

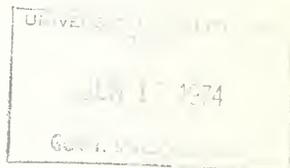
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STATE OF CALIFORNIA  
The Resources Agency

Department of Water Resources

BULLETIN No. 117-16



HESPERIA  
AQUATIC RECREATION AREA

MAR 3 1977

Recreation Development Plan

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APRIL 1974

NORMAN B. LIVERMORE, JR.  
*Secretary for Resources*  
The Resources Agency

RONALD REAGAN  
*Governor*  
State of California

JOHN R. TEERINK  
*Director*  
Department of Water Resources



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Recreation Development Plan

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State of California  
DEPARTMENT OF WATER RESOURCES  
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Sacramento, California 95802

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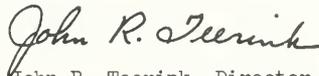


## FOREWORD

The Department of Water Resources has been given overall responsibility, under provisions of the Davis-Dolwig Act (Water Code Sections 11900-11925), for acquiring land and planning for recreation and fish and wildlife habitat enhancement features in connection with the State Water Project. To assist in planning these features, the Department has obtained the services of the California Departments of Parks and Recreation and Fish and Game.

This report is based on "Hesperia Aquatic Recreation Area, Recreation Development Plan", dated January 2, 1973, prepared by the Department of Parks and Recreation, and on "California Aqueduct, Hesperia Aquatic Recreation Area - Fish and Wildlife Development Plan", dated February 1, 1973, prepared by the Department of Fish and Game.

The capital improvements described in this report are to be developed by the Departments of Parks and Recreation, Fish and Game, and Water Resources and by the Wildlife Conservation Board. The San Bernardino County Regional Parks Department will operate and maintain the recreation features, subject to approval by the County Board of Supervisors. The Department of Fish and Game will manage the fishery.



John R. Teerink, Director  
Department of Water Resources  
The Resources Agency  
State of California  
April 2, 1974

# CONTENTS

	Page
FOREWORD .....	3
ABSTRACT .....	5
RECOMMENDATION .....	5
INTRODUCTION .....	7
RECREATION DEMAND .....	7
THE RECREATION PLAN .....	7
PROJECTION OF RECREATION USE .....	9
LAND ACQUISITION AND SCHEDULING .....	9
OPERATION PLAN .....	10
BENEFITS AND COSTS .....	10

State of California  
The Resources Agency  
DEPARTMENT OF WATER RESOURCES

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#### DEPARTMENT OF PARKS AND RECREATION CONTRACT SERVICES SECTION

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Kenneth H. Pierce ..... Park and Recreation Specialist

#### COORDINATION

Coordination was maintained with the agencies shown below throughout the preparation of the plan:

#### State of California

Department of Parks and Recreation  
Department of Fish and Game  
Department of Transportation - District 8  
Department of Health  
Regional Water Quality Control Board,  
Lahontan Region  
Wildlife Conservation Board

#### San Bernardino County

Regional Parks Department  
Planning Department  
Health Department  
Road Department  
Flood Control District  
Planning Commission  
Board of Supervisors

#### Mohave Water Agency

#### DEPARTMENT OF FISH AND GAME CONTRACT SERVICES SECTION

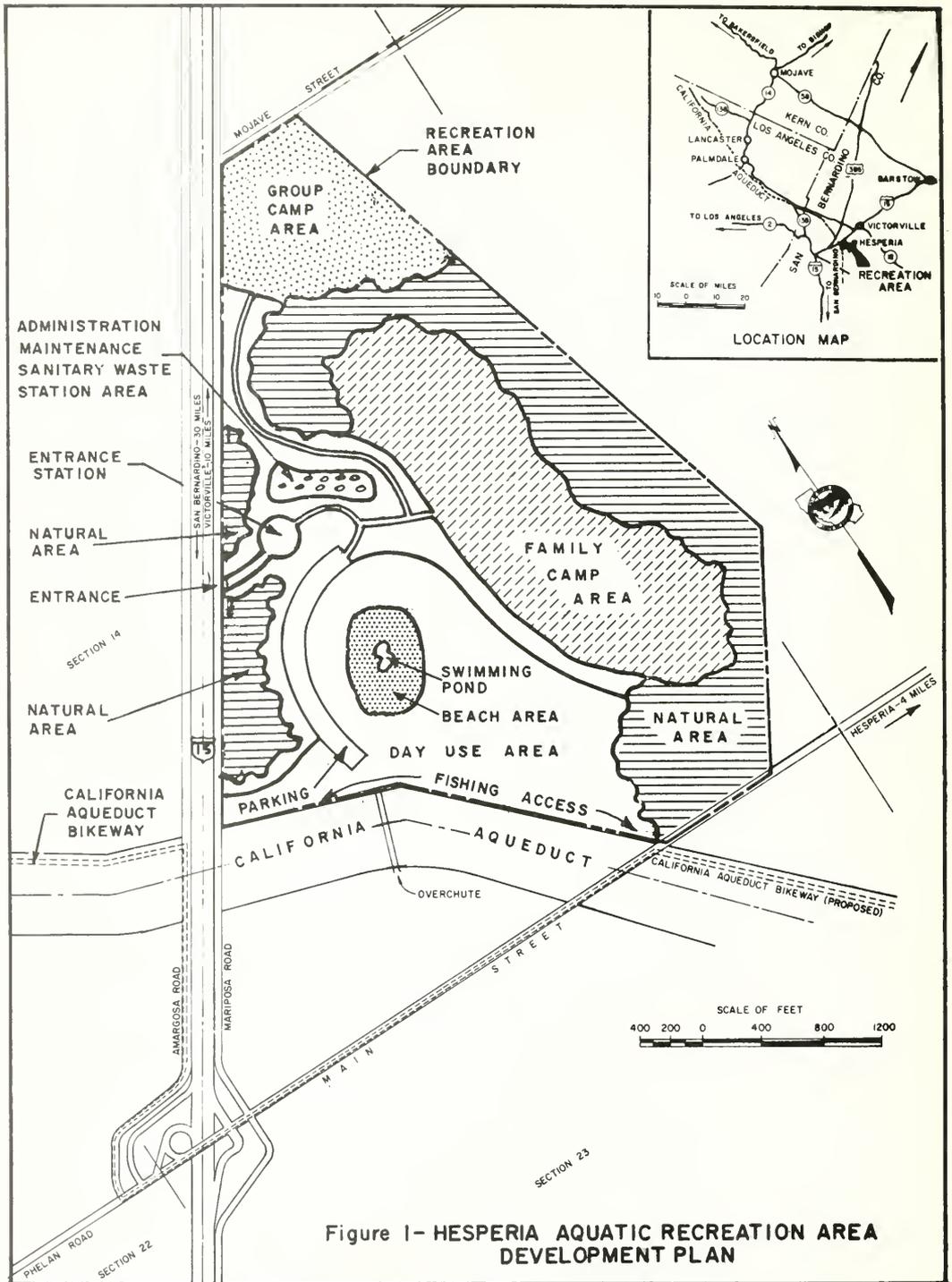
Kenneth D. Aasen ..... Fishery Biologist  
Peter Gelfand ..... Manager - Biologist

## ABSTRACT

This bulletin presents plans for the 260-acre Hesperia Aquatic Recreation Area, to be adjacent to the California Aqueduct at the frontage road of Interstate Highway 15 near Hesperia in San Bernardino County. Full development will include facilities for swimming, fishing, picnicking, hiking, and camping for motorists coming by highway and for bicyclists and hikers using the California Aqueduct Bikeway. The State Department of Parks and Recreation will develop the onshore recreation facilities, the Wildlife Conservation Board will develop the Aqueduct fishing access facilities, and the Department of Fish and Game will stock the Aqueduct. The California Department of Parks and Recreation has arranged for the San Bernardino County Regional Parks Department to operate and maintain the Recreation Area. Facilities described will cost an estimated \$2,680,000, including land which will be purchased by the Department of Water Resources at an estimated cost of \$600,000, and will ultimately generate an annual 532,000 recreation-days of use.

## RECOMMENDATION

In accordance with the Davis-Dolwig Act, the Department of Water Resources recommends that the Legislature appropriate funds as requested to develop the improvements described in this report.



**Figure 1- HESPERIA AQUATIC RECREATION AREA DEVELOPMENT PLAN**

## INTRODUCTION

The 260-acre Hesperia Aquatic Recreation Area is a development proposed as part of the recreation and fish and wildlife habitat enhancement program of the State Water Project. It replaces the former site, named "Oro Grande Wash", which was located west of Interstate Highway 15. For a short time the name "Oro Grande" was applied to the new site, but it has been discontinued to avoid public confusion with the town of the same name located 3 miles north of Victorville.

The site is in the high desert terrain of San Bernardino County, 30 miles north of the City of San Bernardino and 10 miles southwest of the City of Victorville (Figure 1). It lies on a polygonal shaped piece of land just to the northeast of where Interstate Highway 15 passes over the California Aqueduct at the Phelan-Hesperia junction. Frontage roads connect to freeway ramps and provide access to the site.

North of the site, Interstate 15 turns northeast toward Las Vegas. South of the site, it connects with two major highways, Interstate 10, an east-west artery from the City of Los Angeles, and with U. S. Highway 395, a major north-south route. In addition, it connects with Main Street to Hesperia.

At the site, summers are dry, with the mean daytime temperatures in the mid-80s (Fahrenheit) during July and August. Evenings are generally cool. Precipitation of 4 to 5 inches can be expected during the winter, including occasional snowfall.

## RECREATION DEMAND

An important factor in analyzing the recreation demand at the Hesperia Aquatic Recreation Area is its proximity to the

densely populated Los Angeles Basin. Los Angeles and San Bernardino County residents are expected to create the greatest demand for this Recreation Area.

The Department of Parks and Recreation predicts a deficiency, by 1980, of approximately 12,000 camping sites daily within 1 to 2 hours driving time of the Los Angeles-San Bernardino-Riverside-Long Beach metropolitan complex. This is large enough to ensure that capacity recreation use can be anticipated shortly after construction.

The increasing travel costs are expected to increase demand for recreation facilities at this location because of its closeness to large population centers.

## THE RECREATION PLAN

The plan as discussed here and depicted on Figure 1 represents a proposed out-of-doors recreation facility making available for public use a segment of the California Aqueduct in the high country of the Mojave Desert. In addition to facilities for water-associated recreation, those for bicycle staging, hiking, picnicking, and camping will also be provided.

The recreation features will be constructed at two intervals. The initial facilities are scheduled for completion late in 1976. The remaining facilities will be added as needed to meet increasing recreation demands and as funds become available.

### Swimming

A pond will be provided for swimming in the summer and possibly for trout fishing in the winter. The pond will have a surface area of 1/2 acre and will be designed as a sand bottom free-form

lake. It will have a circulating chlorination and filtration system meeting state and county public health requirements.

A sunbathing deck will surround the lake, also a turfed area for informal picnicking. Dressing rooms and showers will be provided, as well as lighting to extend both swimming and trout fishing well into the evening.

### Picnicking

A total of 75 picnic units will be provided in the initial development and 50 will be added later. This will make a total of 125 picnic units for day use. These will be available to travelers on Interstate 15 who wish to stop, as well as to fishermen, swimmers, bicyclists, and hikers.

Parking for 400 cars will be provided in the initial development and space for 300 additional cars will be added later. The parking will be placed convenient to the picnic units.

The initial landscaping will be completed near the swimming pond for picnicking use. The remaining landscaping will be added as funds become available. Landscaping with turf and tree plantings will make the area an attractive, pleasing stopping point. Water and sanitary facilities will be conveniently placed.

A group picnic area is planned north of the main picnic and swimming areas. It will be easily accessible for large club or travel group outings.

### Camping

Overnight camping will be a major attraction. Initial facilities will consist of 75 family camp units and a group camp area of 25 camp units. Facilities to be added later will include 75 family camp units and 75 group camp units. The final development will

accommodate 1,000 to 1,500 persons per evening. A waste disposal station will be provided to serve self-contained campers, trailers, and motor homes. In addition, a tent camping area will also be available.

Convenient connections with Interstate 15 and U. S. Highway 395 will make the area easily accessible to persons traveling on the highways. The opportunity to swim and fish in high desert surroundings will be a bonus to these travelers.

### Bicycling and Hiking

In the Antelope Valley to the west, the Department of Water Resources has opened the maintenance service road along several reaches of the California Aqueduct to hikers and bicycle riders. The Recreation Area will make contact with this Bikeway system and will offer facilities for wayside stops, rest areas, and overnight stops. Bicycle parking stands and staging areas close to the Aqueduct maintenance road are planned.

### Fish and Wildlife Habitat Development

Fishing access facilities to the Aqueduct will be provided by the Wildlife Conservation Board and will be developed in coordination with the initial facilities. The Aqueduct fishery will be started with the planting of warmwater fish by the Department of Fish and Game, which hopes to establish a self-sustaining fishery.

To make the area more attractive during the November through April period, consideration is being given by the operator to provide a trout fishery in the swimming pond. Trout could be purchased and released in the pond. Anglers would pay a daily fee, which would allow them to catch and keep a specified limit.

The Recreation Area will be constructed on gently sloping Mojave Desert land.

The area is now nearly devoid of resident wildlife species. Seasonally, many species of birds pass through the area, but few stop because the plant cover generally is light. The Department of Fish and Game has recommended that existing native vegetation be preserved and that landscaping be confined to native species that are attractive to wildlife for food and cover.

Walking trails through the natural area would connect to bicycling and hiking assembly areas. They will permit public access to photograph wildlife and the high desert vegetation.

#### Water Supply and Sanitation

Water for domestic and irrigation use may be obtained by treatment of waters from the Aqueduct or from the local water agency. The water system will have adequate reserve storage capacity and fire hydrants to handle emergencies. Water requirements are estimated to be 190 acre-feet per year.

Sewage would be treated in a tertiary package plant, which would be installed on the site, or would be piped off-site for treatment or disposal. The treated effluent from any on-site treatment plant would be disposed of in compliance with waste discharge requirements prescribed by the California Regional Water Quality Control Board, Lahontan Region.

#### PROJECTION OF RECREATION USE

The Area is planned to be operational in the late fall of 1976 as the initial construction is completed. In this area of serious shortages in outdoor recreation facilities, news of its opening and its attractions will spread rapidly.

By virtue of its convenient access from Interstate Highway 15, U. S. Highway 395, and other highways, the facility is expected to experience heavy use. Peak traffic counts on Interstate 15 alone

are 25,000 vehicles daily; the Department of Transportation estimates that 2,000 of these cars will stop at roadside rest areas.

Fishing access along the Aqueduct is expected to attract anglers from a wide area. The swimming, camping, and picnic facilities will provide out-of-doors activities for entire families.

Overnight facilities for caravans of travel trailers, campers, and motor homes are also among its attractions.

These outdoor recreation uses will reach initial design capacity of 425,000 recreation-days during the third year of operation. After completion of all remaining facilities the Recreation Area will be accommodating 532,000 recreation-days annually, which includes the approximately 3,000 angler-days predicted for the self-sustaining fishery. (See Table 1.)

TABLE 1	
HESPERIA AQUATIC RECREATION AREA	
ANNUAL RECREATION USE	
In recreation days	
<u>Year</u>	<u>Use</u>
1977	175,000
1978	325,000
1979	425,000
1987-2026	532,000

#### LAND ACQUISITION AND SCHEDULING

The recreation plan for this Area reflects the probable development based on information and conditions prevailing in February 1974. Figure 1 of this report, taken from a drawing provided by the Department of Parks and Recreation, shows the general layout of facilities. The plan requires 260 acres of land, of which 14.5 acres are state owned, having been acquired for the Aqueduct right-of-way; the remainder is in private ownership. The privately owned lands consist of 50 parcels. There are no buildings or

improvements on the required lands. In February 1974, these lands were estimated to have a value of \$600,000. The estimate was based on current purchase prices of comparable parcels in the area. The Department of Water Resources will acquire the land using State Water Project funds, which will be subsequently reimbursed from State general funds under provisions of the Davis-Dolwig Act.

Construction of the initial recreation features is scheduled to start in 1975 and would be completed in 1976. The remaining facilities will be added as funds become available. (See Tables 2 & 3.)

#### OPERATION PLAN

The California Department of Parks and Recreation, which will develop the onshore facilities, has arranged for the San Bernardino County Regional Parks Department to operate and maintain the Recreation Area. Therefore, planning for the development of the facilities has been coordinated with that agency.

Fire protection would be provided by the County, which maintains fire stations in the Hesperia area.

Fees established by the San Bernardino County Regional Parks Department are expected to be consistent with those charged users of the State Park System. The Recreation Area is expected to be in operation year around.

#### BENEFITS AND COSTS

A method for establishing benefits for general recreation days, adopted by the

Departments of Water Resources and Parks and Recreation through a "Statement of Guidelines", provides criteria for evaluating general recreation by two factors: (1) the variety and quality of recreation, and (2) the esthetic qualities of the site. Using these criteria, the unit benefit for recreation at Hesperia Aquatic Recreation Area is \$1.65.

The unit benefit value for warmwater fishing is also \$1.65, established under procedures adopted by the Departments of Fish and Game and Water Resources.

The capital cost of all facilities is estimated to be \$2,680,000 (Table 3). This includes an initial investment for the warmwater fishery and land costs.

To compute the annual operation and maintenance costs, a value of 40 cents per recreation-day was assigned. Annual replacement costs were set at 3-1/2 percent of the capital expenditures for onshore facilities.

The unit cost of Aqueduct water at the site is estimated to be \$24 per acre-foot. Annual water maintenance and treatment costs are included in the 40-cent operation and maintenance cost.

All identifiable recreation and fish and wildlife habitat enhancement benefits and costs have been converted to the present worth value in 1976. Based on a 50-year period of analysis at 5 percent interest, the present worth of all future benefits is \$14,200,000 and of all costs is \$7,400,000. The resulting benefit-cost ratio is 1.9 to 1.0.

TABLE 2

ESTIMATED CAPITAL COSTS OF INITIAL RECREATION AND FISH AND  
WILDLIFE ENHANCEMENT FACILITIES

<u>Onshore Recreation Development</u> <sup>1/</sup>	
1. Roads and parking for 400 cars . . . . .	\$225,000
2. Utilities, including water supply and sanitary facilities, electric and telephone lines . . . . .	278,000
3. Seven comfort stations . . . . .	197,000
4. Swimming area, including bath house, deck filter system, etc. . . . .	300,000
5. 75 picnic units . . . . .	8,000
6. 75 family camp units . . . . .	15,000
7. 25 camp unit group camp area . . . . .	4,000
8. Landscaping, including 5 acres of irrigated turf and trees . . . . .	24,000
9. Administration, operation, and maintenance buildings . . . . .	50,000
10. Miscellaneous facilities, signs and drainage . . . . .	57,000
11. Access, including fish-cleaning facilities . . . . .	63,000
Contingencies . . . . .	122,000
Engineering . . . . .	<u>134,000</u>
Subtotal . . . . .	\$1,477,000
<u>Warmwater Fishery Development</u> <sup>1/</sup> . . . . .	3,000
<u>Land Costs</u> <sup>2/</sup> . . . . .	<u>600,000</u>
TOTAL INITIAL DEVELOPMENT	\$2,080,000

<sup>1/</sup>\$1,480,000 for onshore recreation and warmwater fishery development will be provided by the Recreation and Fish and Wildlife Enhancement Fund. In addition, the Department of Water Resources will participate in providing swimming facilities to the extent provided by the allocation from the Federal Land and Water Conservation Fund. Also, Item No. 11 will be funded by the Wildlife Conservation Board.

<sup>2/</sup>Land will be purchased by the Department of Water Resources using State Water Project funds in accordance with the Davis-Dolwig Act.

TABLE 3

ESTIMATED CAPITAL COSTS OF ALL RECREATION AND FISH AND  
WILDLIFE ENHANCEMENT FACILITIES

REMAINING RECREATION FACILITIES

1. Additional roads and parking for 300 cars . . \$	75,000
2. Additional utilities . . . . .	57,000
3. Add two comfort stations . . . . .	38,000
5. Add 50 picnic units . . . . .	8,000
6. Add 75 family camp units . . . . .	15,000
7. Add 75 camp units at group camp area . . . .	6,000
8. Add 60 acres of irrigated turf and trees . .	296,000
Contingencies . . . . .	50,000
Engineering . . . . .	<u>55,000</u>
Subtotal remaining development <sup>1/</sup> . . . . .	\$ 600,000
Total initial development (Table 2) . . . . .	2,080,000
 <b>TOTAL ULTIMATE DEVELOPMENT . . . . .</b>	 <b>\$2,680,000</b>

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<sup>1/</sup>These remaining facilities are planned to be developed within ten years as funds become available. Funding for these facilities will be provided from sources undetermined at this time.



