavated material.

- o Lakes should be designed with gravity flow systems that would maintain water levels, as opposed to systems that are mechanically pump dependent.
- o Design features for any facility should include solar space and water heating and include architectural elements that utilize building aspect and deciduous plants to insulate against temperature differences. Buildings should be constructed to maximize natural ventilation and avoid mechanical cooling.

- o No future recreation facilities should be located beyond a comfortable walking distance from a public transportation route.

## 4.36 SOCIOECONOMIC RESOURCES

As noted throughout this document Hansen Dam Recreation Area and the surrounding area will experience a greater number of visitors than the past with implementation of the proposed Master Plan.

4.37 The region around Hansen Dam lies almost entirely within the limits of the City of Los Angeles, and has experienced tremendous development over the past few years. This area contains some of the last remaining undeveloped land within the City limits, and is regarded as one of the few remaining areas where affordable new housing may be found. This has created a highly dynamic atmosphere in the communities which surround Hansen Dam. Those communities are: Pacoima, Sun Valley, Shadow Hills, Sunland and Lake View Terrace.

4.38 Hansen Dam basin sits at the interface of two socio-economic areas. The area to the east of the basin is dominated by horsekeeping districts and low-density housing zones. The areas to the west and south of the basin are much more densely populated, being dominated by higher density housing zones, multi-unit housing, and light industry and commercial land uses.

4.39 The conditions above create a highly varied social fabric. This makes for a stimulating and interesting mix of recreation desires and uses, but also has the potential to contribute to conflicts in recreation uses within the basin.

4.40 As previously discussed in the sections on physical impacts, it is anticipated that the greatest impact will be related to the introduction of the much larger user group population for Hansen recreation facilities. Real estate values could potentially be positively affected by the expansion of recreation facilities within the basin. The local business community could also benefit in a positive manner from increased service exposure. There could also potentially be an increase of concession-operated facilities associated directly with the basin itself. The increased usage may impact other areas within the basin, as well as the transient population.

4.41 Real estate values could be positively enhanced by the expansion of recreation facilities, particularly any water-based recreation facilities. If property values increase as a result of greater development of the basin, then it is likely that the project could potentially serve as a further catalyst for development within the region.

4.42 Alternatives A, B and C could provide a similar degree of growth-inducement potential. The No-Action Alternative would have no impact upon growth; however, the increasing unmet demand for recreation would fall farther behind the demand generated by the rapid rate of population growth in the proposed project area. 4.43 HEALTH AND SAFETY

Lake development is anticipated to result in increased visitation to Hansen Dam, and thus the need to consider security patrol/supervision and management.

## 4.44 CUMULATIVE IMPACTS

Complete development or implementation of the Master Plan is dependent on demand for a given activity, resource availability (e.g., water), and funding availability. The resource plan displays areas for multiple resource management development, environmentally sensitive land reserves, and potential lake sites. Based on this plan, it is possible that over a period of years, a most likely scenario for full implementation of the Master Plan could include the following features: development of a 15-acre swimming lake, and the much larger 70-acre lower lake, sports fields, informal play and picnic areas, Phase II expansion of the Equestrian Center, and an event center and group picnic area. Additional development could possibly include food concessions, a golf area and related concessions.

4.45 Additional recreational development in the vicinity could possibly include the Los Angeles International Golf Club. A proposed site for an 18-hole golf course and associated development is located north of Foothill Boulevard in Sunland-Tujunga at the mouth of Big Tujunga Canyon. The Final Environmental Impact Statement (DEIS) for the U.S. Army Corps of Engineers Regulatory Permit under Section 404 of the Clean Water Act was distributed for public review in February 1990. Project studies are ongoing. If developed, the golf club would most likely host one or two tournaments per

year.

4.46 Further commercial and residential development could also be anticipated in the area over time on remaining undeveloped parcels of land. Possible developments could include equestrian/residential in areas so zoned, and condominiums and homes in areas zoned for more urbanized development as well as retail development and office complexes. Again, development would be dependent on a number of factors including demand, availability of financing, and environmental review.

4.47 Corps of Engineers regulations (ER 1130-2-435, dated 30 Dec 87) state that a Master Plan is a planning document anticipating what could and should happen and is flexible to changing conditions. The Master Plan deals in concepts rather than details of design and administration. As noted elsewhere in this EIS, the document is programmatic due to the conceptual nature of the Master Plan. Thus, detailed engineering and design, traffic studies, and definitive adverse impact mitigation programs can be tailored according to established project design features. Additional National Environmental Policy Act (NEPA) documents will be prepared and circulated for review at that time. The same procedure would apply to all proposals to implement various elements of the Master Plan.

4.48 For this reason, cumulative impacts of the Master Plan, added to other past, present, and reasonably foreseeable future actions in the area, are identified rather than quantified. Likely cumulative impacts include air quality, traffic, recreation/land use, water resources, and biological resources.

4.49 Total implementation of the Master Plan in conjunction with possible development of the Los Angeles International Golf Club would increase the number of people visiting Hansen Dam Recreation Area and its environs for recreational purposes. Short-term impacts from construction may include erosion, leakage of petroleum products, noise and impacts to air quality, which can be minimized by the use of required environmental measures. Traffic and localized air quality impacts associated with traffic would increase. Except during infrequent special events (up to twice-yearly golf tournaments), recreation-related traffic would be heaviest on weekends when work-related traffic can be expected to be lighter. During summer months, daily use would be heavy and add incrementally to the daily air quality and traffic impacts. With increased area recreational and residential/commercial development, traffic and attendant air quality impacts can be expected to increase.

4.50 Recreational opportunities at Hansen Dam may encourage nearby residents to utilize these resources rather than travel to more distant recreation areas. These recreational amenities can be anticipated to enhance the quality of life in the northeast San Fernando Valley. The variety of leisure and recreational activities available, both active and passive, will increase.

4.51 Implementation of the Master Plan in its entirety would improve the visual aspect of the basin as lake and recreational development replace most of the sand and gravel operation. The natural appearance of the basin and region would be modified somewhat by development but the overall unique visual character of the area would be maintained.

4.52 All Master Plan features would be designed in a manner to avoid or minimize impacts to biological resources. However, indirect impacts to biological resources through increased basin development and use could be anticipated, including increased human and equestrian disturbance, and littering. All planned and future development would avoid wetland habitats.

4.53 All development can be anticipated to have an incremental impact on water supply and use. Alternative sources of water supply for all Master Plan features must be identified and assessed as projects are developed. Lakes, picnic areas, playgrounds, sports fields, and golf courses are all dependent on adequate water supply and availability for these purposes. All basin features would be designed in a manner to avoid impacts to water quality; however, increased human/equestrian use with full implementation of the Master Plan and possibly other recreational development in the area can be expected to have an impact on water quality in the basin. Development of the 15-acre lake will have a cumulative impact on the water resources of the region. Initially, the lake will be filled with potable water allocated by the Department of Water and Power. Water used to maintain the lake level will be designated during the design phase and addressed in the final NEPA document. Initial water used to start the lake will be inconsequential to the regions water supply and will be offset by the use of Best Management Practices (BMP) and Conservation Programs in the area. BMPs utilize policies, programs, practices, rules, regulations or ordinances and/or the use of devices equipment or facilities which result in more efficient use or conservation of water. Conservation Programs use economic and financial incentives to encourage efficient use of water, public information and education activities, and water conservation research and development to reduce the uncertainty surrounding the effectiveness of alternative conservation measures. Although Southern California has been in drought status since 1987, the development of the lake is not expected to adversely impact the current or reasonably foreseeable future water supply in the region. This is because of the proposed reclaimed water recycling program associated with the lake's long-term water supply. It is anticipated that the lake may over time increase the groundwater supply in the area through a groundwater recharge program.

## 4.54 SUMMARY OF IMPACTS

Alternatives A, B, and C (the proposed Master Plan alternatives) will have no significant adverse impacts on resources in the basin. No wetland habitat would be affected. Those resources that may experience adverse cumulative include:

Land Use: The identification of new recreation areas may lead to additional development in the project area. There is the potential for the loss of fringe natural areas due to the impact by pedestrian traffic. Also, it is highly plausible that there will be increased traffic and a greater need for parking space. The land use areas proposed by the project could generate the demand for structural facilities such as restrooms and concession stands, which could also affect the open space quality of the area.

Traffic. The potential exists for increased traffic and all the problems associated with heavy traffic such as congestion on arterial streets, poor traffic circulation, parking, and increased emissions. Mitigation conditions will be employed.

Natural Areas: Due to increased visitation to the area, natural areas could experience impacts such as loss of native vegetation, increase in litter, and the attraction of wildlife scavengers by litter.

Cumulative Impacts: Likely cumulative impacts include air quality, traffic, recreation/land use, water resources, and biological resources.

4.55 The proposed project has the potential to generate positive impacts such as:

- Addressing the unmet need for water-based and general recreation facilities in the area.
- Providing migratory bird habitat and acting as an outdoor classroom that serves to increase environmental awareness.
- Improving aesthetic quality of the project area.
- Preserving valuable riparian habitat.

## 4.56 MITIGATION/ENVIRONMENTAL COMMITMENTS

Few mitigation measures are anticipated to be required as a result of proposals outlined in this master plan; however, pending technical studies and associated design features may identify necessary mitigation measures. Mitigation measures arising from previous and future projects in the basin will be honored and left undisturbed by the Master Plan for the life of the project.

4.57 Proposed mitigation plus a list of environmental commitments for the proposed plan follow:

Mitigation for Phase II Expansion of Equestrian Center:

1. Proposed on-site mitigation is intended to compensate for impacts of removing riversidian sage scrub habitat, mixed with facultative wet riparian elements, scattered through an area of approximately 15 acres.

2. Proposed mitigation would concentrate on fencing off and restoration of a 200-foot wide buffer extending between Big Tujunga Wash and the Phase II facilities.

3. The subject habitat restoration shall entail:

o Transplanting of individual plants, from a Corps approved list, from the rest of the Phase II development area to the buffer zone according to a plan developed in full consultation with the Corps.

o Planting of native nursery stock at intervals and using procedures fully coordinated with appropriate Corps personnel, to include:

- Sycamore trees on 75 foot centers
- Opuntia transplanted by scattering through area
- Golden current, yerba santa, yucca, etc.

o Removal of Arundo donax (giant reed) from buffer zone, sustained in perpetuity.

o Drip watering until new and transplanted vegetation is fully on line.

o Fencing of habitat buffer to prevent human encroachment using Corps-approved materials, and procedures.

4. In addition, the following measures would be taken:

o All sycamores in the Phase II development area would be sustained in place

o The road proposed to cross the Phase II tract would be located outside the subject buffer zone.

5. If at any time it is determined that this mitigation cannot or could not be fully implemented on-site, off-site mitigation for a total of 15 acres, at a minimum, would be required.

6. In addition, incomplete Phase I mitigatation shall be successfully completed prior to initiation of Phase II construction and all associated activities.

- o Willows planted in wash

- o Mulefat restored

7. The Phase II Equestrian Center Proponent shall initiate all mitigation work, and have revegetation in the buffer area completely on board, or secure a $ 100,000.00 performance bond, prior to construction or building of Phase II work.

Commitments for Water Resources:

1. To eliminate the potential of erosion of sediments into the Big Tujunga, protection features such as berms and slope stabilizing vegetation will be implemented during construction. The topography around lake areas will be graded to eliminate the potential of surface drainage inflows into the lakes from the surrounding areas. In order to mitigate for potential construction-related water quality problems , specific construction guidance will be conveyed to the contractor(s). Conditions such as oil and diesel spill contingency plans, designation of refueling and equipment parking areas that do not pose pollution threat to surface or groundwater, construction windows, (limiting construction to dry weather periods), fugitive dust control watering programs, and other related measures will be enforced to avoid adverse impacts to surface and groundwater during construction. Dust suppression watering programs and erosion and sediment control plans will be implemented in compliance with the City of Los Angeles Building Code.

2. During the design phases of proposed projects, the COE will devise lake management plan (LMPs) that will include, but not be limited to, the following elements: clearly stated implementation strategies for the LMPs; monitoring programs that will discuss what parameters will be sampled, why the specific parameters are selected, how often sampling schedules will be fulfilled, and how the data will be used and analyzed; mosquito abatement programs; lake circulation systems; lake bottom drain systems; lake aeration systems; fish maintenance; algae and aquatic plant controls; emergency response actions; and other elements as determined.

3. Section 319 of the Clean Water Act requires states to develop nonpoint source water pollution management programs. The lake designs and LMPs will be developed pursuant to the Clean Water Act and attain full compliance with all applicable sections of the Act.

4. Lake designs, daily water demand, aeration techniques, eutrophication mitigation, mixing patterns and thermal stratification amelioration will be determined during detailed designs and presented in supplemental environmental documents.

5. The Regional Water Control Board will be coordinated with during the design of any future lakes.

Commitments for Air Quality:

6. Watering programs will be employed to control fugitive dust generation; during construction.

7. Specific project design features will be considered and implemented to assure minimal negative air quality impacts. Features to be considered include the following: transportation management plans that will include strategies such as, instituting peripheral park-and-ride lots with shuttle services; special parkways for buses and trams; preferential parking and low parking fees to high occupancy vehicles. Measures considered to relieve traffic congestion on surrounding streets include roadway controls such as one-way streets; directional signs; and alter traffic signals to induce smoother traffic flow. These and other features will be considered during design phases to minimize air pollution.

8. All future development will be coordinated with SCAG to insure compliance with the State Implementation Plan.

Commitments for Biological Resources:

9. During lake construction all trees that have attained reproductive status; regardless of age, will not be removed or damaged. If a tree absolutely cannot be avoided, that tree will be mitigated for at a ratio of 3:1.

10. To deter pedestrian use and discourage avoidable impact to boundary areas, 50-foot vegetation buffers between environmentally sensitive land reserves and recreation land use areas, will be employed.

11. Comprehensive least Bell's vireo and San Diego coast horned lizard surveys will be conducted prior to any development in the basin, should any indication of their presence and, or, their habitats be discovered in the project area.

12. To avoid impacts to any wetlands, a complete wetlands survey will be conducted prior to final lake site designation. The survey will be conducted by a Corps regulatory biologist.

Commitments for Cultural Resources:

13. Compliance with section 106 of the National Historic Preservation Act (36 CFR 800) will be completed for each individual action that might result from the Master Plan.

Commitments for Land Use:

14. Any excavation within the basin will be evaluated and approved by COE Hydrology

and Hydraulics Branch to insure that there is no impact to the flood capacity of the project.

15. No impacts shall be incurred to any mitigation areas that may be established as a result of the Hansen Dam Sediment Removal Supplemental Environmental Assessment.

Commitments for Traffic:

16. Current information will be used to develop a model and perform a comprehensive traffic analysis that will precede any construction and assist in the final design of the proposed project. The traffic analysis and a mitigation plan to avoid or minimize adverse air quality and circulation impacts will be included in an environmental document that will accompany the basis of the design for the project. At a minimum, the proposed traffic study should include detailed analyses of the circulation, parking, access, public transit alternatives, bikeways, and a discussion of mitigation measures.

Commitments for Noise:

17. Construction will be limited to times allowed by the city's noise ordinance, and the provisions of the construction contract. The distance of approximately 2,000 feet from the nearest housing will provide sufficient attenuation, an estimated drop of 18 DBA, to reduce construction noise levels near these houses to within an acceptable level.

Commitments for Energy:

18. The following project features or measures will be considered to reduce any potential energy overhead generated by project implementation:

o Lake excavation plans should minimize haul distance and avoid double-handling of the excavated material.

o Conveyers should be used whenever possible to transport excavated material.

o Lakes should be designed with gravity flow systems that would maintain water levels, as opposed to systems that are mechanically pump dependent.

o Design features for any facility should include solar space and water heating and include architectural elements that utilize building aspect and deciduous plants to insulate against temperature differences. Buildings should be constructed to maximize natural ventilation and to avoid mechanical cooling.

o No future intensive use facilities should be located beyond a comfortable walking distance from a public transportation route.

Environmental Compliance Program

19. The U.S. Army Corps of Engineers Environmental Resources Branch has recently developed a Environmental Compliance Program (ECP). The ECP is a monitoring program that will insure completion of environmental commitments and mitigation of Corps projects. The program will be employed on the Hansen Dam Master Plan and EIS/R.

# List of Preparers

# 5. LIST OF PREPARERS

5.01 Corps of Engineers staff responsible for preparation and review of this final environmental impact statement/report are listed as follows:

| Name | Position | Activities |
|---|---|---|
| Raina Fulton | Senior Project Manager, Master Plan | Preparation and Review |
| Wanda Kiebala | Hansen Dam Project Manager | Review |
| Ed Louie | Landscape Architect, Senior Project Manager, Master Plan | Preparation |
| Jennifer Eckert | Ecologist | Preparation |
| Richard Perry | Archeologist | Preparation |
| Sherri Stevens | Regulatory Review | Review |
| Charles H. Thomas, Jr. | Geographer, Environmental Coordinator, EIS/R | Preparation and review |
| Laura Tschudi | Geographer, Environmental Planner; Chief, Environmental Design Section | Preparation and review |
| Nedenia C. Kennedy | Environmental Planner, Archeologist; Chief, Environmental Support Section | Preparation and review |
| Ruth Bajza Villalobos | Geographer; Chief, Environmental Resources Branch | Review |

| Name | Position | Activities |
|---|---|---|
| Brian Whelan | Geographer, Acting Project Manager, Master Plan | Preparation and review |
| Terry Wotherspoon | Operations | Review |
| Todd Snow | Environmental Resources Planner, South Pacific Division | Preparation and Review |
| Misty Espinoza | Technical Support | Preparation |
| Mario Cardenas | Technical Support | Preparation |
| David Sanchez | Technical Support | Preparation |

5.02 City of Los Angeles staff responsible for preparation and review of this final environmental impact statement/report are listed as follows:

| Names | Position | Activities |
|---|---|---|
| David Attaway | Environmental Supervisor | Preparation and review |
| Alonzo A. Carmichael | Planning Officer | Review |
| Camille Didier | Planning Associate | Preparation and review |
| Marilyn Rawlings | Environmental Associate | Review |

# Public Involvement

# 6. PUBLIC INVOLVEMENT

## 6.01 PUBLIC INVOLVEMENT PROGRAM

Legal requirements for public involvement have been met in developing this project. The public involvement program for the Hansen Dam EIS/R was coordinated with the public using the following methods:

1. Contact was made with key representatives of the community throughout the planning and scoping process.

2. A flyer was sent out to approximately 2,000 interested parties, including project locality homeowners, homeowner associations, equestrian club members and any individuals who might be affected by the project. The flyer briefly discussed the proposed project and gave the time, date and location of the scoping meeting that was to be held.

3. A public workshop/scoping meeting was held April 4, 1989. The meeting served to set the scope of the project based on public input, and allowed the public to express their concerns, desires, and suggestions regarding the project.

4. A public meeting was held October 16, 1990 following the release of the final EIS/R. The meeting allowed the Corps to receive input regarding this EIS/R and the Master Plan in terms of addressing public needs. Numerous requests were made for a larger lake and for additional recreation facilities, for which funding is not currently available. Input from that meeting and from written comments were incorporated, where appropriate, into the final EIS/R. A summary of the comments and responses is provided in Appendix C, Comments and Responses.

## 6.02 COORDINATION

This Document was coordinated with the appropriate agencies pursuant to requirements set forth by the National Environmental Policy Act, and the California Environmental Quality Act. Below is a list of agency coordination contacts.

## 6.03 Federal Agencies

U.S. Fish and Wildlife Service (USFWS). Extensive coordination was accomplished via meetings, site walks, correspondence, and telephone conversations. Guidance on planning and environmental impact assessment was received from the USFWS in Planning Aid Letter dated July 20, 1990. A letter identifying endangered species known to occur in the area was received by the Corps from the USFWS on May 21, 1989. A coordination meeting between the Corps and USFWS was held on May 4, 1990. Coordination with the USFWS will

continue as new issues arise and the project advances through design phases.

National Park Service (NPS). The NPS was contacted via telephone to inform them of the scope of the project and to solicit any comments they might have.

Environmental Protection Agency (EPA). EPA was coordinated with regarding comments received on the Draft EIS/R. Those comments have been addressed throughout the Final EIS/R.

6.04 State Agencies

Pursuant to section 106 of the National Historic Preservation Act and 36 CFR 800 which implements the Act, formal coordination with the State Historic Preservation Officer (SHPO) has been initiated. A letter dated August 17, 1990 was sent to SHPO requesting concurrence with our determination that the project as planned will have no effect on properties that are eligible for, or are listed in, the National Register of Historic Places. A Reply letter dated October 23, 1990, provided guidance from SHPO.

The following state agencies were coordinated with to inform them of the proposed project, to obtain information, and to solicit comments. A public scoping meeting was held on April 4, 1989. Comments and concerns that were expressed were taken into consideration throughout the planning process and will be incorporated during project implementation where feasible.

California Regional Water Quality Control Board
California Department of Fish and Game
Southeast Mosquito Abatement District

Comments received from the above agencies have been addressed in this Final EIS/R. Further coordination and reception of agency recommendations will continue throughout the project planning process.

6.05 Local Agencies

The following local agencies were coordinated with to provide the Corps with planning guidance, information and regulatory information. Comments received from these agencies have been incorporated in the text and are listed in Appendix C, Comments and Responses.

Los Angeles Department of Water and Power
City of Los Angeles Department of Recreation and Parks
City of Los Angeles Department of Transportation
South Coast Air Quality Management District

6.06 All agencies listed above and other interested agencies and organizations will receive a copy of this Final Environmental Impact Statement/Report (EIS/R). Comments received from interested parties will be reviewed and incorporated into the project design wherever appropriate. Coordination with Federal, State, and local agencies will continue throughout all future design phases.

## 6.07 PUBLIC VIEWS AND RESPONSES

The public emphatically expressed the desire for a large lake. The public's desire for a large lake had a major influence on the decision and planning process for the project. Throughout the alternative plan formulation process several concepts that would address the potential for a large lake were considered and incorporated into the project design.

The public expressed the preference for the basin to maintain a sizable portion of its natural open space to provide equestrian and hiking trails. During project development this preference was considered and embodied in the assignment of the land use areas.

## 6.08 ENVIRONMENTAL IMPACT STATEMENT/REPORT RECIPIENTS

The following is a list of agencies, groups, and individuals to whom copies of the EIS/R are sent.

Pete Wilson, Governor of California
Alan Cranston, U.S. Senator
Howard Berman, U.S. Congressman, 26th District
Elton Gallegly, U.S. Congressman, 21st District
Alan Robbins, California State Senator
Richard Katz, California State Assemblyman
Mike Antonovich, Los Angeles County Councilman, 2nd District
Ernani Bernardi, City Councilman, 2nd District
Joel Wachs, City Councilman, 2nd District
Tom Bradley, Mayor, City of Los Angeles
Doris Myer, City of Los Angeles, Administrative Coordinator
U.S. Forest Service, Angeles National Forest
U.S. Forest Service, Tujunga Ranger District
National Park Service, Santa Monica Mountain Recreation Area
U.S. Fish and Wildlife Service
U.S.D.A., Agriculture Stabilization and Conservation Service
Advisory Council on Historic Preservation
FEMA Region IX
Environmental Protection Agency, Region 9
U.S. Soil Conservation Service

California Department of Fish and Game
Regional Water Quality Control Board
California State Historic Preservation Officer
California Wildlife Federation
California State Clearinghouse
California Department of Transportation, District 7
California Wildlife Conservation Board
South Coast Air Quality Management District
Southern California Association of Governments
South East Mosquito Abatement District
Los Angeles County, Department of Parks and Recreation
Los Angeles County, Department of Public Works
City of Los Angeles, Department of Recreation and Parks
City of Los Angeles, Department of Water and Power
City of Los Angeles, Department of Transportation
City of Los Angeles, bureau of Engineering
City of Los Angeles, Planning Department
City of Los Angeles, Community Development Department
Tillman Water Reclamation Plant
Metropolitan Water District of Southern California
National Audubon Society, Western Regional Office
San Fernando Chapter, Audubon Society
Los Angeles Audubon Society
United Voters League
Van Nuys Chamber of Commerce
Pacoima Chamber of Commerce
Los Angeles City Equine Advisory Council
Reseda Community Association
Friends of the Earth
People for Parks
Foundation for Resource Conservation
Sierra Club, Angeles Chapter
U.C. Irvine, Department of Ecology and Evolution Biology
East Valley Horse Owners Association
Van Nuys Homeowners
Southern California Canoe Association
San Fernando Valley Flyers
Valley Fliers
Valley Flyers/Giant Scale Squadron
Hansen Dam Advisory Committee
Shadow Hills Property Owners Association
National Wildlife Federation
Van Nuys Public Library
Pacoima Public Library

San Fernando Public Library
United Chambers of Commerce
Pacoima Kiwanis Club
Valley Horse Owners Association
Los Angeles City Transportation Committee
Lake View Terrace Improvement Association
Black America Political Association of California, San Fernando Valley Chapter
Project Heavy
Pacoima Property Owners Association
San Fernando Valley Boys/Girls Club
NAACP
Lake View Terrace Home Owners Association
Pacoima Community Youth Cultural Center
Hansen Hills Homeowners Association
Northeast Valley Health Corporation
Valley Horse Owners

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| 25. | Wildlife Ecology | 3.33-3.34 |

# References

# 8. REFERENCES


Brandman, Michael Associates, Inc. Final Environmental Impact Statement for U.S. Corps of Engineers Regulatory Permit for Los Angeles International Golf Club, Sunland-Tujunga, California, 1990.

EPA Document; AP-42, Chapter-4, 4.1.3, Chapter-5, 5.1.2.3 and 5.1.2.5, Chapter 11, 11.2.3

Martz, Patricia. Description and Evaluation of the Cultural Resources within Hansen Debris Basin, Hansen Dam, Lopez Dam, and Sepulveda Dam, Los Angeles County, California. 1977. Manuscript on file, Los Angeles District, Army Corps of Engineers, Environmental Planning Section.

San Diego Association of Governments (SDAG). September, 1989. Traffic Generation Rates for San Diego County.

Schwartz, Steven 1986 Site record form - CA-LAn-1525. Form on file at the U.C.L.A. Regional Information Center. Westwood.

South Coast AQMD handbook for EIRS, Rev. 1987.

Unitex, Final Report; Review of Water Resources within the Los Angeles County Drainage Area, 1985.

U.S. Army Corps of Engineers, Los Angeles District. Environmental Assessment for Debris Removal, Hansen Dam Flood Control Basin, 1984.

U.S. Army Corps of Engineers, Los Angeles District. Draft Hansen Dam Master Plan. September, 1990.

U.S. Army Corps of Engineers, Los Angeles District. Draft Hansen Dam Debris Removal Final Supplemental Environmental Assessment. January, 1990.

U.S. Army Corps of Engineers, Los Angeles District, Hansen Dam Master Plan, 1975.

U.S. Army Corps of Engineers, Los Angeles District, Hansen Preliminary Study, 1984.

U.S. Army Corps of Engineers, Los Angeles District, Hansen Dam Preliminary Formulation Study: Final Biological Resources Report, 1984.

U.S. Fish and Wildlife Service, 1987. Planning Aid Letter on Los Angeles County Drainage Area Water Control Study. Unpublished report prepared for Department of the Army, U.S.

Corps of Engineers, Los Angeles District.

U.S. Fish and Wildlife Service, 1990. Planning Aid Letter on: Hansen Dam Recreation Master Plan, 1990. Los Angeles County, California.

Fischer, Jon, California Department of Fish and Game, pers. comm. June, 1989.

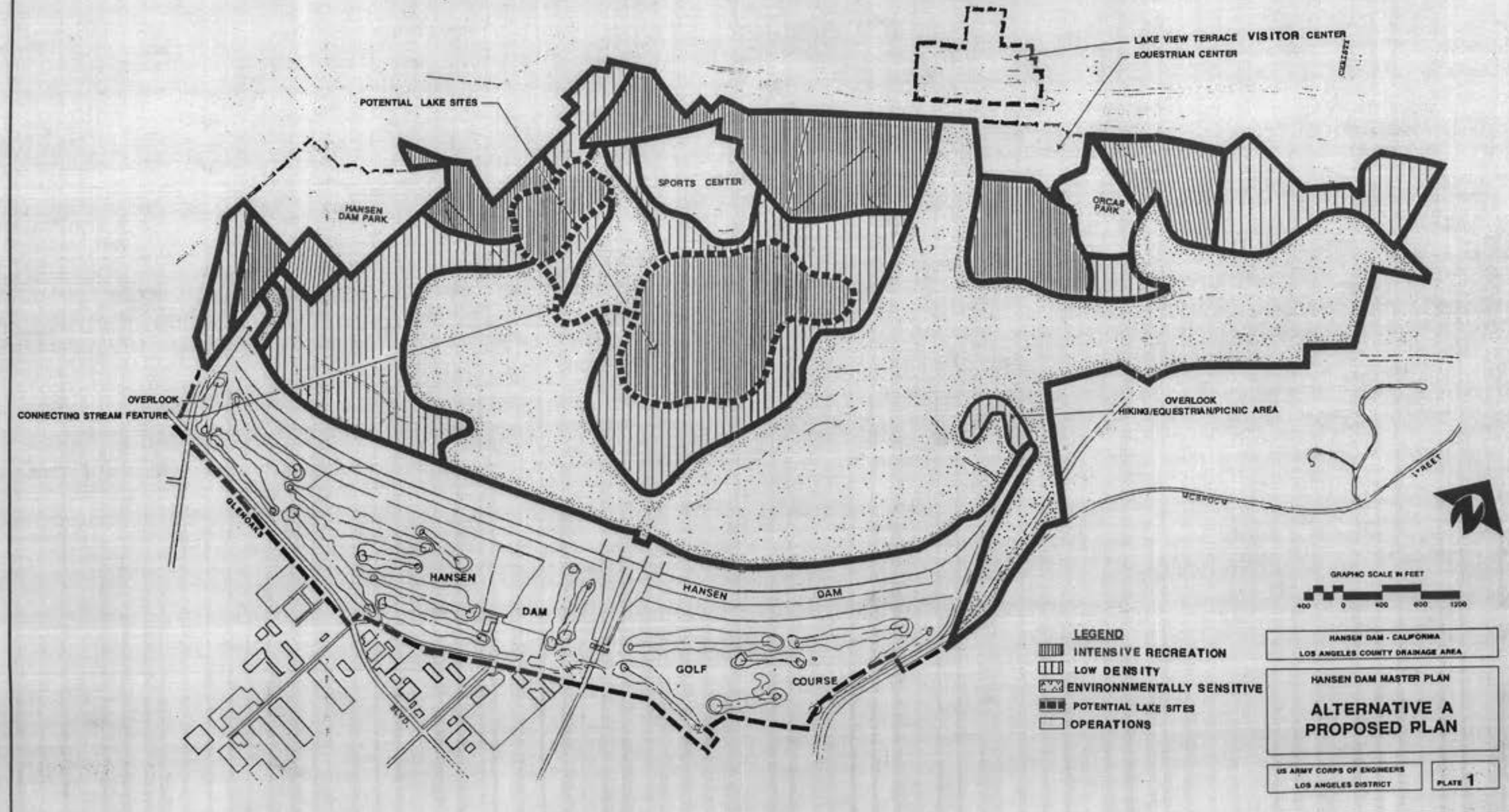
Hanlon, John, U.S. Fish and Wildlife Service, pers. comm. May, 1990.

Blossom, Glen, Southern California Association of Governments, pers. comm. January, 1991.

Tomsavic, David, Environmental Protection Agency, pers. comm. February, 1991.

Ray, Vivian, South Coast Air Quality Managment District, pers. comm. January, 1991.

# Plates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VISITOR CENTER
EQUESTRIAN CENTER
POTENTIAL LAKE SITES
SPORTS CENTER
HANSEN DAM PARK
ORCAS PARK
OVERLOOK
CONNECTING STREAM FEATURE
OVERLOOK
HIKING/EQUESTRIAN/PICNIC AREA
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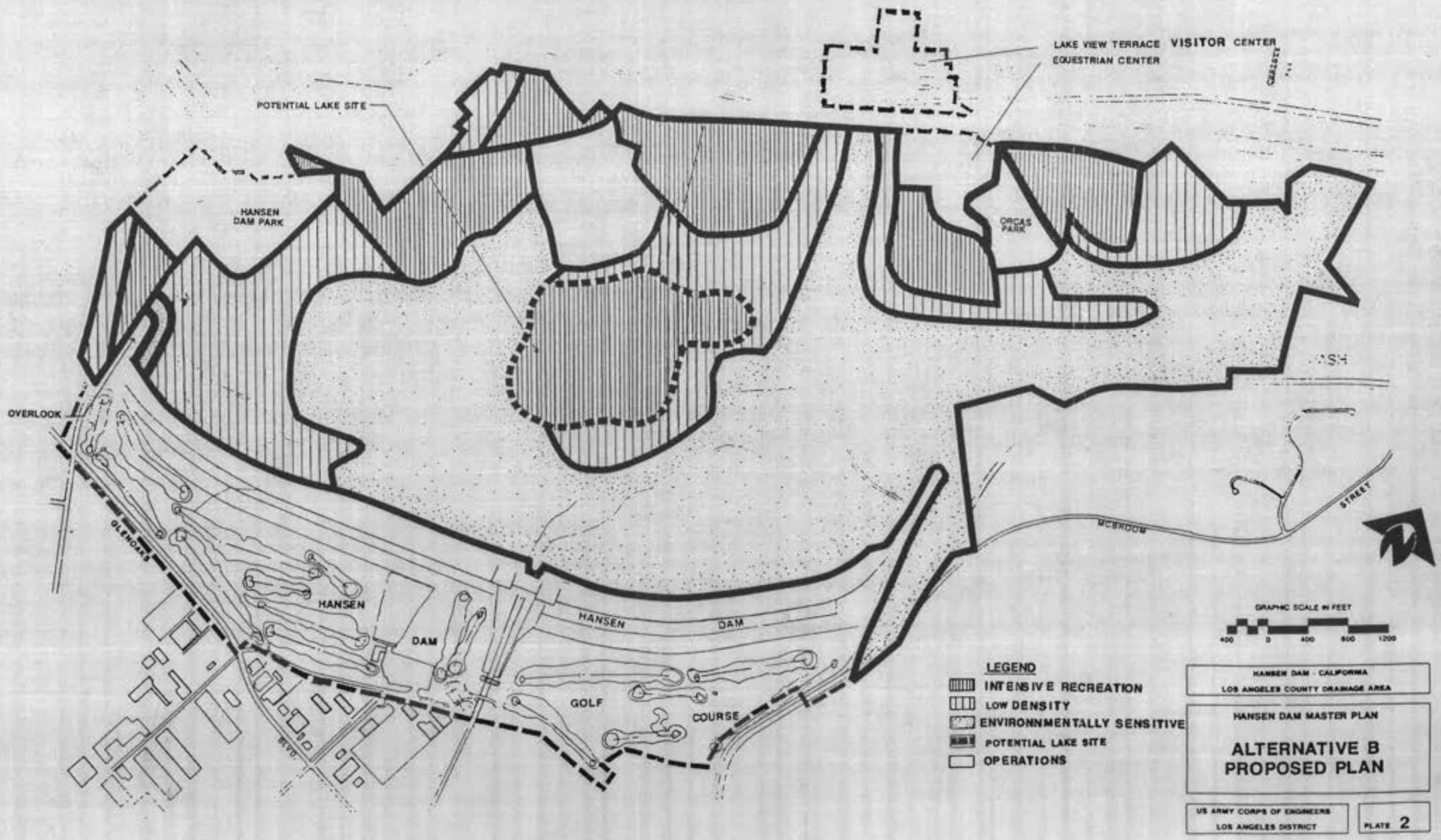
LOS ANGELES COUNTY DRAINAGE AREA
HANSEN DAM MASTER PLAN
ALTERNATIVE A
PROPOSED PLAN
US ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT
PLATE 1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ALTERNATIVE B
PROPOSED PLAN
US ARMY CORPS OF ENGINEERS
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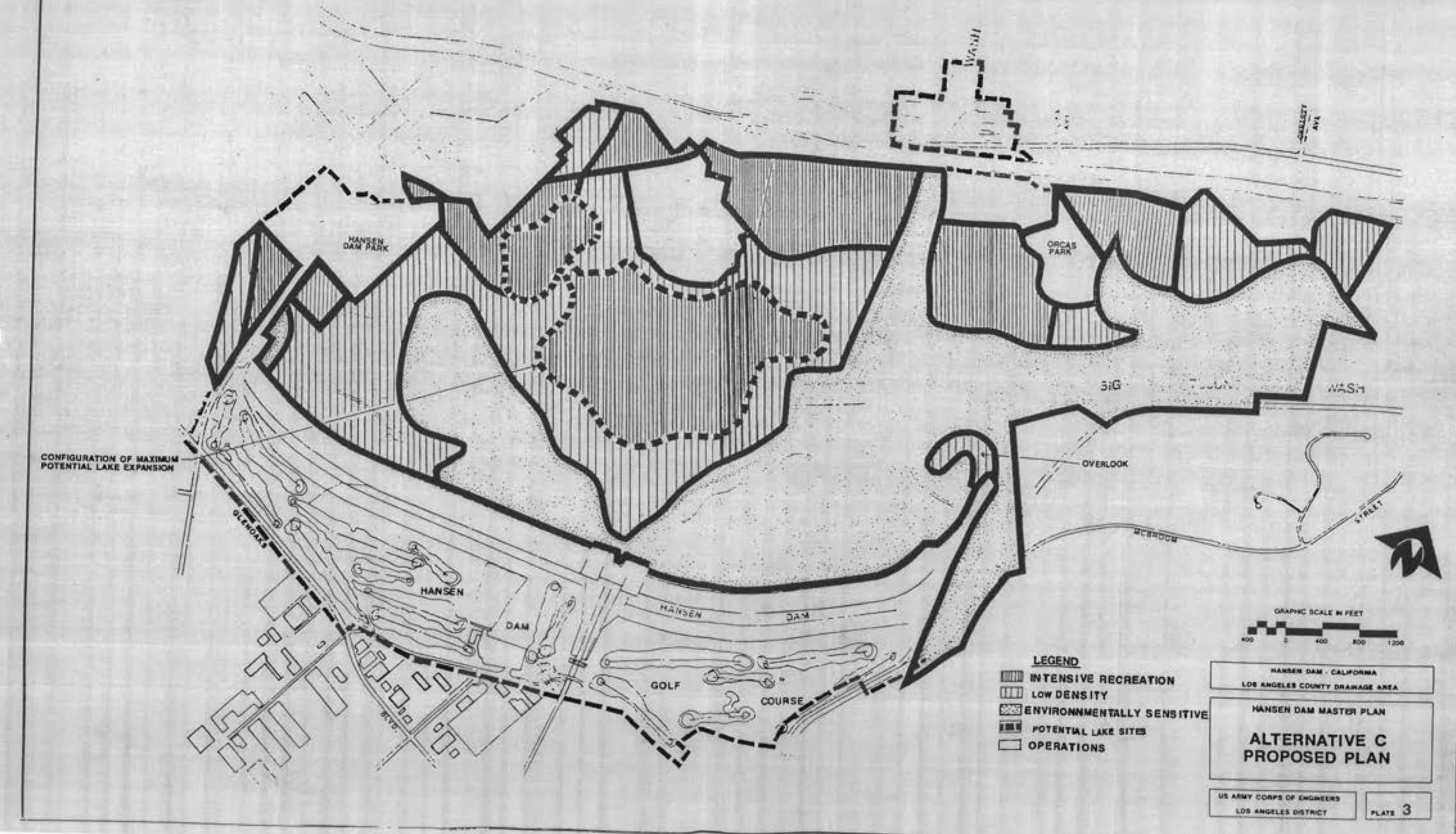
PLATE 2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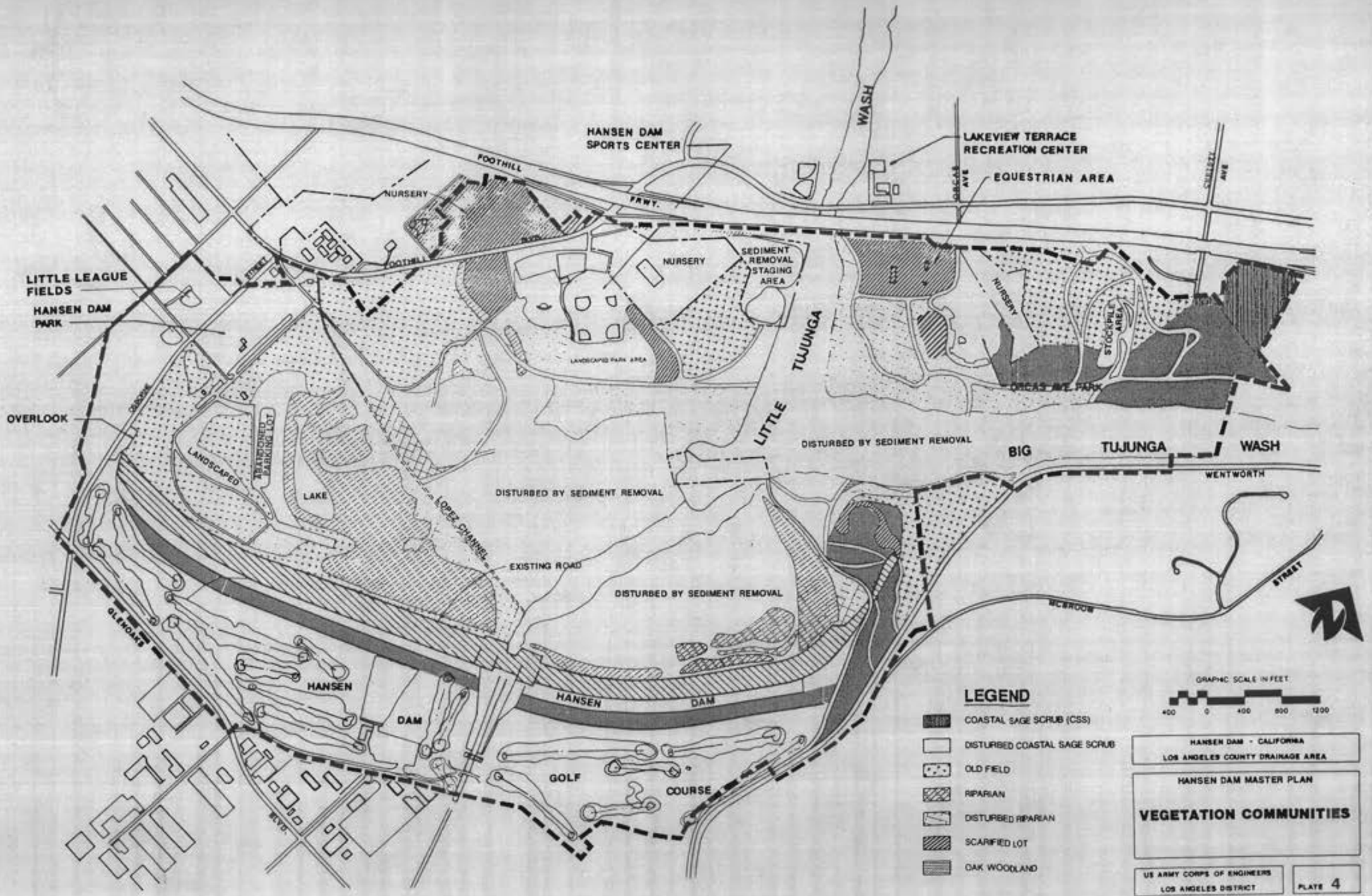
LOS ANGELES COUNTY DRAINAGE AREA
HANSEN DAM MASTER PLAN
ALTERNATIVE C
PROPOSED PLAN
US ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT
PLATE 3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WASH
LAKEVIEW TERRACE RECREATION CENTER
EQUESTRIAN AREA
FOOTHILL
FWY.
ORCAS AVE
OSBORNE ST
NURSERY
LITTLE LEAGUE FIELDS
HANSEN DAM PARK
SEDIMENT REMOVAL STAGING AREA
LANDSCAPED PARK AREA
TUJUNGA
STOCKPILE AREA
ORCAS AVE. PARK
OVERLOOK
BROOK
ABANDONED PARKING LOT
LANDSCAPED
LAKE
DISTURBED BY SEDIMENT REMOVAL
LOPEZ CHANNEL
EXISTING ROAD
LITTLE
BIG
TUJUNGA
WASH
WENTWORTH
MCBROOM
STREET
GLENOAKS
HANSEN
DAM
BLVD.
GOLF
COURSE
LEGEND
COASTAL SAGE SCRUB (CSS)
DISTURBED COASTAL SAGE SCRUB
OLD FIELD
RIPARIAN
DISTURBED RIPARIAN
SCARIFIED LOT
OAK WOODLAND
GRAPHIC SCALE IN FEET
400 0 400 800 1200
HANSEN DAM - CALIFORNIA
LOS ANGELES COUNTY DRAINAGE AREA
HANSEN DAM MASTER PLAN
VEGETATION COMMUNITIES
US ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT
PLATE 4

# Correspondence

United States Department of the Interior

FISH AND WILDLIFE SERVICE
LAGUNA NIGUEL FIELD OFFICE
24000 Avila Road
Laguna Niguel, California 92656

May 19, 1989

Colonel Tadahiko Ono
District Engineer
Los Angeles District, Corps of Engineers
P.O. Box 2711
Los Angeles, California 90053

Attn: Mr. Robert S. Joe, Chief, Planning Division

Re: Endangered Species Information for the Proposed Hansen Dam Recreation Master Plan, Los Angeles, Los Angeles County, California (#1-6-89-SP-796)

Dear Colonel Ono:

This letter is in response to your letter, dated March 29, 1989 and received by us on April 4, 1989, requesting information on endangered, threatened, and candidate species which may be present within the area of the subject project in Los Angeles County, California.

The enclosed list of species fulfills the requirements of the Fish and Wildlife Service (Service) under Section 7(c) of the Endangered Species Act of 1973, as amended (Act). This list includes species which are listed as endangered or threatened. We have also provided a list of candidate species.

The Federal lead agency has the responsibility to prepare a Biological Assessment if the project is a construction project which may require an Environmental Impact Statement[1]. If a Biological Assessment is not required, the agency still has the responsibility to review its proposed activities and determine whether the listed species will be affected.

During the assessment or review process, the agency may engage in planning efforts, but may not make any irreversible commitment of resources. Such a commitment could constitute a violation of Section 7(d) of the Endangered Species Act. If a listed species may be affected, the agency should request, in writing through our office, formal consultation pursuant to Section 7 of the Act.

Informal consultation may be used to exchange information and resolve conflicts with respect to listed species prior to a written request for formal consultation. It should be noted that

you are not required to perform a Biological Assessment for candidate species nor to consult with the Fish and Wildlife Service should you determine your project may affect candidate species. They are included for the sole purpose of notifying Federal agencies in advance of possible proposals and listings which at some time in the future may have to be considered in planning Federal activities. If early evaluation of your project indicates that it is likely to adversely impact a candidate species, you may wish to request technical assistance from this office.

Should you have any question regarding the species listed or your responsibilities under the Act, please call John Hanlon at FTS 796-4270 or (714) 643-4270.

Sincerely,

Brooks Harper

Brooks Harper
Acting Field Supervisor

Enclosure

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[1] "Construction Project" means any major Federal action which significantly affect the quality of the human environment designed primarily to result in the building or erection of man-made structures such as dams, buildings, roads, pipelines, channels, and the like. This includes Federal actions such as permits, grants, licenses, or other forms of Federal authorizations or approval which may result in construction.

**Hansen Dam Flood Control Basin Debris Removal Project, San Fernando Valley, Los Angeles County, California 1-6-89-SP-796**

LISTED SPECIES

| | | |
|---|---|---|
| Birds | | |
| Least Bell's vireo | Vireo bellii pusillus | (E) |
| Plants | | |
| Slender-horned spineflower | Centrostegia leptoceras | (E) |

CANDIDATE SPECIES

| | | |
|---|---|---|
| Reptiles | | |
| San Diego horned lizard | Phrynosoma coronatum blainvillei | (2) |
| Plants | | |
| Nevin's barberry | Mahonia nevinii | (2) |
| San Fernando Valley chorizanthe | Chorizanthe parryi var. fernandina | (1) |

# United States Department of the Interior

**FISH AND WILDLIFE SERVICE**

**FISH AND WILDLIFE SERVICE**
**SOUTHERN CALIFORNIA FIELD STATION**
**Laguna Niguel Office**
**Federal Building, 24000 Avila Road**
**Laguna Niguel, California 92656**

July 20, 1990

Colonel Charles Thomas,District Engineer
Corps of Engineers, Los Angeles District
P.O. Box 2711
Los Angeles, California 90053-2325

Attn: Charles Thomas, Environmental Resources Branch

Re: Planning Aid Letter - Hansen Dam Recreation Master Plan, Los Angeles County, California

Dear Colonel Thomas:

This planning aid letter constitutes our preliminary inventory of fish and wildlife resources and an analysis of the impacts from the alternatives for the proposed Hansen Dam Recreation Master Plan, Los Angeles County, California. This letter is not intended as our official report under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.). It is intended to aid you in planning for this project. This report is based on information supplied by the Corps of Engineers, previous letters, and reports prepared by the U.S. Fish and Wildlife Service (Service) for the Los Angeles County Drainage Area (LACDA).

## INTRODUCTION

Hansen Dam is located at the base of the Verdugo Mountains of the San Gabriel Mountain Range at the northern edge of the San Fernando Valley (Figure 1). Little Tujunga Wash enters the basin from the north and joins Big Tujunga Wash which flows through the basin from east to west. Both of these streams flow during the wet season, but only minimal flows continue in Big Tujunga Wash during the dry summer and early autumn months. The Tujunga section of the San Fernando fault system is located one-quarter mile north of the flood control basin.

The dam is oriented in an east-west direction across Tujunga Wash. Elevation at the dam site is approximately 1,000 feet. The streambeds of the Little and Big Tujunga Washes contain alluvial materials of sand, gravel and boulders. Areas adjacent to the washes have a higher concentration of silts and clays. Completed in September 1940, the dam was designed to have a

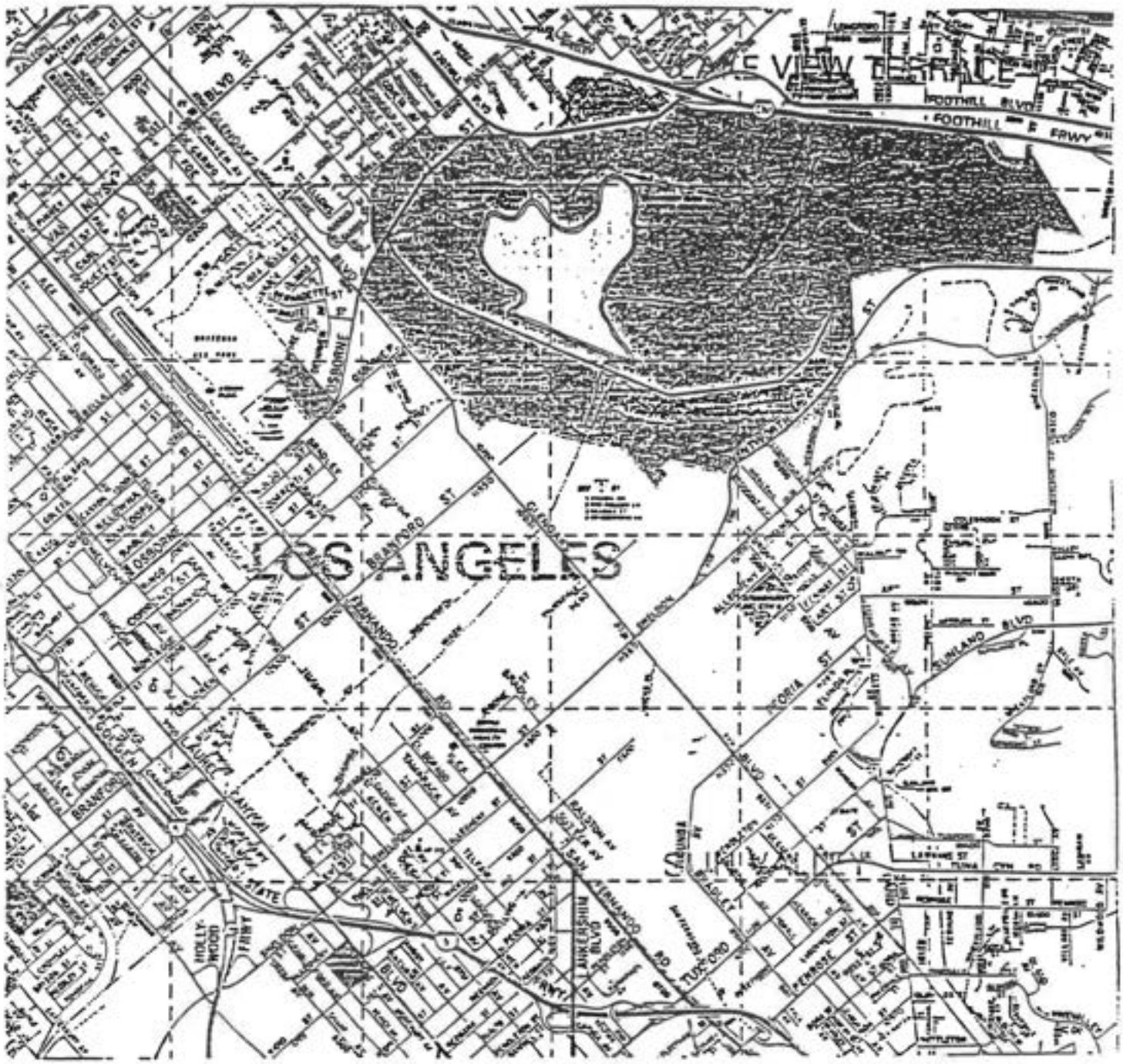
VIEW TERRACE
FOOTHILL BLVD
FOOTHILL FRWY
LOS ANGELES
BRANFORD ST
SAN FERNANDO RD
VICTORY BLVD
SUNLAND BLVD
LAKE VIEW AVE
SAN FERNANDO
TUJUNGA
HOLLY WOOD FWY
GLENOAKS BLVD
OSBORNE ST
CONDUIT RD
JOHNSTONE

Figure 1

capacity of over 28,000 acre-feet of flood water storage and 5,000 acre-feet of sediment storage (Corps 1975, 1984). Several large storms since 1969 have transported large volumes of sediment into the basin. As a result, there is presently nearly 15,000 acre-feet of sediment stored behind the dam. These deposits have filled two small five acre lakes (Redwing and Middle Lakes) and approximately 2/3 of the original 130-acre Holiday Lake in the lower portion of the basin.
On the north side of the project area are a variety of recreation facilities developed by the City of Los Angeles. At the west end is Hansen Dam Park with picnic areas. To the east is a sports complex with ball fields and an amphitheater. Just east of Little Tujunga Wash is an equestrian facility and Orcas Park with picnic and play areas. Equestrian trails are located throughout the basin. Nurseries are located east of the sports complex and east of Orcas Park. Powerlines cross the basin in a north/south direction at the upper end of Orcas Park.

Several areas of sand and gravel mining are located within the basin. The Corps is currently removing sand from the main channel of Big Tujunga Wash south to the spillway. Waters of the channel appear to have been diverted along the south edge of the basin to form a small stream which enters the main channel just above the spillway.

PROJECT DESCRIPTION

A Recreation Master Plan (Plan) is being prepared to establish a plan for recreation development within the Hansen Dam Flood Control Basin. The Plan is intended to guide the orderly and coordinated development and management of Corps of Engineers (Corps) lands within the basin. Corps lands are allocated primarily for flood control and secondarily for recreation uses. The local community expressed a desire for establishing a water-based recreation facility behind Hansen Dam. The Corps investigated various lake options and alternatives to determine an ideal lake location. Factors taken into consideration for lake designs included basin topography, surrounding land use zones, infrastructure (existing utilities), hydrology, and biological resources. Three alternatives were identified.

The Hansen Dam Flood Control Basin was zoned into various levels of recreation intensity which included high intensity use, low intensity use, and open space/trail use. The zoning was formulated in conjunction with various physical site constraints and the proposed lake development. These zoning designations set the upper limits for recreation development within the basin.

High intensity areas involve structural improvements and/or high density use by the public. In the basin, areas adjacent to existing high intensity recreation facilities and areas with easy access to existing roads were designated as high intensity.

Examples of facilities that would be located in a high a high intensity zone include: group picnic areas, developed campgrounds, nature centers, sports fields, playgrounds, recreation centers, stables and resorts. High intensity zones are located at the higher elevations within the basin in order to protect developed recreation areas from flood damages. In addition, the high intensity zones are buffered from the open space areas to separate the functions of the different zones. Focus has been drawn to developed areas and away from sensitive biological resources in order to protect them from overuse or disturbance.

Low intensity recreation areas are designated for low density dispersed use, requiring only minimal improvements such as: landscaping, picnic tables, trails, restrooms, ramadas, primitive campgrounds, access, and parking. Low intensity areas act as buffers to protect residential neighborhoods and sensitive biological resources from the greater activity associated with high intensity zones.

Open Space/Trails areas are designed to contain no development aside from hiking or equestrian trails. No structures will be built and the maximum disturbance allowed in these areas will be trails or turf grass. Areas which are low in the basin and thus have a high probability of flooding have been designated as open space/trails to avoid damage to developed recreation facilities. Areas with significant biological resources including wetlands and riparian habitat were designated as open space to protect them.

EXISTING ENVIRONMENT

The most prominent habitat type at Hansen Dam is willow riparian woodland which covers approximately 105 acres in the southern portion of the basin and in scattered areas along the north side to east of Orcas Park (Figure 2). The woodland is dominated by mature black and arroyo willows. The understory, comprised primarily of mulefat, is patchy and is dense only in scattered locations on the west side of the basin. Young but dense willow growth lines the east side of what remains of Holiday Lake in the southwest section of the basin. The shallow lake provides habitat value for wintering waterfowl and shorebirds. The lakebed became dry during the late spring of 1987. To the east of the willow riparian woodland is an approximately 200 acre area of riparian scrub dominated by giant reed, mulefat, and ruderal species with scattered willows and young Fremont cottonwoods (USFWS 1987).

Little and Big Tujunga Washes within the basin are highly disturbed due to past and present sand and gravel operations and sediment removal as well as scouring flood flows during winter months. Little Tujunga Wash is nearly devoid of vegetation and

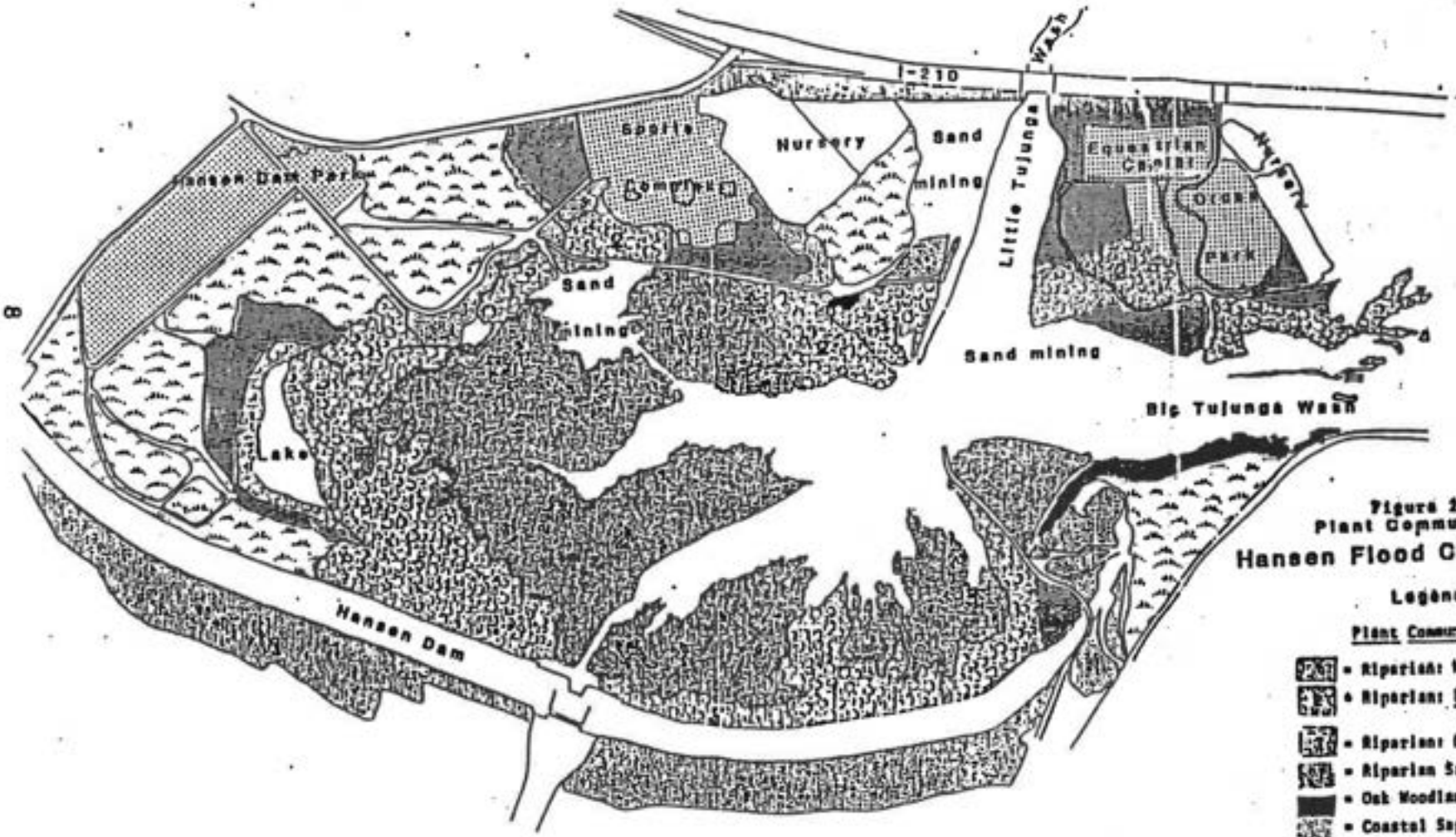


Figure 2
Plant Communities
Hansen Flood Control Basin

Legend

Plant Communities

- Riparian Willow Woodland
- Riparian Baccharis-dominated
- Riparian Dying Willows
- Riparian Scrub
- Oak Woodland
- Coastal Sage Scrub
- Old Field
- Landscaped Area
- Disturbed

active sand removal is ongoing in Big Tujunga Wash. Only those areas upstream of Orcas Park contain vegetation. Dominant species are arroyo willow, mulefat, Fremont cottonwood, and giant reed which are scattered throughout the wash. The coastal sage scrub community is also represented here by scale broom, California buckwheat, and deerweed.

Alluvial scrub is found in the floodplain upstream of Orcas Park. Dominant plants include laurel sumac, Whipple yucca, California buckwheat, scale broom, poison oak, and golden currant.

Coastal sage scrub lines the slopes and uplands at the perimeter of the basin. California buckwheat, California sagebrush, prickly pear cactus, black sage, and Whipple yucca are dominant members of this community. In the southeast portion of the basin the bluffs northwest of Wentworth Street contain a stand of coast live oak with a sparse understory of representatives of the coastal sage scrub and chaparral plant communities. Prominent here are toyon, California buckwheat, Mexican elderberry, and poison oak. Some of the slopes and uplands north of Holiday Lake in the area of Hansen Dam Park and Orcas Park are abandoned agricultural areas with old field habitat. The parks and Hansen Dam Sports Complex are primarily landscaped with turf and a mix of native and ornamental trees.

The habitat types which will be affected by the Plan are willow woodland, riparian scrub, alluvial scrub, alluvial wash, coastal sage scrub, oak woodland, old field, landscaped park, and the dam face. A list of plant species with common and scientific names found within areas affected is given in Appendix A. Large expanses of the willow woodland which occupy the Hansen Dam Flood Control Basin are subject to periodic inundation under current dam operating conditions during winter storm events.

The 9 acres of riparian habitat east of the Sports Complex and west of Little Tujunga Wash is highly disturbed. What few willows remain are dead or dying, possibly due to adjacent sand mining activities. Wood debris litters this area, and the poor understory consists primarily of mulefat, golden currant, and mustard. Further downstream no willows are seen and the area is dominated by mulefat and giant reed. A few eucalyptus trees are scattered throughout this area.

The 8.4 acre willow woodland adjacent to Orcas Park is dominated by arroyo and black willows up to 30 feet tall with some sandbar and red willow represented. Mature Fremont cottonwoods and California sycamores are scattered throughout the habitat. Giant reed is found in more disturbed portions of the site. Much of the area under the willows is open with only scattered clumps of understory. Dominant scrub species are mulefat and golden currant with coyote brush and poison oak forming a minor component. The area is used heavily by humans who have littered

the site with trash and trampled shrubs and ground cover. Nonetheless, some herbaceous perennials and annual plant species are present. These included sweet alyssum, horehound, phacelia, dwarf nettle, mugwort, tansy and field mustards, and mosses. The approximately 20 acre riparian area south and west of the equestrian facility is more disturbed with a higher incidence of mulefat and a variety of species typical of alluvial scrub. These include prickly pear and cholla cactus, calabazilla, Whipple yucca, California buckwheat, California sagebrush, scale broom, laurel sumac, croton, black sage, Mexican elderberry, Hooker's evening primrose, and bush monkey flower. Of special interest is the presence of many-leaved eriastrum (Eriastrum densifolium ssp. austromontanum). Normally found on dry slopes at 4,000 to 8,000 feet in montane coniferous forest, this species is clearly cut of its range (Munz 1974). Ground cover in the willow-riparian/scrub habitat consists of everlasting , wash groundsel, climbing bedstraw, filaree, and introduced grasses. More disturbed areas have patches of castor bean, cocklebur and field mustard.

Upstream from the Orcas Park area, the willow woodland habitat gradually grades into a mulefat-dominated riparian scrub with scattered sycamore, cottonwoods and willows. Elements of the alluvial scrub community, which predominates further upstream, are found in this area. In addition to scrub species listed above, golden currant, poison oak, white sage, felt-leaved yerba santa, and brittle bush are present. Ground cover consists primarily of prostrate spine-flower, filaree, dwarf wooly heads, sun cup, dragon sagewort, fiddleneck, and slender eriogonum. Dominant grass species are red brome and fescue. This area is subjected to equestrian use as well as heavy grazing pressure by rabbits.

The alluvial wash habitat has been severely affected by sediment removal and sand mining operations. The wash within the project area is sparsely vegetated. Scattered representatives of the riparian community are found and include California sycamore, Fremont cottonwood, arroyo and sandbar willows, mulefat, and giant reed. Alluvial scrub species are also present, particularly scale broom and bush senecio. Occasional specimens of laurel sumac, California buckwheat, Whipple yucca, deerweed, field mustard, and red brome also grow here. Sand mining operations have destroyed alluvial wash and scrub habitats and any riparian vegetation that may have existed where they are operating.

Slopes on the perimeter of the basin on its north side have remnants of coastal sage scrub habitat. California sagebrush, black sage, and California buckwheat are dominant in these areas with prickly pear cactus and felt-leaved yerba santa also present. Weedy species such as mustard, bull thistle, horehound, castor bean and tree tobacco are found in more disturbed areas

among the native plants. Near the base of the slopes in some areas are Mexican elderberry, mulefat, dwarf nettle, calabazilla, and white alder. A lone coast live oak is located on the slope above willows west of the Sports Complex.

In the southeast section of the basin and just northeast of the terminus of the dam are slopes leading down to the wash. These slopes are covered with highly disturbed coastal sage scrub dominated by introduced grasses, California buckwheat, California sagebrush, golden currant, and Mexican elderberry. Laurel sumac, Whipple yucca, bush senecio, prickly pear cactus, lemonadeberry, and castor bean are scattered through this area. At lower elevations are western sycamore, mulefat, and arroyo willow.

The bluffs above the south side of Big Tujunga Wash contain a prominent stand of 34 coast live oaks, many with multiple trunks. Approximately 1/5 of these are large and mature, 3/5 are of moderate stature, and the remaining are small, either young or stunted in their growth due to the steepness of the terrain. Understory species and shrubs in this area are sparse and consist primarily of golden currant, toyon, poison oak, and black sage. Mexican elderberry, western sycamore, and mulefat grow at the base of the bluff.

Old field habitat is located among the turfed park areas at the west end of the basin. Some of these fields and slopes at the west and northwest ends of the basin above Holiday Lake are partially landscaped with native and ornamental trees. Species include California sycamore, walnut, acacia, tamarisk, pine, eucalyptus, and palm. Sandbar willow and mulefat are found at lower elevations near the lake. Some larger shrubs are present and include coyote brush, felt-leaved yerba santa, and black sage. More disturbed areas have patches of tree tobacco and castor bean. Ground cover is predominantly introduced grasses, horehound, curly dock, brass buttons, telegraph weed, prickly lettuce, field mustard, filaree, wild radish, and yellow sweet clover.

A barren field is located just west of the Sports Complex. Adjacent to it is a small drainage with mulefat, young willows, and ruderal species. The Sports Complex features a turfed park, restroom facilities, a baseball diamond and an amphitheater. The grounds are landscaped with eucalyptus, Canary Island pine, elm, and other ornamental species. Because the trees are widely spaced and there are no shrub plantings, there is only minimal cover for wildlife. The park above the west end of the basin has a greater density of trees and a wider variety of species, including some natives such as California sycamore. Eucalyptus, pines, oleander, bottlebrush and other ornamentals provide some cover for wildlife.

The rocky dam face has some vegetation which has become established in silt deposits among the boulders. Species include mulefat, giant reed, tree tobacco, Mexican elderberry, felt-leaved yerba santa, prickly pear cactus, cocklebur, castor bean, and pampas grass. Herbaceous species such as heliotrope, mustards, curly dock, mugwort, jimson weed, and a variety of composites have also become established. Plant densities are low and concentrated near the base of the dam.

Little Tujunga Wash is an intermittent stream throughout most of its length. The Service is not aware of the presence of fish in this stream near the Hansen Dam basin, although native species may occur in the upper reaches. Unlike the Little Tujunga Wash, the boulder-strewn big Tujunga Wash is a perennial stream and supports native fish species. The Big Tujunga Wash between Big Tujunga Dam and the Hansen Dam, designated as a south coast minnow/sucker stream by the California Department of Fish and Game, is approximately 12.1 miles in length. It may represent the last viable population of this rare, endangered and unprotected fish community in the Los Angeles River watershed (MBA 1990). The native fish community consists of Santa Ana sucker (Catostomus santaanae), arroyo chub (Gila orcutti), and speckled dace (Rhinichthys osculus). The Santa Ana sucker is also listed by the California Department of Fish and Game as a Species of Special Concern. The fish species found in the project area are listed in Appendix B.

The commonly observed herpetological fauna throughout the Hansen Dam Flood Control Basin are the western fence lizard and the side-blotched lizard. However, several other species are expected and have been collected at the basin by herpetologists or listed in Corps documents as occurring in the area. The California slender salamander, garden slender salamander, western toad, California treefrog, Pacific treefrog, and gopher snake could be present in willow riparian areas. The southern alligator lizard, gopher snake, common king snake, and coachwhip are expected in old field habitats. The southwestern toad and southern Pacific rattlesnake may be found in the dry rocky areas such as alluvial scrub habitat and in the wash during dry periods of the year. Los Angeles County Museum records show a specimen of San Diego coast horned lizard collected in Tujunga Wash in 1934. They definitely occur upstream and may very likely occur in the project area. Appendix B lists the amphibians and reptiles that are present in the project area.

The portion of the project area with the greatest abundance and diversity of bird species was the willow woodland habitat adjacent to Orcas Park, while birds are most numerous in the willows closer to the dam. Resident species include Bewick's wren, rufous-sided towhee, brown towhee, bushtit, song sparrow, Anna's hummingbird, orange-crowned warbler, house finch, mourning dove, lesser goldfinch, downy woodpecker, mockingbird, scrub jay,

wrentit, California thrasher, black phoebe, Hutton's vireo, American goldfinch, brown-headed cowbird, California quail, common yellowthroat, American kestrel, and American crow. Other basin residents which also use adjacent areas and riparian habitat include greater roadrunner, and house sparrow. Migratory breeders in the willow woodland and riparian areas are house wren, black-headed grosbeak, phainopepla, western kingbird, northern oriole, western flycatcher, black-chinned hummingbird, and Costa's hummingbird. Wintering or migrant birds seen in the area include Wilson's warbler, hermit thrush, white-crowned sparrow and yellow-rumped warbler, and many other species are expected. Killdeer and Brewer's blackbird are found in open areas adjacent to the willows. Violet-green cliff and barn swallows and red-tailed hawks forage over this and other areas throughout the basin.

Further upstream, in riparian scrub where mature cottonwoods and sycamore are present, ash-throated flycatchers are found as well as larger numbers of phainopepla. Where riparian scrub grades into alluvial scrub, the number of Costa's hummingbird, California quail, mourning dove, northern mockingbird, and phainopepla increases. A cactus wren nest was found in a patch of prickly pear cactus and a mourning dove nest with two eggs was found in scale broom. An olive-sided flycatcher was observed flycatching from a yucca flower stalk. Birds from riparian and alluvial scrub habitats are sometimes seen in the dry wash, but the only species which would nest there are killdeer and rock wren.

The coastal sage scrub habitat on the north and southeast sides of the basin is for the most part located adjacent to willow riparian woodland, and bird species reflect this association. Coastal sage scrub species include California quail, Bewick's wren, rufous-sided towhee, and brown towhee. Riparian species that forage in scrub are northern flicker, Anna's hummingbird, bushtit, orange-crowned warbler, yellow-rumped warbler, lesser goldfinch, house finch, and song sparrow.

Old field habitats are also frequented by birds that use adjacent willow woodland, coastal sage scrub, or turfed park areas. Anna's hummingbirds, mourning doves, and song sparrows may nest in areas where there is some cover, but primarily this habitat is used for foraging by scrub jay, northern mockingbird, northern oriole, western kingbird, bushtit, yellow-rumped warbler, Bewick's wren, lesser goldfinch, house finch, rufous-sided and brown towhees, and white-crowned sparrow. Cooper's and red-tailed hawks probably utilize these fields for hunting to some extent. The barren field west of the Sports Complex was used for roosting and foraging by ground, spotted, and mourning doves as well as American crows.

Landscaped areas of Hansen Dam Park, the Sports Complex, and Orcas Park provide nest sites for American crow, bushtit, Anna's hummingbird, house wren, northern oriole, European starling, lesser goldfinch, house finch, and house sparrow. Downy woodpeckers are found in both Hansen Dam and Orcas Parks and may nest there. Killdeer, Brewer's blackbirds, and flocks of western bluebirds and American goldfinches forage on the lawns of the Sports Complex in the late winter and early spring months. Other species utilizing park areas are northern flicker, western kingbird, brown-headed cowbird, and yellow-rumped warbler. A list of birds that can reasonably be expected to occur in the flood control basin is found in Appendix C.

Mammals common throughout the Hansen Dam Flood Control Basin include desert cottontail, black-tailed jackrabbit, and California ground squirrel, while Bottas pocket gopher and coyote utilize willow woodland, coastal sage scrub, alluvial scrub, and old field habitats. Male deer utilize the dry wash as a movement corridor and the entire basin for feeding. Other species expected to occur in the Hansen Dam Flood Control Basin are Virginia opossum, raccoon, gray and red foxes, striped skunk, deer mouse, house mouse, and western harvest mouse, all of which could be found throughout the area. Brush rabbit and the dusky-footed woodrat are expected in coastal sage scrub and alluvial scrub habitats. Appendix B lists the mammals found in the project area.

Special status wildlife and plants which do or could occur at Hansen Dam Flood Control Basin are shown in Table 1. The only Federal listed endangered wildlife species known from the basin is the least Bell's vireo. Two pairs nested in the willow riparian woodland immediately northeast of the spillway in 1986 (Corps 1986). Service surveys during the spring of 1987 located one singing male in March in this same area. However, the bird subsequently disappeared and no additional sightings of least Bell's vireos were made at the basin in 1987. The habitat northwest of the spillway is marginal due to inadequate understory to meet the nesting requirements of the species. Suitable habitat does occur further to the west where a dense over- and understory has developed, but no least Bell's vireos had been detected in this area until 1989.

The San Diego horned lizard is reported to occur along Big Tujunga Wash (Los Angeles County Natural History Museum, pers.comm.), but a precise location where specimens have been taken is not available.

However, suitable habitat appears to occur in sandy areas adjacent to vegetation throughout the basin wherever an adequate food source (carpenter ants) occurs, as well as upstream in open sandy areas in alluvial scrub habitat.

Colonel Charles Thomas

Table 1. Special status species found or which could be present at Hansen Dam Flood Control Basin.

| Species | Fed. Endangered[1] | Fed. Cand.[2,3] | CDFG Endangered[4] | Sensitive Species USFWS[5] | Sensitive Species CDFG[6,7] | Aud. Blue List | CNPS[9] |
|---|---|---|---|---|---|---|---|
| **Reptiles** | | | | | | | |
| San Diego Horned Lizard | | X | | | | | |
| **Birds** | | | | | | | |
| Canvasback | | | | | | X | |
| Sharp-shinned hawk | | | | | | X | |
| Cooper's hawk | | | | | X | X | |
| Red-shouldered hawk | | | | | | X | |
| Northern harrier | | | | | | X | |
| Willow flycather | | | | X | X | X | |
| Bewick's wren | | | | | | X | |
| Western bluebird | | | | X | | | |
| Loggerhead shrike | | | | X | | X | |
| Least Bell's vireo | X | | X | | | | |
| Yellow Warbler | | | | X | X | X | |
| Yellow-breasted chat | | | | | X | | |
| **Plants** | | | | | | | |
| Slender-horned spineflower | X | | | | | | X |
| Nevin's barberry | | X | | | | | X |
| San Fernando Valley spineflower | | X | | | | | X |

[1]Service 1990

[2]Service 1985

[3]Service 1982a

[4]CDFG 1986

[5]Service 1982b

[6]Remsen 1979

[7]CDFG 1980

[8]Tate 1986

[9]Smith and York 1984

The canvasback could occur on Holiday Lake during winter months. Sharp-shinned Cooper's and red-shouldered hawks, northern harrier, and loggerhead shrike forage throughout the basin. Red-shouldered hawks nest in the willow riparian woodland near the dam face. There is a potential for willow flycatchers, which have declined markedly in California, to use the willow riparian habitat. Yellow warblers and yellow-breasted chats nest in the willows near the dam. Populations of willow flycatchers and yellow warblers have been reduced in numbers in the west through destruction of willow woodlands and cowbird parasitism. Bewick's wrens nest throughout the basin. Western bluebirds forage on the lawn of the Sports Complex in early spring.

The Service identified three sensitive plants as potentially occurring in the vicinity of the project area. The Federal endangered slender-horned spineflower, Dodecahema (=Centrostegia) leptoceras occurs just upstream of Foothill Boulevard in Big Tujunga Wash. Nevin's barberry (Mahonia nevinii) and the San Fernando Valley spineflower (Chorizanthe parvii var. fernandina) are Category 2 candidates for listing as endangered species. None of these plants are expected to occur within the basin itself, but could occur immediately upstream in alluvial scrub east of Orcas Park. None were found during Corps surveys in 1986 (Corps 1986).

The Service believes that there still exists a potential for the two spineflowers to occur here, but they may not have been present in recent years due to low rainfall.

ALTERNATIVES

The Developed Recreation Alternative (Alternative 1) provides for maximum recreation development. It includes a 15 acre swimming lake located on a bluff approximately 40 feet above and to the northeast of a proposed 100 acre boating and fishing lake. A waterfall would spill into a short stream that would feed directly into the 100 acre boating and fishing lake surrounded by low intensity recreation use. This alternative does not contain low intensity buffering between high intensity uses and the wildlife corridors in Big Tujunga and Little Tujunga Washes. A picnic area located on a high bluff northeast of the eastern dam abutment would have vehicular access (Figure 3).

The Equestrian/Wildlife Alternative (Alternative 2) provides maximum wildlife habitat development. A lower lake approximately 70 acres in size would be developed with no upper swimming lake. Unlike Alternative 1, a large portion of the lakeside area would be preserved as open space. This alternative would include low intensity buffering between high intensity uses and wildlife corridors in Big Tujunga and Little Tujunga Washes that are designated as open space/trails. The bluff top picnic area would be accessible to hikers and equestrians only (Figure 4).

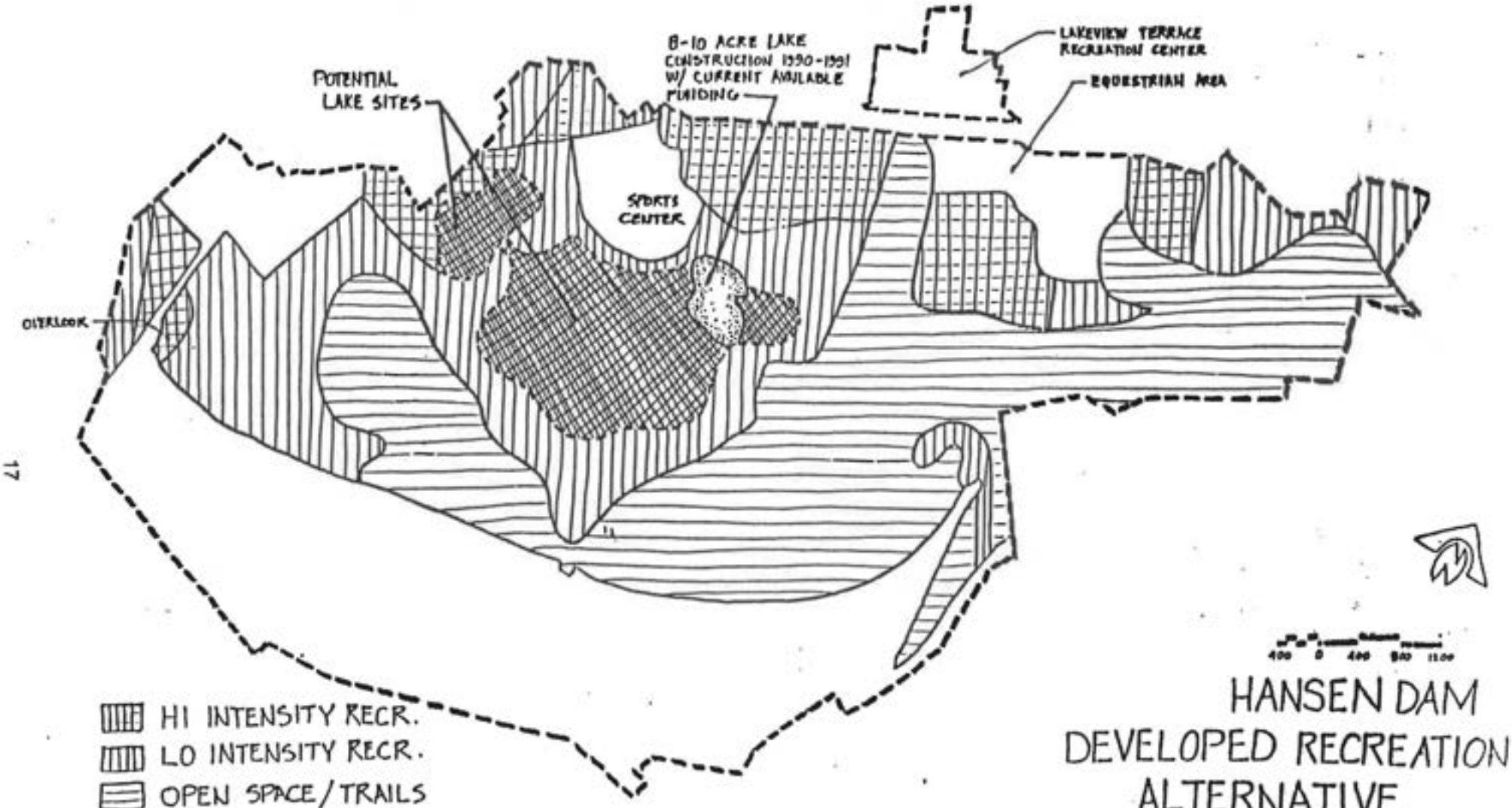
POTENTIAL LAKE SITES
8-10 ACRE LAKE CONSTRUCTION 1990-1991 W/ CURRENT AVAILABLE FUNDING
LAKEVIEW TERRACE RECREATION CENTER
EQUESTRIAN AREA
SPORTS CENTER
OVERLOOK
HI INTENSITY RECR.
LO INTENSITY RECR.
OPEN SPACE/TRAILS
400 0 400 800 1100
HANSEN DAM
DEVELOPED RECREATION
ALTERNATIVE

Figure 3

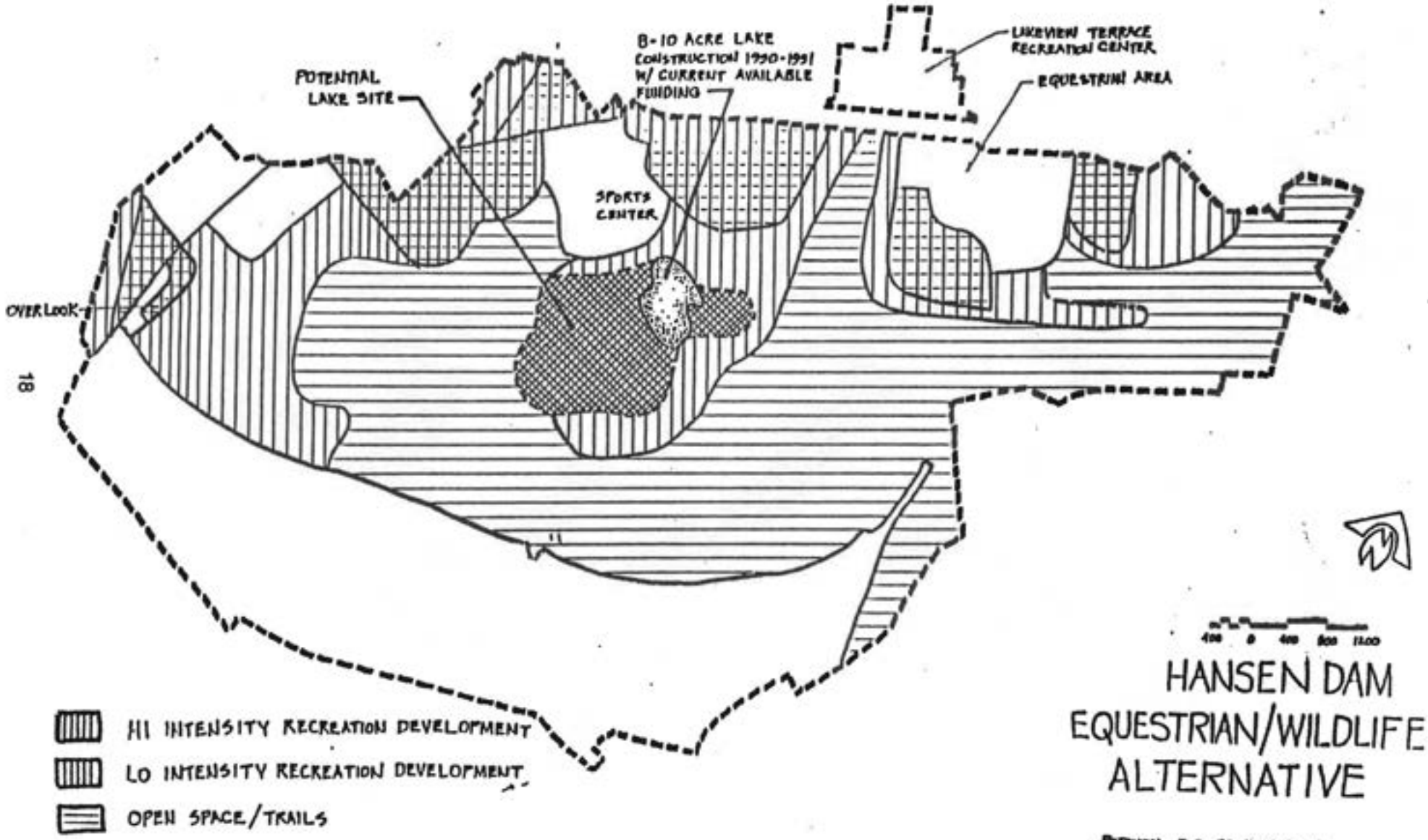
8-10 ACRE LAKE
CONSTRUCTION 1990-1991
W/ CURRENT AVAILABLE
FUNDING
LAKEVIEW TERRACE
RECREATION CENTER
EQUESTRIAN AREA
POTENTIAL
LAKE SITE
SPORTS
CENTER
OVERLOOK
HI INTENSITY RECREATION DEVELOPMENT
LO INTENSITY RECREATION DEVELOPMENT
OPEN SPACE/TRAILS
HANSEN DAM
EQUESTRIAN/WILDLIFE
ALTERNATIVE
POTENTIAL FOR 70 ACRE LAKE

Figure 4

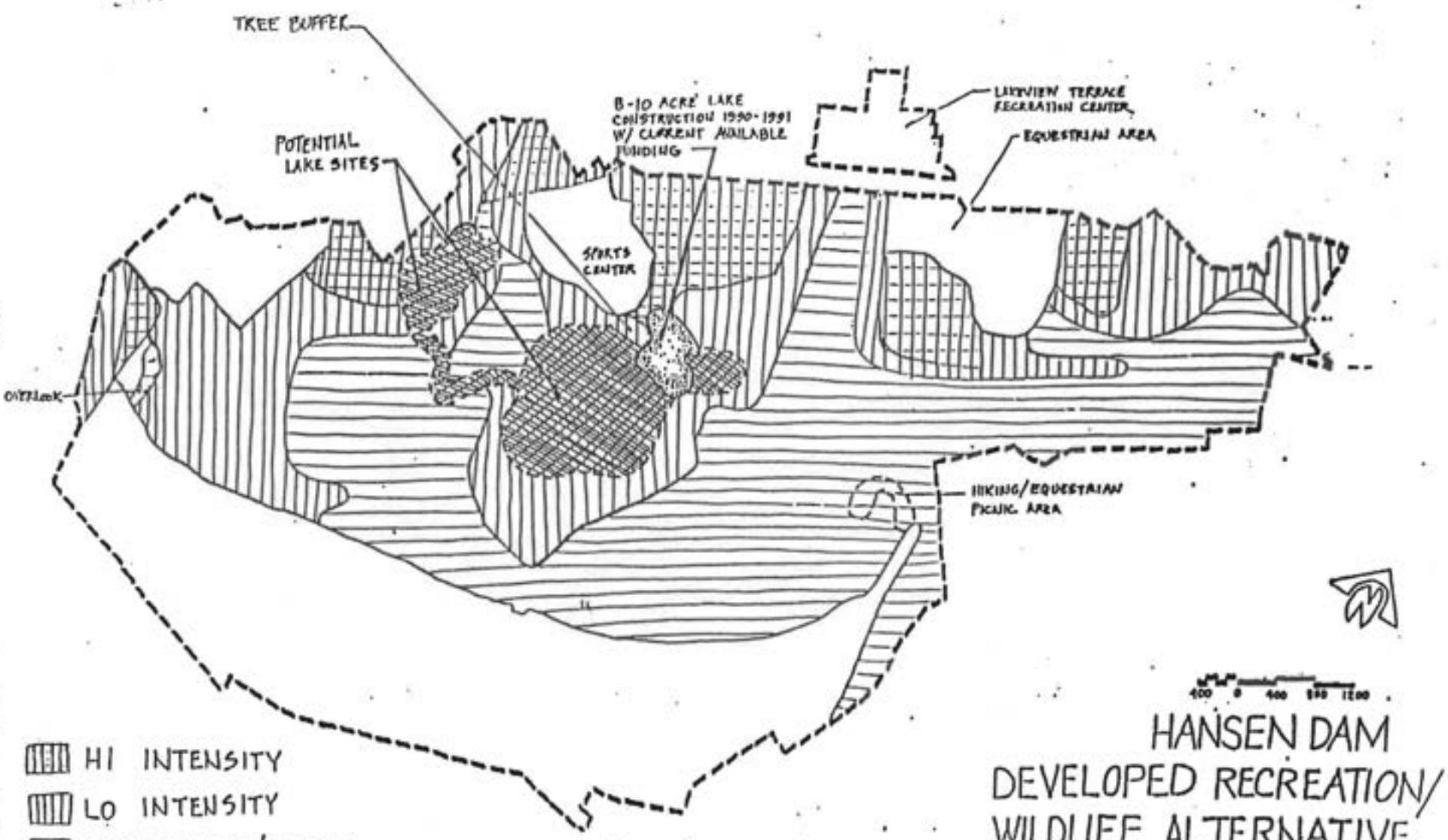
TREE BUFFER
POTENTIAL LAKE SITES
8-10 ACRE LAKE CONSTRUCTION 1990-1991 W/ CURRENT AVAILABLE FUNDING
SPORTS CENTER
LAURVIEW TERRACE RECREATION CENTER
EQUESTRIAN AREA
OVERLOOK
HIKING/EQUESTRIAN PICNIC AREA
HI INTENSITY
LO INTENSITY
OPEN SPACE/TRAILS
400 0 400 800 1200
HANSEN DAM
DEVELOPED RECREATION/
WILDLIFE ALTERNATIVE
POTENTIAL FOR 15 ACRE PLUS 70 ACRE LAKES
PREFERRED PLAN

Figure 5

The Developed Lake/Wildlife Alternative (Alternative 3) attempts to balance recreation use with the protection of wildlife habitat within the Hansen Dam basin. It includes a 15 acre swimming lake located on a bluff approximately 40 feet above and to the northeast of a proposed 70 acre boating and fishing lake. A waterfall would spill into a stream that would meander through existing riparian habitat and connect the two lakes. Much of the lake would be surrounded by a low intensity recreation zone. Most of the high intensity areas are buffered by a perimeter of low intensity zones. Both the Big Tujunga and Little Tujunga Washes are zoned as open space/trails. A buffer of low intensity use is present between the high intensity zones and the washes in order to protect the wildlife corridors. Like Alternatives 1 and 2, the high intensity designations are generally located on high ground along the perimeter of the basin. The bluff-top picnic area in the southeast corner of the Hansen Dam basin would be accessible by hikers and equestrians only (Figure 5).

PROJECTS IMPACTS

The three proposed alternative recreation development plans includes areas for high and low intensity recreation developments, and open space/trails. The areas of the Hansen Dam Flood Control Basin having sensitive and significant resources are generally located in low intensity recreation development and/or open space/trails designated areas. The high intensity recreation development areas are generally located in highly disturbed areas of the basin due to sand and gravel operations that have few resources and little resource value. Alternative 2 has the greatest amount of the basin designated as low intensity recreation development and open space/trails, followed by alternative 3. Alternative 3 represents a compromise between alternatives 1 and 2.

Recreation and recreation components have direct and indirect impacts on natural areas. Some of the direct impacts associated with recreation include parking lots, roads, restroom facilities, loss of native vegetation, non-native grass areas, litter, and human presence. Some of the indirect impacts include noise, trampling of native vegetation, erosion, attraction of wildlife predators by litter, and the lack of enforcement of regulations.

The construction of parking lots and roads disturb the soil and vegetation resulting in erosion and sedimentation. In addition, oil, grease and other contaminants inherent during the construction phase could runoff into sensitive habitats and watercourses, thereby, impacting water quality and the organisms inhabiting the aquatic habitat. These foreign substances may bioaccumulate within aquatic organisms and pass up the food chain. The air quality would be impacted during construction from vehicle and construction equipment exhausts and windblown

dust and dirt. Photosynthetic activity is affected by accumulated dust and dirt on leaves of vegetation. Upon the completion of construction, the water and air quality problems persist. Drainage systems built into roads and parking lots carry the accumulated oil, grease, and the myriad of other contaminants into watercourses as point source discharges. The air quality continues to be impaired from vehicles using the roads and parking lots.

The construction of restroom facilities results in the loss of native vegetation by extensive trenching for sewer and water lines, building pads, leach fields from septic tanks, and erosion and sedimentation during construction. Air quality is also impaired during the construction phase from construction equipment and vehicles.

Native vegetation is eliminated wherever permanent facilities are constructed and/or a turf area is established, unless native grasses are planted. However, rarely are native grasses planted in parks or recreation areas. These areas are generally planted with exotic or hybrid grasses and ornamental trees and shrubs. Native vegetation, where it is allowed to exist, can be trampled by people. Native plants cannot tolerate human trampling, thus, they are lost and erosion of the soil may occur. Drought tolerant native vegetation doesn't require irrigation whereas the non-native turf grasses require large amounts of water in this semi-arid environment. Because most irrigation systems are controlled by timers as opposed to demand, large amounts of water is wasted and often flows down roads and into parking lots and lost to evaporation.

The human presence creates noise and litter. Noise has impacts on some species of wildlife. Construction and human noise could prevent the successful breeding and nesting of certain birds, such as the Federal endangered least Bell's vireo. The management of construction noise and human presence and associated noise is necessary during certain times of the year to prevent impacts to sensitive wildlife resources in the basin. Litter will attract known wildlife predators such as crows and cowbirds. Other predators that are attracted to litter that have public health and safety implications include rats.

Equestrian trails that are constructed in natural areas could attract wildlife predators such as the cowbird. The cowbird is a known predator on the least Bell's vireo and other riparian bird species. Equestrians often wander off the trails into sensitive habitats such as the riparian habitat in the basin. In the process, they could disrupt breeding and disturb nests of sensitive riparian bird species, especially those species that nest close to the ground.

If you have any questions please contact John Hanlon of my staff at (714) 643-4270.

Sincerely,

John R. Hanlon

Brooks Harper
Office Supervisor

**Appendix A. A list of plants found in the Hansen Dam Flood Control Basin.**

| Species | |
|---|---|
| **Scientific Name** | **Common Name** |
| Acacia sp. | Acacia |
| Alnus rhombifolia | White adler |
| Amsinkia intermedia | Fiddleneck |
| Anthemis cutula | Mayweed |
| Arctostaphylos glauca | Big berried manzanita |
| Artemisia californica | California sagebrush |
| Artemisia douglasiana | Mugwort |
| Artemisia dracunculus | Dragon sagwort |
| Arundo donax | Giant reed |
| Baccharis glutinosa | Mulefat |
| Baccharis pilularis | Coyote brush |
| Brassica nigra | Black mustard |
| Brassica rapa ssp. sylvestris | Field mustard |
| Bromus diandrus | Ripgut grass |
| Bromus rubens | Red brome |
| Camissonia bistorta | Sun cup |
| Centaurea melitensis | Tocalote |
| Chenopodium album | Pigweed |
| Chorizanthe procumbens | Prostrate spineflower |
| Cirsium vulgare | Bull thistle |
| Crassula erecta | |
| Cucurbita foetidissima | Calabazilla |
| Cuscuta sp. | Dodder |
| Datura meteloides | Jimsonweed |
| Descurainia pinnata | Tansy mustard |
| Eriastrum densifolium ssp. austromontanum | Perennial eriastrum |
| Eriodictyon crassifolium | Felt-leaved yerba santa |
| Eriogonum fasciculatum | California buckwheat |
| Eriogonum gracillimum | Slender eriogonum |
| Erodium botrys | Filaree |
| Erodium cicutarium | Red-stem filaree |
| Eucalyptus sp. | Eucalyptus |
| Euphorbia spathulata | Reticulate-seeded spurge |
| Festuca dertonensis | |
| Galium nuttallii | Climbing bedstraw |
| Gnaphalium californicum | California everlasting |
| Gutierrezia bracteata | Matchweed |
| Helianthus annuus | Common sunflower |
| Heterotheca grandiflora | Telegraph weed |
| Lepidospartum squamatum | Scale broom |
| Lessingia glandulifera | Valley lessingia |
| Lobularia maritima | Sweet-alyssum |
| Lotus scoparius | Deerweed |
| Lupinus albifrons | Lupine |

**Appendix A. Continued**

| | |
|---|---|
| Marrubium vulgare | Horehound |
| Matricaria matricarioides | Pineapple weed |
| Mimulus longiflorus | Bush monkey flower |
| Nicotiana glauca | Tree tobacco |
| Oenothera hookeri | Hooker's evening primrose |
| Opuntia littoralis | Coast prickly pear |
| Opuntia parryi | Valley cholla |
| Phoradendron tomentosum ssp. macrophyllum | |
| Pinus canariensis | Canary Island pine |
| Platanus racemosa | California sycamore |
| Populus fremontii | Fremont's cottonwood |
| Psilocarphus brevissimus | Dwarf woolly-heads |
| Quercus agrifolia | Coast live oak |
| Rhamnus californica | Coffeeberry |
| Rhamnus crocea | Buckthorn |
| Ribes aureum | Golden currant |
| Ricinis communis | Castor-bean |
| Rumex crispus | Curly dock |
| Salix goodingii | Black willow |
| Salix hindsiana | Sandbar willow |
| Salix laevigata | Red willow |
| Salix lasiolepis | Arroyo willow |
| Salvia apiana | White sage |
| Salvia mellifera | Black sage |
| Sambucus mexicana | Elderberry |
| Schinus molle | California pepper |
| Schismus barbatus | |
| Senecio douglasii | Bush senecio |
| Silybum marianum | Milk thistle |
| Sisymbrium irio | London rocket |
| Solanum xantii | Purple nightshade |
| Toxicodendron diversilobum | Poison oak |
| Trifolium repens | White clover |
| Typha latifolia | Cattail |
| Ulmus sp. | Elm |
| Urtica holosericea | Stinging nettle |
| Vinca major | Periwinkle |
| Washingtonia filifera | California fan palm |
| Xanthium strumarium | Cocklebur |
| Yucca whipplei | Whipple yucca |

**Appendix B. Fish, amphibians, reptiles, and mammals reported to occur in the Hansen Dam Flood Control Basin.**

| Species | |
|---|---|
| Scientific Name | Common Name |
| Gila orcutti | Arroyo chub |
| Rhinichthys osculus | Speckled dace |
| Catostomus santaanae | Santa Ana sucker |
| Batrachoseps attenuatus | California slender salamander |
| Batrachoseps major | Garden slender salamander |
| Bufo boreas | Western toad |
| Bufo microscaphus | Southwestern toad |
| Hyla cadaverina | California treefrog |
| Hyla regilla | Pacific treefrog |
| Gerrhonotus multicarinatus | Southern alligator lizard |
| Phrynosoma coronatum blainvillei | San Diego horned lizard |
| Sceloporus occidentalis | Western fence lizard |
| Uta stansburiana | Side-blotched lizard |
| Crotalus viridis helleri | Southern Pacific rattlesnake |
| Lampropeltis getulus | Common kingsnake |
| Masticophis flagellum | Coachwhip |
| Pituophis melanoleucus | Gopher snake |
| Didelphis virginiana | Virginia oppossum |
| Sylvilagus bachmani | Brush rabbit |
| Sylvilagus audubonii | Desert cottontail |
| Lepus californicus | Black-tailed jackrabbit |
| Spermophilus beecheyi | California ground squirrel |
| Thomomys bottae | Bottas' pocket gopher |
| Dipodomys agilis | Agile kangaroo rat |
| Reithrodontomys megalotis | Western harvest mouse |
| Peromyscus maniculatus | Deer mouse |
| Neotoma fuscipes | Dusky-footed woodrat |
| Canis latrans | Coyote |
| Vulpes vulpes | Red fox |
| Urocyon cinereoargenteus | Gray fox |
| Procyon lotor | Raccoon |
| Mephitis mephitis | Striped shrew |
| Odocoileus hemionus | Mule deer |

**Appendix C. Birds observed in the Hansen Dam Flood Control Basin[1].**

| Species | |
|---|---|
| Scientific Name | Common Name |
| Anas platyrhynchos | Mallard |
| Aythya valisineria | Canvasback |
| Circus cyaneus | Northern harrier |
| Accipiter striatus | Sharp-shinned hawk |
| Accipiter cooperii | Cooper's hawk |
| Buteo lineatus | Red-shouldered hawk |
| Buteo jamaicensis | Red-tailed hawk |
| Falco sparverius | American kestrel |
| Callipepla californica | California quail |
| Fulica americana | American coot |
| Charadrius vociferus | Killdeer |
| Columba livia | Rock dove |
| Streptopelia chinensis | Spotted dove |
| Zenaida macroura | Mourning dove |
| Columbina passerina | Common ground dove |
| Amazona sp. | Parrot |
| Geococcyx californianus | Greater roadrunner |
| Archilochus alexandri | Black-chinned hummingbird |
| Calypte anna | Anna's hummingbird |
| Calypte costae | Costa's hummingbird |
| Ceryle alcyon | Belted kingfisher |
| Picoides pubescens | Downy woodpecker |
| Colaptes auratus | Northern flicker |
| Contopus borealis | Olive-sided flycatcher |
| Empidonax traillii | Willow flycatcher |
| Empidonax difficilis | Western flycatcher |
| Sayornis nigricans | Black phoebe |
| Myiarchus cinerascens | Ash-throated flycatcher |
| Tyrannus verticalis | Western kingbird |
| Tachycineta thalassina | Violet-green swallow |
| Hirundo pyrrhonota | Cliff swallow |
| Hirundo rustica | Barn swallow |
| Aphelocoma coerulescens | Scrub jay |
| Corvus brachyrhynchos | American crow |
| Corvus corax | Common raven |
| Psaltriparus minimus | Bushtit |
| Campylorhynchus brunneicapillus | Cactus wren |
| Salpinctes obsoletus | Rock wren |
| Thryomanes bewickii | Bewick's wren |
| Troglodytes aedon | House wren |
| Sialia mexicana | Western bluebird |
| Catharus guttatus | Hermit thrush |
| Chamaea fasciata | Wrentit |
| Mimus polyglottos | Northern mockingbird |

**Appendix C. Continued**

| | |
|---|---|
| Toxostoma redivivum | California thrasher |
| Phainopepla nitens | Phainopepla |
| Sialia mexicana | Western bluebird |
| Catharus guttatus | Hermit thrush |
| Chamaea fasciata | Wrentit |
| Mimus polyglottos | Northern mockingbird |
| Toxostoma redivivum | California thrasher |
| Phainopepla nitens | Phainopepla |
| Lanius ludovicianus | Loggerhead shrike |
| Sturnus vulgaris | European starling |
| Vireo bellii pusillus | Least Bell's vireo |
| Vireo huttoni | Hutton's vireo |
| Vermivora celata | Orange-crowned warbler |
| Dendroica petechia | Yellow warbler |
| Dendroica coronata | Yellow-rumped warbler |
| Geothlypis trichas | Common yellowthroat |
| Wilsonia pusilla | Wilson's warbler |
| Icteria virens | Yellow-breasted chat |
| Pheucticus melanocephalus | Black-headed grosbeak |
| Pipilo erythrophthalmus | Rufous-sided towhee |
| Pipilo fuscus | Brown towhee |
| Melospiza melodia | Song sparrow |
| Zonotrichia leucophrys | White-crowned sparrow |
| Agelaius phoeniceus | Red-winged blackbird |
| Euphagus cyanocephalus | Brewer's blackbird |
| Molothrus ater | Brown-headed cowbird |
| Icterus galbula | Northern oriole |
| Carpodacus cassinii | Cassin's finch |
| Carpodacus mexicanus | House finch |
| Carduelis psaltria | Lesser goldfinch |
| Carduelis tristis | American goldfinch |
| Passer domesticus | House sparrow |

[1]List includes birds observed on Service field trips during 1987 as well as sensitive species which could be present in the project areas. This is not intended to be a complete list of birds in the flood control basin.

## REFERENCES


California Department of Fish and Game. 1986. State and Federal lists of endangered and threatened animals of California. Leaflet.

Michael Brandman Associates. 1980. Draft environmental impact statement for Los Angeles International Golf Club.

Munz, P.A. 1974. A flora of southern California. Univ. of California Press, Berkeley, California.

Remsen, J.V. Jr. 1979. Bird species of special concern in California. The Resources Agency, California Department of Fish and Game.

Smith, R.L. and R. York. 1984. Inventory of rare and endangered vascular plants of California. Calif. Native Plant Society, Berkeley, California.

Tate, J. 1986. The Blue List for 1986. American Birds. 40:227-236.

U.S. Army Corps of Engineers. 1975. Hansen Dam master plan. Los Angeles District, Los Angeles, California.

U.S. Army Corps of Engineers. 1984. Environmental Assessment for debris removal, Hansen Dam Flood Control Basin. Los Angeles, California.

U.S. Army Corps of Engineers. 1986. Biological resources report: Special status species of the Los Angeles County Drainage Area (LACDA), FY 1986. Los Angeles District, Los Angeles, California.

U.S. Fish and Wildlife Service. 1982a. Candidate species - Region One. Portland, Oregon. Leaflet.

U.S. Fish and Wildlife Service. 1982b. Sensitive bird species - Region One. Portland, Oregon.

U.S. Fish and Wildlife Service. 1985. Endangered and threatened wildlife and plants; reviews of plant taxa for listing as endangered or threatened species; notice of review 50(188): 39526-39526; Table, pp. 00001-00051.

U.S. Fish and Wildlife Service. 1987. Planning aid letter on the Los Angeles County Drainage Area (LACDA) Control Study, Los Angeles County, California.

U.S. Fish and Wildlife Service. 1990. Endangered and threatened wildlife and plants. 50 CFR 17.11 & 17.12.

CITY OF LOS ANGELES
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DEPARTMENT OF
RECREATION AND PARKS
200 NO. MAIN ST.
13TH FLOOR
LOS ANGELES, CALIF. 90012
485-4831

JAMES E. HADAWAY
GENERAL MANAGER

August 16, 1990

Colonel Tadahiko Ono
Los Angeles District
Army Corps of Engineers
Post Office Box 2711
Los Angeles, CA 90053

Attention: Raina Fulton
Environmental Protection Specialist

Dear Colonel Ono:

Over the past months our staff has been working cooperatively with your agency's staff towards the goal of a new Master Plan for the Hansen Dam Recreational Area, as well as a concurrent Environmental Impact Report/Environmental Impact Study. To assist in the planning of such a rich resource in the City of Los Angeles has been challenging and exciting.

We wish to compliment your staff on their efforts and look forward to a continuing relationship to improve recreation and park opportunities and the quality of life in Los Angeles.

Very truly yours,

JAMES E. HADAWAY
General Manager

FRANK S. CATANIA
Director
Planning and Development

FSC ~~MAC~~/mgm

cc: Jackie Tatum, Assistant General Manager, Valley Region

August 17, 1990

Office of the Chief
Environmental Resources Branch

Ms. Kathryn Gualtieri
State Historic Preservation Officer
P.O. Box 942896
Sacramento, California 94296-0001

Dear Ms. Gualtieri:

The Los Angeles District, Corps of Engineers (COE), is preparing an Environmental Impact Statement (EIS) for the Hansen Dam Master Plan (HDMP). Hansen Dam is in the Lakeview Terrace area of the City of Los Angeles. The project area is situated in the combined San Fernando and Sunland 7.5 minute quadrangle sheets (enclosure 1). The purpose of the HDMP is to provide needed recreational facilities in the San Fernando Valley and reinstate one of the few water-based recreational areas in the Los Angeles Area (enclosure 2).

Three archeological sites are located within the general confines of the HDMP's area of potential effects (APE) (enclosure 3). The most important site is CA-LAn-167, known as Tujunga Village, which was placed on the National Register of Historic Places (NRHP) in 1978. The Action was done by California Dept. of Transportation (CALTRANS) in conjunction with the construction of the I-210, Foothill Freeway. LAn-167, was a village site which has prehistoric and historic componeñts. Tujunga is its historic place-name. The second site, CA-LAn-300, lies to the southwest across the Little Tujunga Wash. This site, which may have been associated with the larger Tujunga Village site, has been tested but not evaluated for NRHP eligibility. LAn-300, has a depth of 130 cm., and the surface yielded fire-cracked rock, cores, manos, and a bowl fragment. The third site, CA-LAn-1525, lies just outside the boundaries of the Hansen Dam recreational area. It is a very sparse scatter, covered with maximum vegetation. In an earlier survey, LAn-1525 was thought to be a component on the northeastern boundary of LAn-167(enclosure 1), but it was subsequently resurveyed and given its own trinomial designation.

The HDMP involves rezoning the project area to accommodate varying types of recreational activities. The legend on the enclosed map details these use-areas (enclosure 3). The three archeological sites are in locations that will remain unaffected by the HDMP. LAn-1525 is outside of the park boundaries on property that is a buffer zone for the freeway. Lan-167 sits on top of, and across Orcas Avenue from the Hansen Dam Equestrian

Center. The portion located in the equestrian center's confines is undergoing a separate treatment plan, and is not part of the HDMP, although it will be an associated feature. The activity resulting from the equestrian center has been an existing condition for about 40 years. The part that lies across Orcas Avenue is in a fenced-off area and there are no plans for public access to it. Archeological site LAn-300 is on the western edge of the Little Tujunga Wash and is currently zoned for areas that are leased to the City of Los Angeles, Dept. of Recreation and Parks. That condition is open space, used for equestrian trail riding only, and will not change.

So, as the HDMP stands there will be no change in the use or setting of the locations of the three archeological sites. Therefore, the COE has determined the HDMP project as planned will not involve properties that are eligible for, or are listed in the National Register of Historic Places.

We request that you review the enclosed information. If you agree with this determination, we would appreciate your concurrence. If you have any questions concerning this project or the determination, please contact Mr. Richard Perry, Project Archeologist, at (213) 894-6087.

Sincerely,

Robert S. Joe
Chief, Planning Division

Enclosures

**OFFICE OF HISTORIC PRESERVATION**
**DEPARTMENT OF PARKS AND RECREATION**
**P.O. BOX 942896**
**SACRAMENTO, CALIFORNIA 94296-0001**
**(916) 445-8006**

**REPLY TO: COE900820B**

**October 23, 1990**

**Carl F. Enson, Chief**
**Construction-Operations Division**
**Los Angeles District**
**U.S. Army Corps of Engineers**
**P.O. Box 2711**
**Los Angeles, CA 90053-2325**

Acts: B2, B4

**Project: Hansen Dam Master Plan**

Dear Mr. Enson:

Thank you for requesting our review of the cited undertaking. We have examined the documentation you provided, and would like to offer the following comments.

Your efforts to identify historic properties within the project's Area of Potential Effect (APE) rely on a report by Pat Martz (1977) entitled Description and Evaluation of the Cultural Resources Within Haines Debris Basin, Hansen Dam, Lopez Dam, and Sepulveda Dam, Los Angeles County, California. After carefully inspecting Martz's report, we feel that additional information will be needed before we can agree with the adequacy of your identification measures pursuant to 36 CFR 800.4(a and b). We ask that you clarify the following matters:

1. It is unclear exactly what background research and survey methods were used to accomplish the historic property inventory within the Hansen Dam Master Plan's APE. What sources were checked during background research for the study? And with what intensity or varying levels of intensity was the APE field inspected? Judging from the acreage covered by Martz's study and the number of person-days spent on the field survey, it is our impression that additional inventory may be warranted within the APE to ensure current standards of identification are achieved.

2. Were previous inspections of the APE impaired by poor ground visibility or other conditions that might reasonably suggest buried or concealed archaeological sites were missed? Studies in the Prado Flood Control Basin, another Corps responsibility, have revealed a number of historic and prehistoric sites buried under sediments. Is it likely that similar resources exist in the Hansen Dam APE?

3. Were any efforts made to identify historic buildings and structures within the immediate viewshed of the Master Plan area? For instance, we wonder how old the Hansen Dam is. Any buildings and structures older than 45 years should be identified and evaluated by an appropriately qualified professional.

We will resume our review of this undertaking upon receipt of additional information from you.

--Thank you for giving consideration to historic properties in the project planning process. If you have any questions regarding our review of this project, please telephone Thad Van Bueren of our staff at (916) 322-9610.

Sincerely,
Signed by:
Hans Kreutzberg
Deputy State Historic Preservation Officer
Kathryn Gualtieri
State Historic Preservation Officer

# Comments and Responses

# RESPONSES TO PUBLIC AND AGENCY COMMENTS ON THE DRAFT MASTER PLAN AND EIR/EIS

## Issues Raised by Public and Agency Review

The draft Master Plan and EIR/EIS were distributed for public review on August 31, 1990. The completed draft Master Plan was presented to the public on October 16, 1990 at a meeting held at the Lake View Terrace Recreation Center, in the city of Los Angeles. Colonel Charles Thomas, District Engineer, Los Angeles District, opened the meeting and presented the findings of the Master Plan and EIR/EIS. Numerous people spoke at the hearing, and several letters of comment were received from government agencies, community groups, and individual citizens.

The significant environmental issues are summarized below, and are followed by responses. Because of the number of written comments, and of extensive oral testimony at the public hearings, similar comments and issues have been grouped together. Responses have been prepared for each issue, rather than for each comment in each letter. If numerous comments were made on the same subject, the total number of comments is shown in a parenthetical note at the end of the comment. Comments which consisted of minor corrections to the document are now incorporated where appropriate. At the end of each major comment is a notation indicating which public agency and, or, private individual made the comment, or a similar comment. Changes in the text of the final Master Plan and EIR/EIS have been made as appropriate. The letters of comment received by the Corps of Engineers follow this summary. Those comments that were grouped are assigned specific response numbers in the left margin. The response numbers correspond with numbered replys given below in this section that directly address the comment.

## Lake Development

1. **Comment:** The decision to plan and manage a lake development is imminent and should be fully addressed in the FEIS. - U.S. Environmental Protection Agency (EPA)

**Response:**
The FEIS presents an abbreviated lake management plan that identifies those areas of lake management that the Corps will employ. An effective completed Land Management Plan can only be developed based on definite project features identified during the project design phase. Lake development impacts will be fully addressed in the Supplemental Environmental Assessment document that will accompany the lake design report (c.f. EIS/EIR, paragraph 4.06).

2. **Comment:** A lake management plan for the ten-acre lake needs to be presented with the EIS. - California State Regional Water Quality Control Board (RWQCB)

**Response:** Extensive coordination with RWQCB on a variety of issues has revealed that in this instance, the RWQCB would actually prefer to see a statement that the Corps understands it is responsible for developing a management plan at the time of lake design. This information has been incorporated into the document. The pertinent text includes the Corps' commitment to maintaining water quality to meet State water quality standards; how the Corps plans to implement its management plan; what the scope of the management plan will be, etc. (c.f. EIS/EIR, para. 4.06)

3. **Comment:** It may prove difficult to retain all of the existing trees due to the lake construction. - City of Los Angeles (L.A.)

**Response:** This comment is now addressed in the text in the "Environmental Commitments" and "Impacts" sections of the EIS/EIR. New information on this particular subject has been provided by the City of Los Angeles. (c.f. EIS/EIR paras. 4.52-4.53, 4.54-4.55)

4. **Comment:** If Proposition B is passed by the voters, the funds would best be expended on improvements to the upper lake in the plan and initial construction should begin there, rather than at a temporary location at the lower lake site. - Lake View Terrace Homeowners Association (L.T.H.A.), Private Individual (P.I.)

**Response:** Proposition B was not passed by a large enough majority of the voters. However, a proposal for the upper lake can be considered in the future if enough funds become available.

5. **Comment:** A natural 100-acre flood lake would be preferable to the initial 10-15 acre lake for fishing, swimming, and other recreation; and would provide a better environment for wildlife. - P.I.

**Response:** This option was considered early on in the planning process, but was dropped for several different reasons, including: safety and security issues, problems with water quality, and difficulties involved in maintenance and refilling the new lake associated with sediment inflow.

6. **Comment:** The water supply for the lake isn't feasible if the City is considering using reclaimed water from the Tillman plant. There is a health problem due to mosquitos and encephalitis. - P.I.

**Response:** The source of water for the lake will be potable water from the Los Angeles City main. This water will meet all regulatory water quality standards for human

contact. In addition, before any lake construction can be initiated, technical studies will be completed which address water circulation, water quality and meet both California State Regional Water Quality Control Board and Los Angeles County mosquito abatement standards.

7. **Comment:** What about the possibility of using another water treatment plant in the Sunland/Tujunga area to supply reclaimed water to the lake, or of the possibility of coordinating with the Big Tujunga Dam for potential water supply? - P.I. (2)

**Response:** Refer to Response Number 6 for water source.

8. **Comment:** Is it possible to enlist the people who are performing the sand and gravel removal operation to help develop a nicer lake? - P.I.

**Response:** During the next phase of development, all attempts will be made to utilize all potential resources in the development of the lake.

**Recreation Use**

9. **Comment:** The list of acceptable uses under the "high intensity/intensive recreation" designation should include the word "fairgrounds." This does not imply support for such activity, but ensures there is nothing within the Plan that would specifically exclude it either. - L.T.H.A. , State Sen. Robbins, P.I. (3)

**Response:** The term "special events" has been added to the Plan. This term could encompass a fair or other similar activities. (c.f. Master Plan para. 6.14)

10. **Comment:** A hang gliding practice area within the Hansen Dam basin would be desirable. - U.S. Hang Gliding Association, Sylmar Hang Gliding Association, P.I.

**Response:** Specific proposals for development will be considered by the city of Los Angeles. Any future proposals will require compliance with the guidelines of the Master Plan, compliance with the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA), and must be approved by the city and the Corps of Engineers.

11. **Comment:** Request the establishment of a separate parcel for equestrian camping within the basin. - Citizens for K-Districting, Inc.

**Response:** Equestrian camping has been added as an example of the types of uses which would be appropriate under the "intensive recreation" use zone. As with other specific requests stated above, a specific proposal such as this would have to considered by the city of Los Angeles and will require compliance with guidelines in the Master

Plan, CEQA, and NEPA, and must be approved by both the city and the Corps. (c.f. M.P. para. 6.14)

**12.** **Comment:** The new (boating) lake should not be open to motorized boating or jet skis, but should be available for use by sailboats and windsurfers. - P.I.

**Response:** The (boating) lake will not be open to motorized boating of any kind. The exact uses of the lake will be determined in the future. (c.f. M.P. para. 6.42)

**13.** **Comment:** Request that restroom facilities and a food service oriented toward equestrians be developed within the basin. -P.I.

**Response:** Again, this would have to be a specific proposal, subject to approval by the city of Los Angeles and the Corps, and consistent with NEPA and CEQA.

**Circulation**

**14.** **Comment:** A circulation plan should be included in the Master Plan which discusses roads, access, bikeways and trails. Additional items which should be added to the document are discussions on security and safety and future development in the area. - L.A.

**Response:** This additional information has been included in the current document. (c.f. M.P. paras. 6.48-6.50)

**15.** **Comment:** Do not provide vehicular access to the overlook area off of Wentworth Street; thereby concentrating vehicular traffic on the northern and western portions of the basin, and keeping the eastern end a haven from cars and crowds. - P.I.

**Response:** There will be no vehicular access to the overlook area under the current Plan. (c.f. M.P. para. 6.29)

**16.** **Comment:** While the Plan shows existing main trails, it would be preferable to have a new plate showing where the main existing trails will be when the preferred alternative is developed. - L.T.H.A., P.I.

**Response:** Although the alignments of many of the localized trails within the basin are occasionally moved around, due to flooding and the sand and gravel removal operation, it is felt that the majority of the main equestrian trails will retain their current alignments. Any additional main equestrian trails that would be developed would have to be addressed in specific development proposals.

**17.** **Comment:** There should be a permanent trail system established within the basin,

one which would also include an equestrian trail network and access points. - P.I. (3)

**Response:** Any extensive, permanent trail system cannot be developed during the time period which is covered by the ongoing sand and gravel removal operation, due to continuous disruption. A future comprehensive trail development system would be treated as any of the other specific development proposals which have been discussed above.

**18. Comment:** The Corps and the City should examine the possibility of linking the equestrian trails within the basin with trails in the Angeles National Forest. - P.I.

**Response:** The area outside the Hansen Dam flood control facility is outside Corps jurisdiction. The possibility of a coordinated development proposal could be examined, however, under a specific development proposal. Such a proposal would be subject to the same conditions as stated above.

**Wildlife and Open Space**

**19. Comment:** Present a more in-depth discussion of threatened and endangered species and possible reasons for the absence of species sighted in the past. - Environmental Protection Agency (EPA); California Department. of Fish and Game (DFG)

**Response:** Additional background data has been provided in the text of this document that documents field reconnaissance dates during which trained ecologists surveyed the basin. During these site visits, there were no indications of nesting least Bell's vireos. (c.f. EIS/EIR para. 4.19)

**20. Comment:** Water courses should be retained in their natural condition and provided with appropriate buffers along both adjacent large open space areas (the Little and Big Tujunga Washes). - DFG

**Response:** This has now been implemented in the document. (c.f., for example, M.P. para. 6.18)

**21. Comment:** Open space areas in the Master Plan should be placed together to form one large natural area which would, therefore, afford better protection to the natural environment. - P.I.

**Response:** Changing some of the designations, such as environmentally sensitive open space areas into "low density" use areas, or vice versa, in order to maximize open space is precluded by the existence of such environmentally sensitive areas. Conversely,

while the plan attempts to protect as many naturally sensitive areas as possible, some areas were assigned low density recreation uses in order to maximize recreation potential where feasible.

22. **Comment:** Open space within the basin should be increased overall. - P.I. (2)

**Response:** Under the current recommended Plan, approximately half of the basin shall be left undeveloped under the environmentally sensitive open space category.

23. **Comment:** Since the sand and gravel operations have severely impacted the terrain with regard to wildlife habitat, the Master Plan must go beyond setting aside open space. Specific areas of the basin that have lost habitat, that is, should be revegetated. - P.I.

**Response:** Aside from mitigation requirements, which will be specified in the Supplemental Environmental Assessment for the sand and gravel removal operation, there is no funding available for such revegetation at this time. Currently, within the scope of this document, there are no elements for any type of revegetation, since there are no specific development proposals within the Master Plan.

24. **Comment:** Request that a wildlife sanctuary, for the protection of some of the endangered plants and animals, be established within the basin. - P.I.

**Response:** There are currently no state or federally listed endangered plants or animals within the basin. A wildlife sanctuary could be established, but as with other specific proposals mentioned above, it would have to be approved by the City and the Corps. It would also would have to be evaluated under NEPA and CEQA.

**Water Conservation**

25. **Comment:** Request that the Corps include water conservation activities as part of its master planning for Hansen reservoir. - Los Angeles County (County).

**Response:** Mention has been made about water conservation within the current document. (c.f. M.P. para. 5.20 and EIS para. 4.06)

**Air Quality**

26. **Comment:** Demonstrate full conformance with the South Coast Air Quality Management District (AQMD) Management Plan, State Implementation Plan (SIP), and Federal Implementation Plan (FIP); and determine whether the Indirect Source Review Program (ISR) may apply to this project. - EPA

**Response:** FIP regulations have not been adopted yet, and are not expected to be adopted until 28 February 1991. According to the Southern California Association of Governments (SCAG), if the Corps complies with the SIP, the FIP will most likely be met since the FIP references the SIP regulations. Additional coordination with SCAG is in progress. SCAG has been made aware of the Corps time frame, and has expressed a willingness to work with the Corps in developing this aspect of the proposed project. For now, there are no problems in meeting the SIP. Coordination has been completed with AQMD with regard to the ISR program. In order to comply with the ISR program, the Corps will address design enhancement features that will reduce emissions stemming from lake visitation.

**Traffic**

**27. Comment:** Neither the Master Plan nor the EIS/EIR adequately describes potential traffic impacts of the proposed plan. Impacts to air quality due to induced growth and increased vehicle miles traveled (VMT) should be fully discussed in the final Environmental Impact Statement (FEIS). - EPA, L.A.

**Response:** Corps of Engineers coordination with city of Los Angeles traffic engineers resulted in an agreement that a project of this scope requires a long-range modeling traffic analysis. This model will take approximately four to six months to develop, and will require a vast amount of traffic data based on design features of the proposed project. At this stage, the project is programmatic in approach and lacks much of the necessary detail needed to initiate a modeling analysis. Information is currently being collected on access locations, existing traffic patterns, circulation and peak visitation periods. This information will be used to develop a model and to perform a comprehensive traffic analysis before onset of final construction. It will also assist in the final design of the project. The traffic analysis, a process to achieve compliance with applicable air quality regulations and statutes; and a complete mitigation plan to avoid adverse air quality and circulation impacts, will be incorporated in an environmental document that will accompany the project basis of design.

**Water Quality**

**28. Comment:** Horse stables on the Army Corps property at Hansen are polluting surface waters and may pose a threat to public health. Compliance should be made with the Clean Water Act and 40 Code of Federal Regulations (CFR), part 412 (feed lots and point source category). - EPA

**Response:** A runoff problem no longer exists under the current stable concessionaire; it is questionable whether the high coliform counts were caused by the stables. The new concessionaire disposes of bedding and manure daily, and the

stockpiling area has been bermed and situated to prevent water runoff into streams in the area. Waste disposal practices are in full compliance with the Clean Water Act. The facility is not subject to 40 CFR 412 regulations because of the number of horses housed (c.f. Sec. 412.10 "Applicability").

**29. Comment:** Section 319 of the Clean Water Act requires states to assess non-point source water pollution problems and to develop management programs for such problems. - EPA, RWQCB

**Response:** The Corps cannot assess non-point source pollution problems until lake hydrological schemes and water flow paths have been determined. Those determinations will be made during the design phases of the project. On January 14, 1991, Michael Lyons of the RWQCB requested that the Corps defer the development of a 319 program until hydrologic schemes are assigned to the lakes. However, the 319 program can be addressed in the text under the lake management plan. The lake management plan and 319 are closely aligned in that one serves to eliminate the need for the other. The city and County have been issued a general permit for non-point sources; the Hansen project will be contained in this general permit. Further coordination is required with the city to ensure that the proposed lakes are included under this general permit. The RWQCB will contact the Corps to establish a point of contact for future coordination on the 319 permit. Included in this Final Environmental Impact Statement are preliminary lake management plans that identify the Corps' intentions and the process for fulfilling the requirements of the 319 program. In addition, the Corps will further protect water quality standards, and satisfy the State's nonpoint source control program, by establishing a water quality contract with the City of Los Angeles for the life of the project. The stated contract will be set forth in the project Record of Decision (c.f. EIS/EIR para. 4.06)

**30. Comment:** The draft EIS/EIR does not adequately address potential water quality impacts associated with construction activities. - RWQCB

**Response:** In order to curtail impacts associated with any future construction, the Corps will take measures which would follow all Regional Water Quality Board water quality regulations to the letter. Some of the measures would include development of watering programs, berms, oil and diesel spill prevention programs for construction equipment, construction parking areas that will not pose a pollution threat to surface waters, refueling areas that do not pose a pollution threat to surface waters, limiting construction to dry weather periods, etc.

**31. Comment:** Daily evaporation rates seem questionably high. - L.A.

**Response:** The Corps has now utilized the best available information to derive these figures. They have been extracted from the Los Angeles County Department of Public Works Hydrologic Data, 1988 - 1989.

**Wetlands**

32. **Comment:** Determine if there are Section 404 (b) (1) jurisdictional wetlands, and whether such wetlands and riparian areas are within the footprints of the proposed lakes and if such Wetlands exist and are to be removed. If so, ensure that they are properly mitigated for and monitored. - EPA, DFG

**Response:** Extensive coordination with the Corps of Engineers Regulatory Branch, and a wetlands delineation computer check, indicate that any likely wetlands within the basin are not present in the proposed footprints of the 15- or 70-acre lakes. Field reconnaissance subsequent to the regulatory coordination and computer check has not located any wetland indicators. Full coordination with the California Department of Fish and Game and with the U.S. Fish and Wildlife Service has been maintained and will continue throughout the life of the project (c.f. EIS/EIR pp. I-C, I-D)

**Cultural Resources**

33. **Comment:** The historical and archaeological survey of the Hansen Dam basin dates back to 1977 and was not completely comprehensive. We would like you to consider doing new surveys to ensure that no significant historical or archaeological resources have been overlooked. - California State Office of Historic Preservation (SHPO)

**Response:** Additional historical and archaeological surveys shall be done for future specific development proposals.

**Mitigation**

34. **Comment:** Assure that concurrent, past and future project elements and mitigation in the basin are included in the Master Plan and EIR/EIS. Include information on enforcement measures being used to avoid further damage to sensitive resources. - EPA

**Response:** Any mitigation agreements regarding Hansen Dam pending or previous to this project are recognized by the Corps of Engineers and shall be executed accordingly. The Corps has recently developed an environmental compliance program which will monitor all commitments and mitigation agreements to assure that such agreements are fulfilled.

**Sand and Gravel Removal Operation**

**35. Comment:** There should be a more integrated approach to explaining how the proposed project interfaces with the sand and gravel removal operation within the EIS/EIR. - L.A.

**Response:** A new section of the EIS/EIR will be devoted to explanation of past and current project elements that will be incorporated, considered or avoided at the proposed lake. (c.f. EIS/EIR, Pg. I-D)

**Cumulative Impacts**

**36. Comment:** The National Environmental Policy Act (NEPA) requires full disclosure of cumulative impacts from past, present and reasonably foreseeable future actions. - EPA

**Response:** Cumulative impacts are now fully addressed within the current document. (c.f. EIS/EIR, para. 4.42-4.51)

**Security**

**37. Comment:** Provisions have to be made that the city of Los Angeles Recreation and Parks Department rigidly enforce any ordinance relating to park use, especially for purposes of security and safety. - P.I. (7)

**Response:** The operation and maintenance of recreation features within the basin are the responsibility of the city. It is the Department of Recreation and Parks policy to ensure that safe, secure facilities are provided to the public, and this is inclusive of the Hansen Dam facilities. Park ranger staff will be equitably apportioned throughout all facilities in the Valley Region, and will continue to work in conjunction with the Los Angeles Police Department in providing protection for park users.

**38. Comment:** National Environmental Policy Act (NEPA) Comments No. 1 - EPA understands and appreciates the strong public desire for lake development, but believes that it is inappropriate for the DEIS to have eliminated a non-lake alternative from further consideration under NEPA. The secondary project purpose of Hansen Dam is recreation, versus lake recreation. This project purpose could be fully met through non-lake recreational developments.

**Response:** The NEPA has been followed to the Act's fullest extent. It is the intention of the NEPA and the U.S. Army Corps of Engineers to examine environmental consequences resulting from the proposed project. The NEPA requires that a Federal

Agency "take action that protects, restores, and enhances the environment," and a focus on issues that are germane to the proposed action.

The secondary purpose of Hansen Dam Basin is recreation and, based on abundantly clear public preferences, one primary purpose of this project is to re-establish water-based recreation within the basin. Therefore, our brief discussion of why the non-lake alternative was not provided further consideration is in full compliance with the NEPA process.

**Master Plan Preparation**

**39. Comment:** The validity of the figures found in Table 5, Pg. 5-5, of the Draft Master Plan is questionable. The demand for horseback riding is understated, while the demand for bicycling is overstated. - L.T.H.A.

**Response:** The figures shown in the table reflect the region rather than the immediate area around Hansen Dam.

**40. Comment:** The map in the Master Plan (Plate 1), is outdated. - L.T.H.A.

**Response:** This map has since been updated. (c.f. Plate 1)

**Public Input**

**41. Comment:** Please include in future notifications and mailings community groups affiliated with Congressman Howard Berman's Hansen Dam Trust Fund Advisory Board. - L.T.H.A.

**Response:** These will be included.

28TH DISTRICT, CALIFORNIA
COMMITTEES
BUDGET
FOREIGN AFFAIRS
JUDICIARY

# Congress of the United States
## House of Representatives
## Washington, DC 20515
HOWARD L. BERMAN

[redacted]

October 16, 1990

This public hearing represents another step in the continuing effort by the community to find a safe place for families to come together and enjoy themselves. Completion of the draft of the Hansen Dam Master plan is an important milestone.

Many thanks to all the members of my advisory committee, colleagues and community representatives whose help made it possible for us to come this far. I very much appreciate the assistance and cooperation of U.S. Army Corps of Engineers Commander and District Engineer Col. Charles Thomas and his staff.

The draft, developed by the Corps, was drawn out of comments from the public. The plan is basically responsive to the needs of the community it will serve.

While this is the time for review, we must continue moving forward. We must maintain momentum if we want to see two lakes, camping and picniking areas, hiking, biking and horse trails, and all the other wonderful things this community has been too long without.

The battle is not over. We still have many fights ahead. But I reiterate my commitment to this project and I will keep on working with all parts of the community for development of the Hansen Dam Recreational Area.

You all know that you can count on my continuing support. And I want you to know how important your cooperation and support is to me.

Sincerely,

Howard L. Berman

Howard L. Berman

DISTRICT OFFICE ADDRESS
[redacted]
ADMINISTRATIVE ASSISTANT
[redacted]
FIELD REPRESENTATIVES
[redacted]
SENIOR CITIZEN COORDINATOR
[redacted]
OFFICE MANAGER
[redacted]
DISTRICT OFFICE STAFF
[redacted]

Senator
ALAN ROBBINS
Representing the
San Fernando Valley

COMMITTEES
[redacted]
INSURANCE, CLAIMS AND CORPORATIONS
BUDGET AND FISCAL REVIEW
BANKING AND COMMERCE
TRANSPORTATION

[redacted]
SELECT COMMITTEE ON GOVERNMENTAL EFFICIENCY

October 10, 1990

Colonel Charles Thomas, District Engineer
Corps of Engineers, Los Angeles District
P.O. Box 2711
Los AnGeles, CA 90053-2325

Dear Colonel Thomas:

14 I have had the occasion to review the Hansen Dam Master Plan Draft prepared by your office and wish to extend my encouragement to you and your staff to continue the plan's objectives. My interest in the plan involves the opportunity for the 51st District Agricultural Association to participate as a possible developer under the direction of the Corps of Engineers and the Los Angeles Department of Recreation and Parks.

I note with interest the criteria established for "High Intensity Recreation" in section 6.11 and 6.12. The criteria appear to provide more latitude for development than is reflected in the list of examples provided at the close of section 6.12.

The 51st District would welcome the opportunity to explore the feasibility of a permanent fairground facility within an area designated for high intensity recreation. This development would become the home for the annual San Fernando Valley Fair.

To support the 51st District's effort to comply with the direction provided by the Master Plan, I recommend the inclusion of "Event Center" and "Fairgrounds" as additional examples under High Intensity Recreation in the final draft of the plan. In my view, these additions are consistent with the criteria established for this classification and provide examples more congruous with future proposals from the District.



I fully endorse the 51st District's efforts to work with your office and the Los Angeles Department of Recreation and Parks in the pursuit of the development of a permanent home for the San Fernando Valley Fair at the Hansen Dam Recreation Area. Properly planned and designed, this development can become an anchor to the enriched quality of recreation experience envisioned in the Hansen Dam Master Plan.

My best regards.

Sincerely,

ALAN ROBBINS

AR:MIR:ah

# City Council of the City of Los Angeles

Ernani Bernardi
COUNCILMAN
SEVENTH DISTRICT

ROOM 240 CITY HALL
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October 16, 1990

Colonel Charles S. Thomas, District Engineer
U.S. Army Corps of Engineers
Los Angeles District
P.O. Box 2711
Los Angeles, CA 90053

Attn: Paina Fulton, CESPL-PD-RQ

Dear Colonel Thomas:

I appreciate this opportunity to offer my brief comments regarding the Hansen Dam Master Plan and Environmental Impact Statement and Report.

I share the concern of the people of the community that the goal of all governmental agencies involved should be as full a restoration as possible of what once was a fine recreational facility at Hansen Dam, one that included a 130-acre lake. I share the frustration of the community regarding the snail's pace at which the various bureaucracies have been moving on this project. This Master Plan marks a major step forward and brings with it the hope that development of a first rate recreational facility at Hansen is within our reach. 1

The approach used in the Master Plan appears to be a wise one. It will permit a phased-in program, proposing immediate development of a 10-acre lake and identifying "footprints" for future lake development, as funding problems and water source problems are overcome.

I support the preferred alternative presented in the Master Plan and believe it offers the framework for development of a fine facility that will serve the recreational needs of this and future generations.



In the interest of developing a water source for the largest possible lake, my office is working with the City's Department of Water and Power and Department of Public Works to explore the possible use of reclaimed water from the Tillman Reclamation Plant in the Sepulveda Basin. Tillman water is planned now for use in the proposed recreational lake near Woodley Golf Course in the Sepulveda Dam Basin. The proposed East Valley Water Reclamation Project will pipe water from Tillman to the Sheldon Generation Plant in Sun Valley. It may prove feasible to extend the pipeline to Hansen, circulate the water through the lake, and then make it available for groundwater discharge. The City's water reuse master plan includes groundwater recharge at Branford, Hansen and Tujunga Spreading Grounds.

Hansen Dam is a unique resource, one well worth our careful planning and continuing commitment. With this Master Plan as guide, I believe the various agencies involved can accomplish development that will meet both the Corps' flood control requirements and the recreational needs of the community.

Thank you for your consideration of my remarks.

Sincerely,

Ernani Bernardi

ERNANI BERNARDI
Councilman, Seventh District

EB:gj

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, Ca. 94105

16 OCT 1990

Colonel Charles S. Thomas, District Engineer
U.S. Army Corps of Engineers, Los Angeles District
ATTN: Ms. Raina Fulton, CESPL-PD-RQ
P.O. Box 2711
Los Angeles, CA 90053

Dear Colonel Thomas:

The U.S. Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement/Environmental Impact Report (DEIS/EIR) titled **Hansen Dam Master Plan, Los Angeles County, CA.** Our review is provided pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and Section 309 of the Clean Air Act.

16

The Hansen Dam Master Plan is intended to provide the Corps of Engineers (Corps) and City of Los Angeles (LA) guidance for orderly development and management of the Hansen Dam project area. Hansen Dam is a dry dam whose primary project purpose is flood control. Secondary project purposes are recreation and environmental resource management. The Corps' preferred alternative management plan is to provide a 10-acre lake, footprints for two potential lake sites (15 and 70 acres), and land classifications of open space (484 acres), low-intensity recreation (334 acres) and high-intensity recreation (145 acres) for all undeveloped lands within the Hansen Dam basin. According to the DEIS, this plan was selected because it offered the largest acreage of potential lake sites with the least impact to environmental resources.

A no action alternative and two alternatives with different lake footprints and land classification configurations were considered. An alternative without a lake was eliminated from further consideration due to strong public desire for a large lake.

This is a programmatic EIS. Supplemental environmental documentation will be prepared during site-planning and design of lakes or specific developments proposed in the designated high- or low-intensity recreation areas.



16 OCT 1990

We commend the Corps for its efforts to balance the demand for recreational development and the protection of sensitive environmental resources. Nevertheless, EPA has environmental concerns with several potential impacts from the proposed project. The source(s) of water and lake design to prevent sedimentation and contamination from poor quality basin waters have not been developed or described in the DEIS. EPA believes that specific information on these issues is critical for determining the feasibility of lake development in the Hansen Dam basin. We have concerns with potential impacts to wetlands, scarce riparian areas and other natural resources, potential air quality impacts and the need to implement air quality mitigation, and cumulative environmental impacts from several projects underway or proposed in the Hansen Dam basin. Based upon our review, we have classified this DEIS as category EC-2, Environmental Concerns - Insufficient Information (see attached "Summary of the EPA Rating System"). Our detailed comments are attached.

We appreciate the opportunity to comment on the proposed project and request that four copies of the FEIS be sent to this office at the same time it is filed with our Washington, D.C. office. We also request notification of any meetings(s) to be held regarding this project. If you have any questions, please contact me or have your staff contact Ms. Laura Fujii at (415) 744-1051 (FTS 484-1051).

Sincerely,

Deanna M. Wieman, Director
Office of External Affairs

Enclosures: two (1 page EIS rating sheet and 5 pages of comments)

EPA ID# 90-355
cc: US Fish & Wildlife Service, Laguna Nigual, Brooks Harper/
John Hanlon
CA Dept. of Fish and Game, Region 5
Regional Water Quality Control Board, Los Angeles Region,
Region 4
South Coast Air Quality Management District, El Monte,
Patricia Nemeth
Air Resources Board, Sacramento, Bob Fletcher
City of Los Angeles, Dept. of Recreation and Parks

1

**WATER COMMENTS**

1. Southern California is a semi-arid area that relies on scarce ground water and imported water for its water supply. The area is now in a drought cycle with growing controversy over the availability of current and increased levels of imported water. Furthermore, water quality in the Hansen Dam basin is very poor with high concentrations of coliform bacteria, sediments, iron, manganese, and mercury.

We urge the Corps to carefully evaluate the feasibility of lake development in an area of scarce water supply and poor water quality. Development of lakes should only be considered if there are guaranteed long-term sources of water and assurance of minimal risk to public health from water quality contamination. See Response No. 6

2. The DEIS (page 26) states that the "main water quality problem with the stream [Big Tujunga Wash] is the high turbidity resulting from its high sediment load and substantial coliform bacteria accumulations due to upstream runoff from horse stables" (underline added). Page 64 of the DEIS discusses several levels of development for the Hansen Dam Equestrian Center, including "a maximum acreage of high intensity use for expansion of the equestrian facilities" (Alternative A) and less intensive equestrian developments (Alternative B).

EPA has serious concerns that horse stables on the Corps' property are polluting surface waters and may pose a threat to public health. Our concerns are heightened by the possibility that even more horse waste may enter surface waters under the action alternatives. See Response No. 28

It is critical that the Corps not authorize additional horse facilities unless compliance with the Federal Clean Water Act and its regulations is ensured, in order to protect public health and water quality. Federal regulations concerning this are found at 40 CFR 412 (Feedlots Point Source Category). Additionally, we request that the Corps investigate whether the horse facility waste disposal practices on its property are in full compliance with the Clean Water Act and State of California public health/environmental laws. The FEIS should also discuss whether the horse stables have received any Clean Water Act permit from the Regional Water Quality Control Board. See Response No. 28

3. In 1987 the Congress amended the Federal Clean Water Act by adding Section 319. Section 319 requires States to assess nonpoint source water pollution problems, develop nonpoint source water pollution management programs, and implement controls to protect water quality and beneficial uses. Since a number of project features may result in increased erosion, sedimentation and the runoff of pollutants (including hydrocarbons and horse waste), compliance with Section 319 will be required. See Response No. 39





We request that the Corps and the City of Los Angeles work with the Regional Water Quality Control Board to determine whether the water pollution control measures (mitigation) identified in the Hansen Dam DEIS and subsequent NEPA documents are adequate to fully protect water quality and to satisfy the State of California's nonpoint source control program. Additionally, we request that the Hansen Dam Record of Decision contain a commitment that the Corps and the City will work closely with the RWQCB for the life of the project to protect water quality. See Response No. 29

We recommend that the Corps consult with the California Regional Water Quality Control Board to ensure that activities on its property do not pose a threat to public health or violate water quality standards. See Response Nos. 6 and 30

**NEPA COMMENTS**

1. EPA understands and appreciates the strong public desire for lake development, but believes that it is inappropriate for the DEIS to have eliminated a non-lake alternative from further consideration under NEPA. The secondary project purpose of Hansen Dam is recreation, versus lake recreation. This project purpose could be fully met through non-lake recreational developments.

We recommend that public health, water supply and water quality be more fully evaluated prior to a decision to pursue lake development. Given the competing demands for water supply and the potential risk to human health from poor water quality, we suggest that a non-lake recreational alternative be more fully assessed pursuant to NEPA. See Response No. 6

2. Several major issues concerning the development of one or more recreational lakes have been deferred by the Corps to later planning stages and will be assessed in future environmental review documents. EPA has concerns that some information essential to justifying a decision to develop a lake has been deferred to future documents. Specifically, we believe the Corps should address the following issues in the FEIS if a lake is proposed as part of the preferred alternative.

* potential source(s) of ground and/or surface waters for the proposed lake(s),
* the quality of waters, and the volumes available, to supply the lake(s),
* potential impacts to public health from human contact with waters that may exceed or violate water quality standards,
* potential impacts to surface and/or ground waters which would supply the new lake(s), and
* potential impacts to beneficial uses which depend on surface waters that may supply the new lake(s). For example, the FEIS should identify potential impacts to wildlife, fisheries,

wetlands, riparian areas, and threatened and endangered species if the surface and/or ground waters on which they depend were reduced or degraded in order to fill and maintain artificial lake(s).

The National Environmental Policy Act (NEPA) states that tiering is appropriate when it helps the lead agency to focus on the issues which are ripe for decision and exclude from consideration issues already decided or not yet ripe [40 CFR 1508.28(b)]. The decision to plan and manage for lake development is imminent and should be fully addressed in the Final Environmental Impact Statement (FEIS). See Response No. 1

3. NEPA requires full disclosure of cumulative impacts from past, present and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions (40 CFR 1508.7). The FEIS should address the cumulative impacts of such projects on wetlands, riparian habitat, air quality and other natural resources. The discussion should include, but not necessarily be limited to, the Los Angeles International Golf Course project, the sand and gravel mining lease(s), debris removal project, and debris removal mitigation project. See Response No. 36

4. When references to previous NEPA documents are used, we recommend that the description of critical issues and decisions be complete enough to stand alone without depending upon continued referencing of other documents.

18

WETLAND COMMENTS

1. The proposed land classification plan may increase human activity near sensitive environmental resources (e.g., wetlands, riparian habitat). We recommend that the Corps discuss means to reduce impacts to these scarce resources. The Hansen Dam Record of Decision should contain a commitment for mitigation capable of protecting sensitive environmental resources from damage or loss. Examples may include designated trails, fencing, proper signs, an educational program, leash requirements for pets, and a ranger/security patrol. Designation of specific buffer zones in the Master Plan between low-intensity recreational use and open space would also help to reduce potential impacts from increased access and human activity. See Response No. 32

2. On January 19, 1990 the Corps transmitted a Draft Supplemental Environmental Assessment (DSEA) and unsigned Finding of No Significant Impact for the Hansen Dam Flood Control Basin Sediment Removal Project (cover letter signed by Robert S. Joe, Chief, Corps Planning Division). The Sediment Removal DSEA states that a 57-acre wildlife management area (WMA) will be protected within the basin for the life of the Hansen Dam project (DSEA, page 15). The DSEA stated that the WMA site will contain See Response No. 34





a ten-acre marsh and approximately 47 acres of riparian habitat. The FEIS should demonstrate that the proposed Master Plan is fully compatible with the 1990 SDEA mitigation plan.

Other mitigation which the Corps may already have in place in the Hansen Dam basin should also be described in the FEIS, so the reader may understand the cumulative environmental impact of various projects authorized or approved by the Corps and the extent of mitigation that has been approved or required. In view of the past history of adverse habitat impact from sediment removal and sand and gravel mining activities, the FEIS should include information on the oversight and enforcement measures being used to avoid further damage to sensitive resources. See Response No. 34

3. Although the DEIS describes riparian habitat in the Hansen Dam basin, it is unclear whether there are Section 404(b)(1) jurisdictional wetlands and whether such wetlands and riparian areas are within the footprint of proposed lake, recreational developments or other project features. We urge the Corps to avoid conversion of riparian and wildlife habitat to open water habitat. If conversion of riparian and wildlife habitat is considered essential, replacement habitats of equal or greater value should be created. See Response No. 32

We recommend that the Master Plan, proposed lake footprints and other developments be fully coordinated with the U.S. Fish and Wildlife Service and the California Department of Fish and Game. See Response No. 32

We suggest that the FEIS contain an overlay map containing the proposed land classification plan and site analysis features or environmental constraints. In addition, certain descriptive terms should be described in more detail, for example, disturbed riparian and scarified lot.

4. The FEIS should discuss the possibility for habitat enhancement or restoration activities as part of the proposed Master Plan.

5. The DEIS notes that "vestiges of riparian habitat" are in the project area (DEIS, Table 1, Comparative Impacts of Alternatives). Pages I-C and I-D of the DEIS identify laws, regulations and Executive Orders which may be applicable to the proposed project. We recommend that the FEIS discuss whether Executive Order 11990 (Protection of Wetlands - May 24, 1977) is an applicable Federal requirement. See Response No. 32

BIOLOGICAL RESOURCE COMMENTS

1. The U.S. Fish and Wildlife Service (FWS) Planning Aid Letter indicates continuing FWS concern with potential impacts to fisheries and sensitive species (slender-horned and San Fernando Valley spineflowers, p. 11). The FEIS should respond to these

concerns and present a more in-depth discussion of threatened and endangered species and species of concern. For instance, the FEIS should expand the discussion of past field surveys, habitat requirements of sensitive species, location of species habitat, and possible reasons for the absence of species sighted in the past. We recommend that the Corps consult with the FWS and the California Department of Fish and Game regarding potential impacts to biological resources and possible habitat restoration measures for threatened, endangered and sensitive species.

See Response No. 19

AIR QUALITY COMMENTS

1. Hansen Dam is located in the South Coast Air Quality Basin which has the worst air quality in the country. EPA is required to develop an air quality Federal Implementation Plan (FIP) for this area. The FEIS should demonstrate full conformance with the South Coast Air Quality Management District's (SCAQMD) Air Quality Management Plan and the FIP. The Corps should also contact the SCAQMD to determine whether the Indirect Source Review (ISR) program may apply to this project and the potential need for compliance. The ISR program is designed to reduce air quality impacts of traffic-generating projects by minimizing vehicle travel and encouraging alternative modes of travel (e.g., public transit, van pools, bicycles).

2. It is essential that the Corps undertake every effort to ensure that projects which it constructs, approves or funds do not delay efforts or make it more difficult to attain Federal air quality standards [Clean Air Act Section 176(c)]. The adoption of air quality mitigation will help Los Angeles County to attain the National Ambient Air Quality Standards and to protect public health and the environment.

See Response No. 27

Because of Los Angeles County's severe air pollution problems, we strongly encourage the Corps and the City of Los Angeles to thoroughly analyze a broad range of mitigation to avoid adverse air quality impacts [40 CFR 1502.2(c)]. Mitigation for potential direct and indirect (secondary) impacts to air quality due to induced growth and increased vehicle miles traveled (VMT) should be fully discussed in the FEIS. We request that the Hansen Dam Record of Decision contain a commitment that the Corps and the City will work with the SCAQMD to mitigate adverse air quality impacts for the life of the project.

Mitigation may include increased or improved public transportation to the recreational areas, parking management to encourage use of mass transit (e.g., metering, van pool parking spaces), and measures to encourage the use of bicycles to recreational areas (e.g., bicycle parking areas and lockers).

19



SUMMARY OF RATING DEFINITIONS AND FOLLOW-UP ACTION*

2 6 OCT 1990

Environmental Impact of the Action

LO—Lack of Objections
The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC—Environmental Concerns
The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

EO—Environmental Objections
The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU—Environmentally Unsatisfactory
The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of environmental quality, public health or welfare. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

Adequacy of the Impact Statement

Category 1—Adequate
EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2—Insufficient Information

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

Category 3—Inadequate
EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From: EPA Manual 1640, "Policy and Procedures for the Review of Federal Actions Impacting the Environment."

STATE OF CALIFORNIA GEORGE DEUKMEJIAN, Governor
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD—
LOS ANGELES REGION
101 Centre Plaza Drive
Monterey Park, California 91754-2156
(213) 266-7500

October 11, 1990

Colonel Charles S. Thomas
District Engineer
U.S. Army Corps of Engineers
Los Angeles District
ATTN: Ms. Raina Fulton, CESPL-PD-RQ
P.O. Box 2711
Los Angeles, CA 90053

**DRAFT HANSEN DAM MASTER PLAN AND ENVIRONMENTAL IMPACT STATEMENT/ REPORT, SEPTEMBER 1990, SCH # 90040126**

We have reviewed the subject document pertaining to a proposed 10-acre lake, two potential lake sites, and land classifications of the basin within the Hansen Dam area. We have the following comments:

20

1) Discrepancies were noted in the Draft EIS/R. The acreage designations for alternatives B and C on pages 12-13 do not correspond with the summary (p. I-A) nor with TABLE 1 (p. 14). These discrepancies should be corrected.

2) The Draft EIS/R does not adequately address potential water quality impacts associated with construction activities. The extensive grading and excavation operations required for this project could accelerate erosion during the construction phase and result in increased sediment loads to the natural drainage channels and, eventually, to the Los Angeles River. In addition, oil and grease and other contaminants from these construction activities could enter the channels and impact the water quality and beneficial uses. Mitigation measures should be included in the Final EIS/R to minimize these impacts (e.g., limit construction to dry-weather periods).

3) The proposed project shall not cause or contribute to significant degradation of the aquatic environment, including riparian habitat. Due to the importance and sensitivity of riparian habitat, project alternatives that prevent impacts to riparian vegetation should be considered.

4) This Regional Board strongly encourages water reclamation programs. Consideration should be given to the use of reclaimed water as a water source for the 10-acre lake



and other proposed lakes. Prior to the construction of the 10-acre lake, the water source should be investigated and guaranteed.

5) A lake management plan for the 10-acre lake should be developed and should clearly state how implementation of a monitoring program will result in effective management of the lake. The monitoring plan, at a minimum, should address what parameters will be sampled, why the specific parameters are selected, how often the various parameters will be sampled and the justification for the sampling schedule, what will be gained by monitoring the selected parameters, and how the data will be analyzed and used. A contingency plan should also be developed should problems arise during operation of the lake. The management plan should anticipate potential problems, such as fish kills, algal blooms, mosquito breeding, etc., and identify the steps to be taken to solve these problems.

See Response No. 1

Thank you for this opportunity to comment. Should you have any questions, please contact Lauma Jurkevics at (213) 266-7607.

J. MICHAEL LYONS
Environmental Specialist IV

cc: Terri Lovelady, State Clearinghouse

MS. NADELL GAYOU
Dept. of Water Resources
1416 Ninth Street, Rm 215-4
Sacramento, CA 95814

September 20, 1990

IGR/CEQA
DEIR/EIS
Tujunga
Hansen Dam
Master Plan
Vic LA-210-7.20

GARY McSWEENEY - District 7

Project Review Comments

SCH NO. 90040126

Caltrans has reviewed the above-referenced document. Based on the information received, we have the following comments:

We find no apparent impact on the State transportation system. However, we would like to review the future DEIR Supplement that contains any further transportation and circulation analysis for the Hansen Dam recreation facility.

21

If you have any questions regarding this response, please call Milford Melton at (ATSS) 8-640-6160 or (213) 620-6160.

Original Signed by

GARY McSWEENEY
IGR/CEQA Coordinator
Transportation Planning and
Analysis Branch

cc: Col. Charles S. Thomas, U.S. Army Corps of Engineers
Attn: Raina Fulton, CESPL-PD-RQ

# State of California

GOVERNOR'S OFFICE
OFFICE OF PLANNING AND RESEARCH
1400 TENTH STREET
SACRAMENTO 95814

GEORGE DEUKMEJIAN
GOVERNOR

(916) 323-7480

DATE: October 25, 1990

TO: Colonel Charles S. Thomas, District Engineer
U. S. Army Corps of Engineers, Los Angeles District
P. O. Box 2711
Los Angeles, CA 90053-2325

FROM: Office of Planning and Research
State Clearinghouse

RE: Hansen Dam Master Plan, Los Angeles County (SCH #90040126)

As the designated California Single Point of Contact, pursuant to Executive Order 12372, the Office of Planning and Research transmits attached comments as the State Process Recommendation.

This recommendation is a consensus; no opposing comments have been received. Initiation of the "accommodate or explain" response by your agency is, therefore, in effect.

Sincerely,

Robert P. Martinez
Director

Attachment

cc: Applicant

Resources Building
1416 Ninth Street
95814
(916) 445-5656
TDD (916) 324-0804

California Conservation Corps
Department of Boating and Waterways
Department of Conservation
Department of Fish and Game
Department of Forestry
Department of Parks and Recreation
Department of Water Resources

GEORGE DEUKMEJIAN
GOVERNOR OF
CALIFORNIA

THE RESOURCES AGENCY OF CALIFORNIA
SACRAMENTO, CALIFORNIA

Air Resources Board
California Coastal Commission
California Tahoe Conservancy
California Waste Management Board
Colorado River Board
Energy Resources Conservation And Development Commission
San Francisco Bay Conservation and Development Commission
State Coastal Conservancy
State Lands Division
State Reclamation Board
State Water Resources Control Board
Regional Water Quality Control Boards

Colonel Charles S. Thomas
District Engineer
U. S. Army Corps of Engineers
Los Angeles District
P.O. Box 2711
Los Angeles, CA 90053-2325

October 25, 1990

Dear Colonel Thomas:

The State has reviewed the Hansen Dam Master Plan, Los Angeles County, submitted through the Office of Planning and Research.

We coordinated review of this document with the California Highway Patrol, State Lands Commission, Air Resources Board, the Los Angeles Regional Water Quality Control Board, and the Departments of Boating and Waterways, Fish and Game, Parks and Recreation, Transportation, and Water Resources.

22

The Department of Fish and Game has submitted the attached comments for your consideration.

Thank you for providing an opportunity to review this project.

Sincerely,

Gordon F. Snow, Ph.D
Assistant Secretary for Resources

Attachment

cc: Office of Planning and Research
1400 Tenth Street
Sacramento, CA 95814
(SCH 90040126)

State of California — The Resources Agency

# Memorandum

To : The Honorable Gordon K. Van Vleck
Secretary for Resources
1416 Ninth Street
Sacramento, CA 95814

Attention Gordon F. Snow, Ph.D.
Projects Coordinator

Date : October 22, 1990

From : Department of Fish and Game

Subject: Draft Supplemental EIS - Hansen Dam Master Plan -
Los Angeles County - SCH 90040126

The Department of Fish and Game (DFG) has received the subject document Hansen Dam Master Plan project SCH 90040126. We recommend that the lead agency appropriately condition the project, and that it fully implement the mitigation and monitoring requirements of the California Environmental Quality Act (CEQA) and the California Endangered Species Act (CESA) to offset adverse impacts to the following resources:

23

1. Any endangered or threatened species of plant or animal which occurs on the project site or is in some manner dependent on the site. In addition, if the project would result in take of any State-listed species, applicant must obtain authorization from the DFG pursuant to Fish and Game Code Section 2081.

2. Wetlands which occur on site or offsite if the project would adversely affect them. Compliance with the DFG's Wetland Policy requires that there should be no net loss of wetland habitat or values due to project development. A mitigation and monitoring plan subject to DFG approval should be required for loss of sensitive habitats, including, but not necessarily limited to, freshwater marsh, riparian woodland, oak woodland, and riparian scrub vegetation.

3. Natural water courses. The DFG is opposed to the elimination of natural watercourses or their conversion into subsurface drains. We recommend that all watercourses, whether intermittent or perennial, be retained in their natural condition and provided with appropriate buffers along both banks. Earthen channels should be interconnected with adjacent large open space areas to increase their effectiveness as wildlife corridors in urban surroundings. The DFG may require such mitigation measures through jurisdiction established under Fish and Game Code Section 1601-1603. Notification (with fee) pursuant to these Code sections and the subsequent agreement must be completed prior to initiating any streambed alteration work. Notification should be made after the project is approved by the lead agency.



In conclusion, if your analysis reveals that the above mentioned concerns have been fully addressed throughout your decision making process, we would not object to the project approval. However, we request that you provide us a copy of the final environmental document immediately upon approval and prior to filing the Notice of Determination. If you have any questions, please contact Mr. Fred Worthley, Regional Manager, Department of Fish and Game, 330 Golden Shore, Suite 50, Long Beach, CA 90802, telephone (213) 590-5113.

Pete Bontadelli
Director

COUNTY OF LOS ANGELES

DEPARTMENT OF PARKS AND RECREATION

433 South Vermont Avenue - Los Angeles, California 90020-1975 - (213) 738-2961

Rodney E. Cooper.... Director


October 25, 1990



Colonel Charles S. Thomas
District Engineer
U.S. Army Corps of Engineers
Los Angeles District
ATT: Ms. Raina Fulton, CESPL-PD-RQ
P.O. Box 2711
Los Angeles, CA 90053

DRAFT HANSEN DAM MASTER PLAN AND
ENVIRONMENTAL IMPACT STATEMENT/REPORT

The environmental section of the Los Angeles County Department of Parks and Recreation has reviewed the above named document and has no comment at this time.

The Department appreciates the opportunity to review this document. If you have any questions or need further information, please call me at (213) 738-2054.

Sincerely,

Marcia L. McDonough
Park Planning Assistant

mlm

**COUNTY OF LOS ANGELES**
**DEPARTMENT OF PUBLIC WORKS**
900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone (818) 458-3100

THOMAS A. TIDEMANSON, Director

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

IN REPLY PLEASE REFER TO FILE P-4

October 29, 1990

Col. Charles S. Thomas, District Engineer
U.S. Army Corps of Engineers
Los Angeles District
P.O. Box 2711
Los Angeles, CA 90053

Attention Raina Fulton, CESPL-PO-RQ

Dear Colonel Thomas:

RESPONSE TO DRAFT HANSEN DAM MASTER PLAN
AND ENVIRONMENTAL IMPACT STATEMENT/REPORT

25 Thank you for the opportunity to provide comments on the Draft Report for the proposed Hansen Dam Master Plan. We have reviewed the Master Plan and Environmental Impact Statement and offer the following comments:

Presently, Hansen Dam is authorized to be used for flood control and recreational purposes. In the past, however, Hansen Dam has also been operated to assist in water conservation whenever possible, but it was never officially authorized.

Los Angeles County is presently in a severe drought and is expected to have more water shortages in the future. One of the ways the local flood control agencies can assist in helping alleviate this problem is through efforts in capturing storm runoff for water conservation purposes. Downstream of Hansen Dam is one of this Department's recharge facilities that is utilized for such purposes.

To assist us in maximizing our water conservation efforts, we would request that you include water conservation activities as part of your master planning for Hansen Reservoir.

Our flood maintenance needs should also be addressed in the Master Plan. For the portion of Lopez Canyon Channel within the flooded area, a 20-foot-wide construction/maintenance area should be reserved on both sides of the Channel. A 20-foot-wide area on one side of the Channel will be adequate from the flooded area to Foothill Boulevard.





If you have any questions regarding these comments, please contact Mr. Richard Tribe of our Planning Division at (818) 458-4310.

Very truly yours,

T. A. TIDEMANSON
Director of Public Works

CARL L. BLUM
Assistant Deputy Director
Planning Division

RT:nr
3/183

# CITY OF LOS ANGELES
CALIFORNIA

TOM BRADLEY
MAYOR

DEPARTMENT OF
RECREATION AND PARKS
200 NO. MAIN ST
13TH FLOOR
LOS ANGELES, CALIF. 90012
485

JAMES E. HADAWAY
GENERAL MANAGER

29 OCT 1990

October 26, 1990

Colonel Charles S. Thomas, District Engineer
U.S. Army Corps of Engineers
Los Angeles District
P.O. Box 2711
Los Angeles, CA 90053

Attn: Raina Fulton, CESPL-PD-RQ

Dear Colonel Thomas:

Thank you for the opportunity to review the draft of the Hansen Dam Master Plan and concurrent Environmental Impact Study/Report (EIS/R). The following comments are made relative to the Plan:

26

A. Both the Master Plan and/or EIS/R should include sections which discuss the following issues:

1. A circulation section, discussing roads, entrances, access, bikeways, hiking/walking/jogging paths;

2. A section relative to permanent and planned equestrian trails and location and type of trail features, such as rest stops, railings, etc. The trails should be railed around the sports areas and lake locations to avoid water contamination and user incompatibility. This section could be included in the circulation element listed above.

3. A security/safety section discussing lighting, fencing, the homeless, patrols, lake design, etc. This was also mentioned at the community meeting as a concern for park users. This issue relates to patron safety on the trails, while using park facilities and the proposed lake design, as discussed below.

4. A section discussing water supply/lake design for the 10-acre lake. With the approximately $845,000 currently available in funding, Department staff is concerned with the future viability of the 10-acre lake. The costs





associated with installation of pipelines, access roads, parking areas, safety features, lighting, fencing, lifeguard stations, patrol facilities, the lake eutrophication mitigation program, filtration systems outflow devices, etc. could increase the lake costs significantly. However, these issues must be adequately addressed to provide for patron security, community health and safety, on-going maintenance, operations and supervision for which we will be responsible upon completion of lake construction. Further, in the interest of community aesthetics and facility use, we want to see lake landscaping, perimeter edging, irrigation systems, drinking fountains and restrooms provided as additional features with the 10-acre lake. Although we understand that many of these issues will hopefully be resolved in supplemental documents, these factors should be mentioned in the Plan or EIS/R relative to the 10-acre lake;

5. A section entitled "park improvement", including replanting/revegetation areas, park boundary definition, park area linkages, management of ecologically-sensitive areas, lake attractions and picnic areas, and signage;

6. A section relative to the sand and gravel operation. It is mentioned in the EIS/R that the proposed 70-acre lake would replace most of the sand and gravel operations. However, it would be helpful to clarify this issue in its own section.

B. The following areas, which are included in Alternative "A" of the Master Plan, should be reclassified:

1. A small triangle or square of high-intensity area on the east side of Osborne, adjoining Foothill Boulevard to accommodate a clubhouse for a possible "Pitch and Putt"/Executive Golf Course in that general area. This use may never come to reality, but it would preclude a plan amendment if the course was constructed and heavily used by the community. The public would want some type of building for amenities;

2. Reclassification of some of the open space area between the 15 acre footprint and the 70 acre footprint on Alternative A as low intensity use. We understand that some of this area must be classified as open space due to flood lines and riparian areas, however, perhaps some of this area could be indicated as low intensity.

Reclassification will provide more of an opportunity to have "shared" facilities between the lakes and the sports center, including common parking and/or restrooms. Activities/development can be scheduled so that "Peak Use" is at different times of the day/year, thereby increasing use of our limited resources.

C. We recommend clarifications of the following three items:

1. Clarification of the San Fernando Valley Rangers as a temporary use on Plate 5 - Site Analysis. Deletion of the not of "(Former Ball Fields)".

2. Clarification that children's play areas/tot lots and golf courses are permitted in low-intensity areas.

3. The San Fernando Valley Fair as a high-intensity option. Several members of the community expressed support for this project:

D. The issue of tree removal is discussed at the end of the EIR/S. It may prove difficult to retain all these trees for the lake construction. Perhaps a more practical approach would be to make every attempt to save and, where impossible, to replace on a 1:1 or 2:1 ratio. This could also assist with providing additional trees at the equestrian trail rest stops.

While we understand that this document was developed as a general plan for the Hansen area and we agree with this flexibility, some discussion of the items listed above could be helpful as future specific development is planned for the area.

Very truly yours,

JAMES E. HADAWAY
General Manager

FRANK S. CATANIA
Director
Planning and & Development

FSC:AAC:rib
cthomas.wp





cc: Jackie Tatum
Councilman Bernardi (Attn: David Mays)
Councilman Wachs (Attn: Arline de Sanctis)
Congressman Berman (Attn: Fausto Capobianco)
Joan Thomas
Assemblyman Richard Katz, 39th District
Assemblyman Michael Roos, 46th District

CITY OF LOS ANGELES
CALIFORNIA

BOARD OF PUBLIC WORKS MEMBERS
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JAMES A. GIBSON SECRETARY

TOM BRADLEY MAYOR

DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING
ROBERT S. HORII CITY ENGINEER
ROOM 800, CITY HALL
LOS ANGELES, CA 90012

November 13, 1990

Colonel Charles S. Thomas
District Engineer
U.S. Army Corps of Engineers
Los Angeles District
Attn: Ms. Raina Fulton, CESPL-PD-RQ
P.O. Box 2711
Los Angeles, CA 90053

Dear Colonel Thomas:

DRAFT HANSEN DAM MASTER PLAN AND ENVIRONMENTAL IMPACT STATEMENT

The Bureau of Engineering has reviewed the above-referenced document and has the following comments:

28

General Comments

The Draft Master Plan and Draft EIR/EIS both lack specific analysis of traffic generation, parking needs, circulation, and access. Also lacking is incorporation of cumulative impact analysis of concurrent developments in the area, particularly and significantly traffic generation and overflow parking demands of major tournaments at the proposed L.A. International Golf Club a couple of miles upstream in the Big Tujunga Wash. The environmental document for that proposed project contains some discussion of utilizing Corps property for overflow parking. There are several other land use proposals over abutting property that should be included in the consideration of the Draft Master Plan. It seems inappropriate to defer traffic studies until during the design process for development, as suggested in the Draft EIR/EIS.

Also missing is information on the ownership and use of adjoining property. There are several privately owned properties that are within the boundaries of the street system surrounding the Corps property that might logically be considered for acquisition by the Corps or the City. The City recently acquired property at the southeasterly corner of Foothill Boulevard and Osborne Street (westerly intersection). Vacant private property near that corner and near the easterly end of the dam along Wentworth Street could be considered for acquisition. Even if not proposed by the Corps, the expansion of the boundaries as discussed above should be considered as an alternative to achieving a more congruous recreational area.



Air quality concerns are similarly (to traffic) not dealt with in these documents, again being deferred to the design phase and to be presented in supplemental environmental documentation. Traffic and air quality are inexorably linked with increases in traffic volumes, resulting in increased air pollution. Alternative access routes to reduce the distance travelled to and from the facility should be evaluated as possible means of mitigation of air quality impacts.

As most existing and proposed recreational areas have access from the north, residents and others to the south must drive around the area to reach recreational facilities. The southerly extension of Christy Avenue across the Corps property to Wentworth Street, for example, would save 2.5 miles of travelled distance for recreational users in Shadow Hills. This would in turn result in reduced auto emissions and fuel consumption while at the same time lessening the likely increased impact of recreational traffic on Osborne Street.

The Christy Avenue extension may be undesirable, however, due to its impact on the small residential area south of the 210 Freeway and the relatively steep approach to Foothill Boulevard from the south. Another possible crossing might be at Wheatland Avenue where an offramp and commercial properties are located. Either crossing could be at the grade of the flowline of the wash with relatively small culverts for low intensity runoff. During infrequent major storms, the roadway would be flooded and would later be cleared of rocks and debris. Wildlife corridors and migration would be impacted at either extension location but perhaps not curtailed because of the at-grade nature of the roadbed.

The proposed plan shows a road entering from Wentworth Street to the south, and this should also be discussed as an alternative access route. Any crossing of the wash would have environmental consequences which should be evaluated in the Corps documents. The Wheatland Avenue extension was previously proposed by this office for a now defunct industrial development proposal in that area. Corps property would probably not be involved in a Wheatland Crossing.

Specific Comments

A realignment of Gladstone Avenue at Foothill Boulevard is proposed in conjunction with the development of a multiple-family residential project near the northwesterly corner of that intersection. The realignment will be over a portion of Corps property and will result in a safer, right-angled intersection. The development is proceeding under City Planning Case No. 16119. Any Federal approvals necessary for the granting of the necessary easement for the realignment should be mentioned in the Master Plan and EIS/EIR.

Other Comments

1. Table of contents:

   "Coordination With Other Agencies" should read "Coordination" to be consistent with text.

   "Resource and Recreation Program Analyses" should read "Recreation Program and Resource Analyses" to be consistent with text.

2. 2.02 Location (page 2-1): State Highway 6 no longer exists.

3. Pages 4-9: Table 4 shows population of communities, not "cities".

4. Pages 5-6: Table 6 "Structures of any ----- are not...": the word kind is missing.

5. 5.13 Water Resources (page 5-3): The statement, "Non-point source pollution to these washes should be controlled through best management practices." should be added to this section.

6. 2.05 Basin Hydrology ( page 2-1) "Pacific Mountains" should be "Pacifico Mountain"

7. 4.21 states that daily evaporation rates range from approximately 1/4 inch in winter to about 1/2 inch in summer, exceeding one inch during Santa Anas. This seems questionably high in view of the fact that hydrologic data for Los Angeles County (Los Angeles County Dept. of Public Works) from 1980-1987 show that the highest evaporation rate, recorded at Palmdale Lake, is still lower than these figures, which the draft EIS/EIR deems "not a major consideration".

8. Throughout: Lake View Terrace is misspelled as "Lakeview Terrace".

9. Plates: Except Plate 1, have Christy Avenue spelled "Chisty Avenue".

10. EIS/EIR- 23: Discussions of Lopez Dam and Pacoima Dam are irrelevant as they are not tributary to Hansen Dam as implied.

11. EIS/EIR-42: The community of Pacoima is to the west, not the east of the Hansen Dam basin.



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Thank you for this opportunity to comment. If you have any questions, please call Linda Moore at 213-485-6556.

Sincerely,

ROBERT S. HORII
City Engineer

By: Andres Santamaria
Andres Santamaria
Division Engineer
Project Management Division

RSH/AS/lm
hnsndam

SE ED ROWE
GENERAL MANAGER

# CITY OF LOS ANGELES
CALIFORNIA

TOM BRADLEY
MAYOR

DEPARTMENT OF
TRANSPORTATION
ROOM 1200 CITY HALL
LOS ANGELES CA 90012
(213) 485-2383
FAX (213) 237-0660

September 18, 1990

Colonel Charles S. Thomas
District Engineer
U.S. Army Corps of Engineers
Los Angeles District
ATTN: Ms. Raina Fulton, CESPL-PD-RQ
P.O. Box 2711
Los Angeles, California 90053

**HANSEN DAM DRAFT MASTER PLAN (DMP) AND DRAFT ENVIRONMENTAL IMPACT STATEMENT/REPORT (DEIS/R)**

Neither the DMP nor the DEIS/R adequately describes the potential traffic impacts of the proposed plan alternatives. The northern San Fernando Valley is the fastest growing region in the City of Los Angeles. The proposed project is also expected to attract visitors from the Santa Clarita Valley (the fastest growing region in Los Angeles County). We believe that the DMP and DEIS/R population growth projection of approximately 1% a year between 1990 and 2000 (based on past population growth analysis and proposed population growth projection) is under-estimated. The Transportation Studies Division of the City of Los Angeles Department of Transportation (LADOT) has shown traffic volume growth in the communities adjacent to Hansen Dam to be approximately 4.6% a year (1986 - 1988).

Section 3.59 of DEIS/R is based on out-dated traffic volumes and studies. Level of service analysis (LOS) should be conducted on an intersectional basis rather than on a general route analysis. In addition, the analysis should include impacts of traffic generated by other new developments in the area.

Section 4.28 of the DEIS/R indicates that further traffic analysis is required *for the lake* and will be conducted during the *design* process for the lake and presented in supplemental environmental documentation. We recommend that the traffic analysis be conducted during the planning stages for the entire project to determine the costs associated with improvements required to mitigate traffic impacts of the project. As a minimum, a traffic study should include detailed analyses of circulation, parking, access, public transit alternatives, bikeways, and a discussion of mitigation measures.

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LADOT is supportive in concept of proposed Hansen Dam recreation alternatives. However, the transportation analysis for the proposed project is incomplete and unsatisfactory. The U.S. Army Corps of Engineers should contact Ali Mahdavi, of my staff, at (213) 237-0645 to discuss the details necessary for a comprehensive transportation and traffic section of the DMP and DEIS/R documents.

T.K. Prime
Senior Transportation Engineer
Transportation Studies Division

AAM:dar
cc: A. Rifkin
A. Albaisa

a:\Hansen

United States Hang Gliding Assn., Inc.
P.O. Box 8300, Colorado Springs, Colorado 80933 (719) 632-8300 (719) 632-6417 FAX

October 25, 1990

Colonel Charles S. Thomas, District Engineer
U.S. Army Corps of Engineers
Los Angeles District
ATTN: Reina Fulton, CESPL-PD-RQ
PO Box 2711
Los Angeles, CA 90053

Dear Colonel Thomas:

The United States Hang Gliding Association would like to commend you and your staff on the cooperative effort to provide a future recreation area and environmental management plan at the Hansen Dam Recreation Area.

Corporate ownership of land suitable for recreation as well as commercial and residential development have created a shortage of viable recreational opportunities for southern California's vast population.

The problem of diminishing open space has also placed hardships on southern California's many hang gliding enthusiasts and their families. Since private landowners are under no obligation to open their lands to recreation, hang gliding clubs and other user groups must look to the governments to provide an avenue to continued access to their recreational pastimes.

It is in this regard that I respectfully request that the Hansen Dam Draft Master Plan be revised to include the planning of a small hang glider practice area. This area could be be designed to accommodate users wishing to develop or retain the necessary launch and landing skills so vital to their continued flight safety. In addition, it would help them maintain their contractual and moral obligations with the U.S. Forest Service, the National Park Service, the L.A. County Fire Dept. Air Operations Division, the Federal Aviation Administration and other airspace user groups.

We look forward to seeing a valuable addition in recreation management designated in the Hansen Dam Area and also working with you to achieve this common goal.

Sincerely,

Jerry Bruning
Executive Director



SYLMAR
HANG GLIDING ASSOCIATION
P.O. BOX 922303, SYLMAR, CA 91392-2303

October 25, 1990

Colonel Charles S. Thomas
District Engineer
U.S. Army Corps of Engineers
Los Angeles District
PO Box 2711
Los Angeles, CA 90053

Dear Colonel Thomas,

The Sylmar Hang Gliding Association has been managing safe, responsible hang gliding activities in the San Gabriel Mountains since 1983. Since that time we have developed important relationships in the communities of Sylmar, Pacoima, Van Nuys, Tujunga, and elsewhere.

We work closely with the local city Councilpersons, homeowner groups, civil service groups, and charities in an effort to provide significant service to the community. In addition, we have accepted contractual management responsibilities with governments and organizations in an effort to educate, regulate, and control the sport of hang gliding. These organizations include the United States Hang Gliding Assoc., the FAA, the U.S. Forest Service, the Yabonia Park Service, Whiteman and Burbank Air Traffic Control Facilities, and the L.A. County Fire Dept. Air Operations Division.

Our efforts and financial commitments have resulted in significant increases in safety and responsibility among the thousands of southern California hang gliding enthusiasts and their families. Continuing to maintain a high level of safety as well as to preserve and protect our current recreational opportunities is among our highest goals. To do this we must maintain adequate facilities for education and skill level enhancement. We are presently lacking in the latter.

We would like to see included in the Hansen Dam Master Plan, the designation of a small hang gliding training area, designed specifically to accommodate the training of launch and landing techniques, without the need for enthusiasts to fly more than 6 feet in the air. This would greatly aid us in our efforts to continue to appropriately manage our safety responsibilities.

USHGA Director, Joe Greblo, would be a valuable contributor to your efforts to investigate how and where this area could be developed. I encourage you to communicate with him on this subject. He may be reached at Windsports Intl Inc. (818) 988-0111.

Please contact me if I can be of any assistance, and thank you for the opportunity to be a part of the Hansen Dam Master Plan.

Sincerely,

Joe Fresquez
President

# LAKE VIEW TERRACE HOME OWNERS ASSOCIATION

L.V.T. HOME OWNERS ASSOCIATION, INC.
POST OFFICE BOX 453 • SUNLAND, CALIFORNIA 91041-0453

October 29, 1990

Colonel Charles S. Thomas, District Engineer
U.S. Army Corps of Engineers / Los Angeles District
Attn: Raina Fulton, CESPL-RD-RQ
Post Office Box 2711
Los Angeles, California 90053

Via FAX (213) 894-0521 from (213) 913-1861
Confirming Copy sent via U.S. Mail

Dear Col. Thomas and Ms. Fulton:

The Lake View Terrace Home Owners Association thanks you for the opportunity to comment on the draft Master Plan and Environmental Impact Statement for lake development at Hansen Dam in our community. On the following pages you will find comments on the draft Master Plan and EIS, in particular dealing with the preferred plan, Alternative A, which our association endorses as its choice for development.

As you know, this long-awaited document will enable the City of Los Angeles' Department of Recreation and Parks, as well as the Army Corps, to begin work on restoration of the recreational lake at Hansen Dam. Our community has been very patient over the past 15 or so years while various and sundry attempts to implement a master plan have not come into fruition. However, we are encouraged and confident that, with your leadership and the leadership shown by Congressman Howard Berman in spearheading the restoration effort, a recreation lake at Hansen Dam will be forthcoming in the very near future.

Please feel free to call on our association, or on me in particular, if we can be of future assistance to the Army Corps on this project.

Sincerely,
The Lake View Terrace Home Owners Association

Lewis S. Snow, President
(818) 897-9276

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CONMENTS ON HANSEN DAM DRAFT MASTER PLAN
ENVIRONMENTAL IMPACT STATEMENT/REPORT

A. In final draft, care should be taken to fix the incorrect spelling of our community's name. It is three words, Lake View Terrace, as legally defined in a Los Angeles City Ordinance last year.

B. Proposition B, a County of Los Angeles bond issue on the November 6, 1990 ballot, will provide an additional $15 million in funding for lake development if passed by the voters. If the bond issue is successful, it is our desire that the initial lake construction be shifted to the site shown for the 15-acre "upper" swimming lake, nearer to the intersection of Foothill Boulevard and Osborne Street. The additional available funding would allow construction of the swimming lake in its designed place, not in a temporary location as denoted in Alternative A. The draft Master Plan and EIS are based on the temporary 10 acre lake. Will we have to start all over again if the initial development is shifted to the 15 acre "upper" lake?

C. We question the validity of the conclusion reached in Item 4.18 of the Master Plan and Item 3.10 of the Environmental Impact Statement. "The main water quality problem with Big Tujunga Wash is the high turbidity resulting from its high sediment load and substantial bacteria accumulations due to upstream runoff from horse stables."

This statement fails to take into account the unofficial park which has been created by Latinos in our area, just outside federal lands near the intersection of Wheatland Avenue and Wentworth Street. This jungle-like riparian area, which has a flowing creek year round, is used by locals for swimming, bathing, defecating, etc. Equestrians and hikers come across literally dozens upon dozens of used diapers, etc., daily. It is more likely that the coliform and bacteria levels are due to human runoff from this creek into the old lake area, not upstream horse stables. (Indeed, if stables were to be a problem, it is more likely that Little Tujunga Wash would be the victim, not Big Tujunga Wash.)

D. The validity of the figures found in Table 5, page 5-5, of the Master Plan, is questionable. We feel that the demand for horseback riding is woefully understated, while the demand for bicycling is vastly overstated.

E. To the list of acceptable "high intensity" uses found in Item 6.12 of the Master Plan, the word "fairgrounds" should be added. The San Fernando Valley Fair, which is organized by the 51st Agricultural District, a state agency, is interested in pursuing the possibility of a permanent home at Hansen Dam. While our support or opposition to such a proposal will be dependent upon the plan submitted, the intent is to ensure there is nothing in the Master Plan which excludes the San Fernando Valley Fair from submitting a proposal.

F. Please note that Master Plan Plate #1 uses a map of the Los Angeles vicinity that is, at a conservative estimate, 50 years out of date.

G. While Master Plan Plate #4 shows existing main equestrian trails, we would also like a new plate showing where main equestrian trails will be when the preferred Alternative A is developed.

H. In the list of organizations sent copies of the draft Master Plan and EIS, the names of our community's associations were not listed. Please include in future notifications and mailings community groups who are members of Congressman Howard Berman's Hansen Dam Trust Fund Advisory Board.





CITIZENS FOR K - DISTRICTING, INC.

EST. 1975

13443 Bradley Ave.
Sylmar, CA 91342-1208
(818) 362-3513

3 October 1990

Colonel Charles S. Thomas
District Engineer
U.S. Army Corps of Engineers
Los Angeles District
Attn: Ms. Raina Fulton, CESPL-PD-RQ
P.O. Box 2711
Los Angeles, CA 90053

RE: HANSEN DAM MASTER PLAN DRAFT AND ENVIRONMENTAL IMPACT STATEMENT/ REPORT (EIS/R)
DATED: SEPTEMBER 1990

Dear Ms Fulton:

In reviewing the referent draft report, we would like to say that this is a more indepth report than we would have expected to read. No stone or rock was overlooked. The Hansen Dam area has been overlooked for too long,and this report should help to rehabilitate the dam area.

From an equestrian point of view, we would like to see if it is possible to establish a separate approximate five acre, level, tree-shaded, equine over-night campsite facility for at least 15 campers. This would be set up for use on a permit only basis, typical of other areas such as the Bandido campground. In this way, people could trailer in their horses, stay the weekend and utilize the trail system. The site would include separate parking spaces for the campers and pipe corrals for the horses. Facilities, could be minimal, with running water and a lavatory, and possibly showers, all of which could be locked when not in use.

While we received a copy of this EIS/R from another organization, we would like to be put on the mailing list for any future communications and revisions.

Thank you.

Respectfully,

CITIZENS FOR K-DISTRICTING, INC.

Karen Duvall

Karen Duvall, Secretary

cc: Councilman Wachs

OCT. 29, 1990
10171 FOOTHILL BLVD.
LAKEVIEW TERRACE
CALIF 91342

TO: COL. CHARLES THOMAS
U.S. ARMY CORP OF ENGINEERS
LOS ANGELES DISTRICT OFFICE
P.O. BOX 2711
LOS ANGELES, CALIF. 90053-2325

ATTN: RAINA FULTON
ENVIRONMENTAL PROTECTION SPECIALIST

RE: HANSEN DAM MASTER PLAN DRAFT

DEAR COLONEL

THANK YOU FOR MAILING ME A COPY OF THE MASTER PLAN DRAFT; HOPEFULLY MORE COPIES WILL BE AVAILABLE AT ANY FUTURE MEETINGS. WHILE LESS THAN 2 WEEKS IS SCARCELY ADEQUATE TIME TO REVIEW A DOCUMENT THAT SEVERAL PEOPLE HAVE SPENT SEVERAL MONTHS PREPARING, I WISH TO MAKE SEVERAL COMMENTS

I FEEL THAT BOTH ALTERNATIVE A & B BOTH HAVE STRONG AND WEAK POINTS, AS FOLLOWS:

1) THE 2 LAKE & STREAM CONCEPT IN "A" IS VERY NICE, MAXIMIZING THE SHORELINE CREATED, AND SEPARATING SWIMMING FROM BOATING AND FISHING. THE CONNECTING STREAM IS AN EXCELLENT IDEA. CURRENTLY THE STREAM IN THE BIG TUJUNGA WASH NEAR WHEATLAND ATTRACTS CONSIDERABLE DAY USE DURING THE SUMMER, CAUSING PROBLEMS WITH TRASH, OPEN FIRES, AND HUMAN WASTE DISPOSAL. IF A SIMILAR AREA WERE AVAILABLE WITH RESTROOMS, TRASH CANS, PICNIC TABLES AND BAR-B-QUES, MOST OF THESE PEOPLE WOULD USE THAT AREA.
2) I WOULD SUGGEST HAVING OPEN SPACE ALONG THE SOUTH SHORE OF THE LAKE, INSTEAD OF THE WEST SHORE. THE STREAM MAKES A GOOD DIVIDING LINE BETWEEN THE LOW INTENSITY USE AND THE OPEN SPACE, AND THE AREA BETWEEN THE TWO LAKES WILL BE VERY POPULAR - IT SHOULD HAVE THE FACILITIES OF THE LOW INTENSITY AREAS. RUNNING A ROAD TO THE SOUTH SHORE OF THE LAKE WILL BRING MUCH MORE DAYTIME FOOT TRAFFIC INTO THE OPEN AREA YOU ARE TRYING TO PRESERVE ALONG THE NORTH FACE OF THE DAM. AT NIGHT, THE ROAD AND PARKING AREAS ASSOCIATED WITH LOW INTENSITY USE



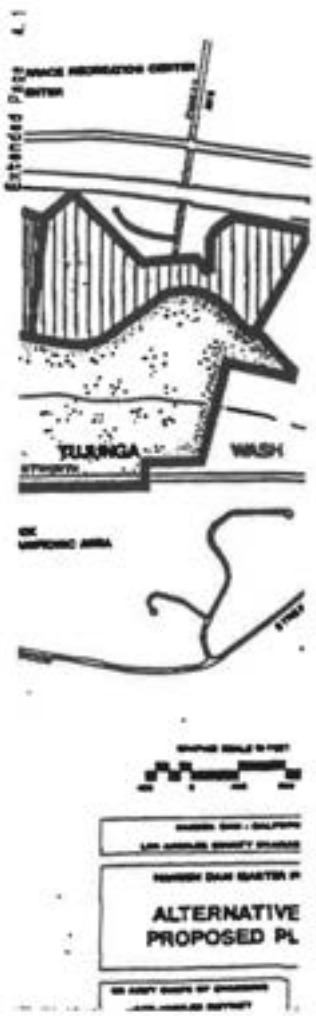
WILL BE DIFFICULT FOR THE POLICE TO OBSERVE OR PATROL, THUS PROVIDING A SECURITY HAZARD
3) PLEASE DO NOT PROVIDE VEHICULAR ACCESS TO THE OVERLOOK ON THE SOUTH SIDE OF THE BASIN. KEEP THE PEOPLE WHO HAVE TO HAVE CARS ON THE NORTH SIDE, AND KEEP SOMETHING NICE FOR THE PEOPLE WHO ARE TRYING TO GET AWAY FROM CARS AND CROWDS. IF THERE IS NO VEHICULAR ACCESS, IT WILL PROVIDE A DESTINATION FOR HIKERS, WITH A REWARDING VIEW AND AS MUCH SOLITUDE AS ONE CAN EXPECT IN A CITY OF 10 MILLION. GRIFFITH PARK HAS ITS PEAKS REACHED ONLY BY TRAIL; LET THIS BE OUR EQUIVILENT. CERTAINLY WENTWORTH IS NEARBY, BUT IT IS POSTED AT 50 M.P.H., AND TRAFFIC FREQUENTLY MOVES FASTER; THERE IS NO PLACE TO PULL OFF THE ROAD; BOTH THESE FACTOR CREATE A PSYCHOLOGICAL DISTANCE, IT WOULD ALSO BE SIMILAR TO THE SOUTH SIDE OF THE LAKE IN TERMS OF A SECURITY HAZARD; DIFFICULT TO SEE AND DIFFICULT TO PATROL.
4) I AM IN FAVOR OF INCREASING THE PERCENTAGE OF OPEN SPACE OVERALL BECAUSE THE CRIMINAL ELEMENT SEEMS AS RELUCTANT AS THE GENERAL POPULACE TO GO FAR FROM THEIR CARS. NEITHER ORCAS PARK NOR HANSEN DAM PARK SEEM LIKE GOOD PLACES TO LINGER LONG AFTER DARK, AND ONE WONDERS JUST HOW LARGE AN AREA THE POLICE CAN ADEQUATELY PATROL. ONCE NATURAL OPEN SPACE IS DEVELOPED IT IS ALMOST ALWAYS LOST FOREVER.

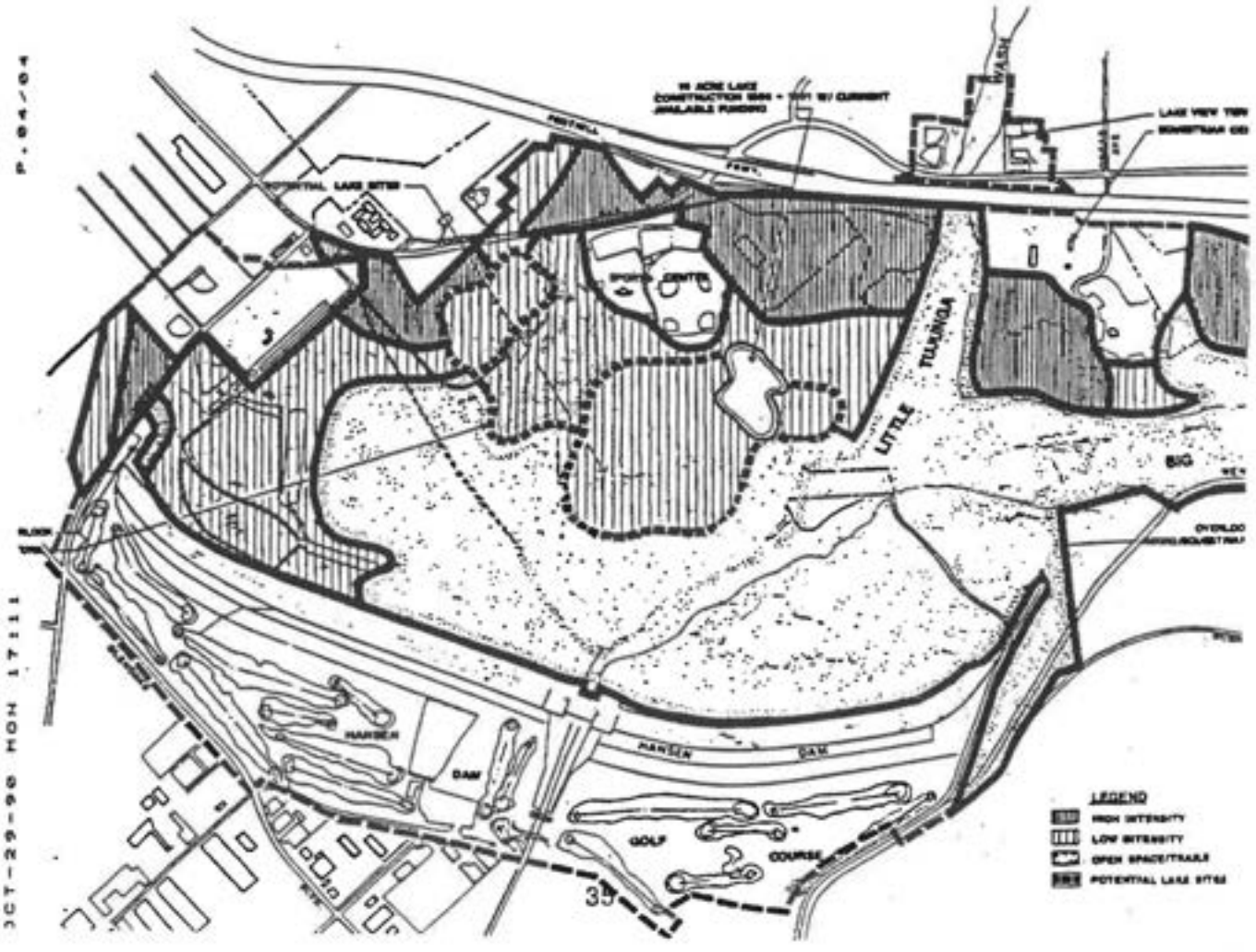
THANK YOU FOR TIME. I THINK YOU ARE VERY CLOSE TO HAVING AN EXCELLENT PLAN FOR HANSEN DAM

SINCERELY YOUR

Robert Wood

ROBERT WOOD


TUJUNGA
WASH
ALTERNATIVE
PROPOSED PL


WASH
TUJUNGA
LITTLE
BIG
HANSEN DAM
DAM
GOLF
COURSE
LEGEND
HIGH INTENSITY
LOW INTENSITY
OPEN SPACE/TRAILS
POTENTIAL LAKE SITES

Lisolotte S. CROWELL
11555 Jeff Ave.
Lake View Terrace
9/15/90

Col. Charles S. Thomas
Distr. Engr. U.S. Army Corps of Engrs.
Los Angeles Distr.

Re. Hansen Dam Master Plan Draft

Dear Colonel Thomas,

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After perusing the Draft I find myself favoring Alternative 2. However, I realize, that the lack of a public swimming pool in the Lake View Terrace / Sunland / Tujunga area makes Alternative 3 ideal, balancing recreational needs with protection of wildlife habitat.
Though the Draft indicates that the list of birds is not exhaustive, I feel the Snowy Egret should be listed, as it is prominent in the riperian area southwest of Orcas Park.
The Draft makes repeated references to the destructive effects of use by humans (litter, trampling of shrub, noise etc.).

Thus, it is imperative that areas of recreational use are fenced in a manner that does not permit vehicles of any sort to stray off designated parking areas. Boulders placed in strategic places make excellent deterrents. Further, provisions have to be made that the Dept. of Parks and Recreation will rigidly enforce ordinance relating to Park use. For example the Dept. of Parks and Recreation is very deficient in this aspect with regard to Orcas Park, which may well relate to the overall abusive treatment of the Tujunga wash / Hansen Dam area.
Since sand and gravel operation have severely impacted the terrain with regard to wildlife habitat the Plan must go beyond setting aside open space. Not only should it promote establishing cover, but also wetlands with vegetation suitable for foraging. To aid migratory fowl that usually circles over this area in fall I suggest seeding of an area adjacent to the natural lake area

(near the toe of the dam gate) with wild oats and other grain bearing crops. A simple irrigation system could pump water from these lakes in the summer months until the grains mature. I do not propose a large scale agricultural activity - merely giving nature a hand to become again self sustaining. Your Draft shows great promise to make the Tujunga Wash / Hansen Dam area into a unique resource for the greater Los Angeles area and I am looking forward to its imple - mentation.

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-- Respectfully,

Lisellotte Crosell

10379 Jimenez Street
Lake View Terrace, CA 91342
October 1a, 1990

Colonel Charles S. Thomas
District Engineer
U.S. Army Corps of Engineers
Los Angeles District
ATTN: Ms. Raina Fulton, CESPL-PD-RQ
P.O. Box 2711
Los Angeles, CA 90053-2325

Dear Ms. Fulton:

In deciding on a course of action for the Hansen Dam Master Plan, I hope you will consider the remarks I offer below:

In years past, the lake formed by the flood waters behind Hansen Dam were used by many people for swimming, sail boating and motor boating which was very nosey), fishing, and general beauty to enjoy. The lake was generally large and could easily absorb all who came. That lake was well used by locals as well as others more distant from our area. The lake was the basis of our name, Lake View Terrace. The lake is included in the masthead drawing of our Lake View Terrace Improvement Association news letter, and has been for 25 years.

Several years ago when it was being decided about the gravel mining in the wash, I had the impression that much more effort would have been taken to clean out the old lake so it could be used again. It did not happen that way. No new lake came of the gravel mining.

Hiking, horse back riding, and general enjoyment of nature in the Wash's desert environment are all important, but so is a lake. In your PROJECTED DEMAND FOR THE RECREATION MARKET AREA table, swimming (and I presume other water activities) is second in popularity.

A ten and/or 15 acre lake is not sufficient.

I recommend a "100 year flood lake." It is not man-made, it provides muddy ground for digging worms for the fishermen/women, it provides "little, secret fishing holes" for fishermen/women, it provides room for sailing, swimming, sunning, and playing in the sand, and it will provide better environment for wildlife.

With the increase in the number of people in the general area, the new lake will have people using it all day long, all year long. A small, token lake(s) will not satisfy the need that is there.

I think there is a <u>present</u> need for a "100 year flood lake."

Sincerely,

Meredith Wills

(Mr.) Meredith Wills

cc:Lake View Terrace Improvement Association
P.O. Box 224
Sunland, CA 91041

Dear Sir;

Oct. 9th. 1990

It is a pleasure to give imput to the Hansen Dam project.

Over the past twenty years, we, the members of the Lockheed Sailing club have used the lake for races, day sailing events and social gatherings.

I speak for the seventy members, plus their families and friends.

Give us another Santa Fe Dam or Bonnelli lake.

NO wading ponds

NO small fishing ponds

NO reflecting pools

We need one large area...with swimming beaches, fishing areas, small boat launch ramps, picnic area, barBques, restrooms, showers and ample parking.

You have done it before, you have the formula, lets do it again.

sincerely,

louis mosconi

Louis Mosconi
9113 Beachy Ave.
Arleta, Ca. 91331
818 899-3344

WINDSPORTS

October 25, 1990

Colonel Charles S. Thomas
District Engineer
U.S. Army Corps of Engineers
Los Angeles District
PO Box 2711
Los Angeles, CA 90053

Dear Colonel Thomas:

It was a pleasure meeting you and hearing you speak at the recent Public Hearing.

I have reviewed the Hansen Dam Master Plan and would like to refer to earlier community workgroup participants suggestions that the plan designate a small hang glider launch and landing technique practice area. Such an area would encompass less land than a football field. It could be designated in the low density area, and be adequately designed to provide a high level of safety with extremely low development cost.

I would appreciate the opportunity to meet with representatives of the Army Corp of Engineers, the Recreation and Parks Department, and representatives of councilmen Bernardi and Wachs, to discuss this possibility. I may be reached at (818) 988-0111.

Thank you for your role in creating what I'm sure will be one of the finest recreation facilities in the southland.

Sincerely,

Joe Greglo
Vice President

6145 VICTORY BLVD. VAN NUYS, CA 91406 (818) 988-0111 FAX (818) 988-1862

Claire Cantor
10900 Lemont Road
Sun Valley, California 91352

Oct. 17, 1990

Colonel Charles S. Thomas, District Engineer
US Army Corps of Engineers
Los Angeles District
Attn: Lewis Sutton, CESPL-PD-RQ
PO Box 2711
Los Angeles, Ca 90053

Dear Colonel Thomas:

Thank you for your presentation Oct. 16, 1990 of the Hansen Dam Master Plan. It was very informative & very well presented.

Other than the two comments I made at the meeting that really did not have anything to do with the plan itself but with the implementation by Dept of Recreation & Parks, I would like to suggest the following:

I concur with the suggestion by Lewis Snow that the swimming lake be moved from a 10 acre site below the soccer fields where it is currently indicated on all 2 plans to that of a 15 (or 10) acre swimming lake while a supplemented 15 acre lake is indicated on Plan A. A lake closer to Foothill Blvd would be more feasible because of its easy access and because it would be on high ground in a more intensively developed area. Also, the boat lake could be placed on a lower level. If the swimming lake is placed in the higher intensity use area, it would help keep the lower intensity & open area more open & less populated.

I do Hope you will seriously consider the above suggestion & that of Lewis Snow & incorporate it into the final master plan.

Sincerely,
Claire Cantor

October 25, 1991

Carolyn Mosby
9329 E Hermosillo Dr.
Tujunga, CA 91042

Colonel Charles Thomas
District Engineer
U.S. Army Corps of Engineers
Los Angeles District
P.O. Box 2711
Los Angeles, CA 90053

Dear Colonel Thomas:

Respectfully,

Carolyn Mosby

Carolyn Mosby