

UNIT 314

BRANNAN ISLAND STATE RECREATION AREA

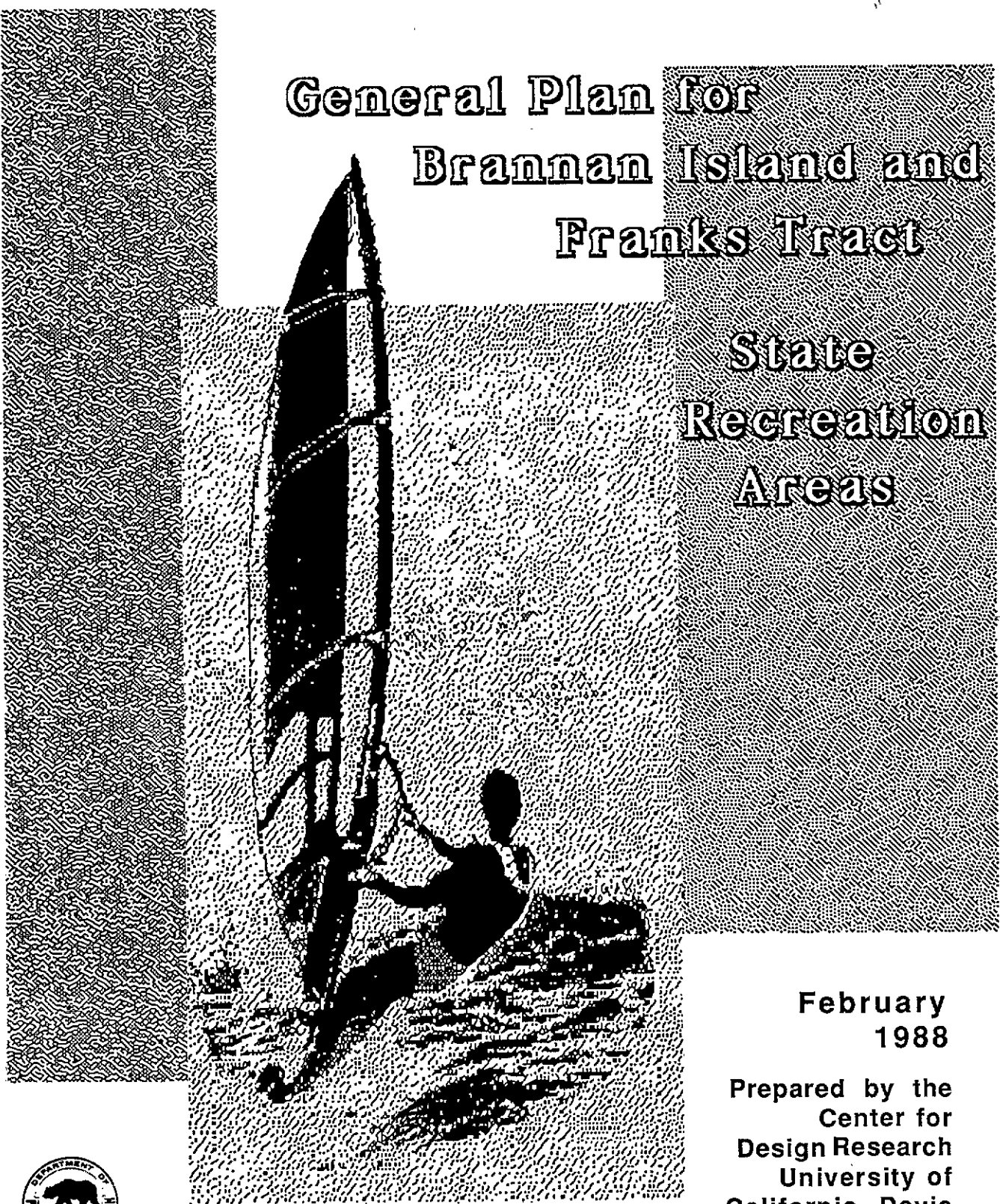
GENERAL PLAN (*)

November 1987

(*) Note: This unit's General Plan is contained within the joint general plan document for the Brannan Island SRA and the Franks Tract SRA

General Plan for Brannan Island and Franks Tract

State Recreation Areas



February
1988

Prepared by the
Center for
Design Research
University of
California, Davis
and EDAW



State of California - the Resources Agency
Department of Parks and Recreation

DEPARTMENT OF PARKS AND RECREATION

STATE PARK AND RECREATION COMMISSION

P. O. BOX 2390, SACRAMENTO 95811



Resolution 77-87
adopted by the
CALIFORNIA STATE PARK AND RECREATION COMMISSION
at its regular meeting in Sacramento on
November 13, 1987

WHEREAS, the Director of the Department of Parks and Recreation has presented to this Commission for approval the proposed General Plan for Brannan Island and Franks Tract State Recreation Areas; and

WHEREAS, this reflects long-range development plans to provide for optimum use and enjoyment of these units as well as the protection of their quality;

NOW, THEREFORE, BE IT RESOLVED that the California State Park and Recreation Commission hereby approves the Department of Parks and Recreation's Brannan Island and Franks Tract State Recreation Area General Plan, preliminary dated August 1987, as amended below, subject to such environmental changes as the Director of Parks and Recreation shall determine advisable and necessary to implement the provisions and objectives of said plan.

BE IT FURTHER RESOLVED the General Plan is amended as follows:

Eliminate only the new proposed creation of a Freshwater Wetland from the Brannan Island State Recreation Area General Plan.

Remove the following sentence from page 128, item 7 of the Brannan Island State Recreation Area General Plan: "Due to unit policy and fiscal constraints, it has been determined as an inappropriate interpretive facility for this location."

General Plan for Brannan Island and Franks Tract State Recreation Areas

February 1988

by
**Center for Design Research
University of California, Davis
and EDAW**

for
**State of California - the Resources Agency
Department of Parks and Recreation**



**Henry R. Agonia
Director**

**George Deukmejian
Governor of California**

**Gordon Van Vleck
Secretary for Resources**

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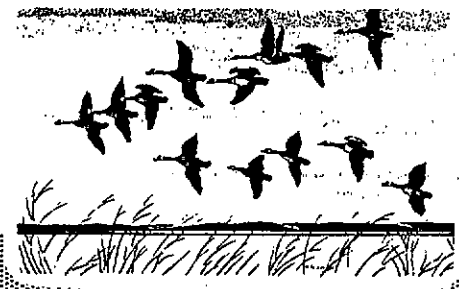
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Summary

SUMMARY

This summary is a quick reference for the resource management policies, facility and site improvements, and interpretive programs proposed for Brannan Island and Franks Tract State Recreation Areas. These are more fully discussed under their respective sections (elements) of this General Plan.

Brannan Island State Recreation Area

Overview of Resource Management Policies

The resource management policies summarized below are intended to protect the natural and cultural resources of the unit, thereby providing direction for future development efforts.

- Maintain and enhance sheltered microclimates.
- Recommend and support all measures to maintain the quality and flow of hydrologic resources affecting the unit.
- Obtain the surface rights of Parcel A (spoils pits).
- Apply earthquake safety standards to the construction of new facilities.
- Develop agreements with appropriate agencies concerning the oil, gas, and mineral rights of the unit.
- Minimize human-caused erosion within the unit.
- Control exotic and other undesirable plant species.
- Revegetate with indigenous delta plant species where appropriate.
- Restore and enhance riparian and freshwater wetland ecosystems.
- Protect and enhance existing rare and endangered plant habitat.
- Perpetuate suitable habitat for animal species that are threatened, endangered, or of special concern.
- Report all cultural resource discoveries so that appropriate protective action may be taken.
- Work to reduce the negative visual impacts of non-recreational structures within the unit.

Overview of Proposed Uses and Facilities

The following is a summary of the facilities that are proposed to be added or removed at Brannan Island State Recreation Area. Improvements include recreation facilities, site amenities, and utility services.

Existing Sites:

Entrance

- Relocate

Cottonwood and Willow Campgrounds (rename Riverside Family Campground)

- Replace five campsites and the campfire center facilities with a swim lagoon and beach
- Add showers at the comfort stations
- Add floating shoreline boardwalks
- Landscape

Olympic Campground (rename Brannan Boat-In Campground)

- Partially remove; remaining facilities to be incorporated into an overflow portion of the boat-in campground on the north side of the boat lagoon.

Boat-In/Walk-In Campground (rename Brannan Boat-In Campground)

- Existing facilities to be incorporated into the new boat-in campground with 32 camping/picnicking sites
- Grade and landscape
- Relocate water faucets as necessary

Group Campground

- Partially remove and develop a wetland habitat area; remaining facilities to be incorporated into the walk-in camping portion of the new family campground.

Recreational Vehicle Campground

- Remove

Seven Mile Slough Day Use Area

- Reorganize parking so that there are 131 fewer parking spaces (300 total)
- Expand the existing comfort station
- Add a snack bar
- Provide water as necessary
- Landscape where parking lot pavement is removed to accommodate rearranged picnic facilities

Three Mile Slough Day Use Area (currently the group picnic area)

- Add a new parking lot with 40 spaces, to serve the visitor center and expand the existing parking lot from 15 to 60 spaces
- Add a visitor center that also contains an elevated observation platform, restroom facilities, and a snack bar.
- Add facilities for two additional group picnic sites
- Add 24 family picnic tables and 8 barbecue grills
- Add a staircase to the beach
- Add a floating shoreline boardwalk
- Provide water and power services
- Landscape

Boat Launch Area

- Add 50 additional parking spaces
- Provide 4 additional boat ramps
- Add a fish cleaning facility
- Add a bait and tackle shop
- Landscape

Boat Lagoon Area

- Add 48 additional boat slips
- Add a fish cleaning facility

Administrative Area

- Add a conference room and another office

Proposed Sites:

Entrances

- Relocate the main entrance road
- Provide additional signs on Highway 160
- Add a contact station
- Add a sanitation disposal dump
- Provide electrical and telephone service
- Grade and landscape

Montezuma Hills Group Campground

- Develop 18 campsites with tables, barbecue grills, and fire rings; 10 for recreational vehicles; 8 for other groups
- Provide two comfort stations with showers
- Provide water and electricity

- Grade and landscape

Brannan Meadow Day Use Area

- Develop the three acre meadow
- Provide parking for 100 vehicles
- Provide a comfort station
- Provide 55 picnic tables and 23 barbecue grills, some for groups
- Provide water
- Grade and landscape

Oak Ridge Family Campground

- Provide 110 campsites with tables and barbecue grills; 15 of these are walk-in, tent-only campsites
- Provide a campfire program center
- Provide four comfort stations with showers
- Provide water and electricity service
- Landscape

Windy Cove Use Area

- Provide parking for 136 vehicles
- Provide overflow parking for another 150 vehicles (east side of Highway 160)
- Construct a highway barricade and underpass
- Develop a beach and open lawn
- Provide a comfort station with showers
- Provide 15 picnic tables
- Provide 15 walk-in campsites
- Provide three waterfront staircases
- Provide a fishing pier
- Provide an observation platform
- Provide a floating dock (east side of Highway 160)
- Provide water and electricity service

- Provide a floating dock (east side of Highway 160)
- Provide water and electricity service
- Landscape

Oak Ridge Meadow Riparian Area

- Develop 12 acres of riparian habitat, including meadows and woodlands
- Install two pedestrian bridges
- Install interpretive signs

Trails

- Develop 3.8 miles of paved, multi-purpose trails
- Develop 0.3 miles of unpaved hiking trails

Overview of Proposed Interpretive Programs

The following proposals aim to enhance the public's recreational experience by improving the educational and informational opportunities available at the unit.

- Construct a new visitor center with indoor and outdoor exhibits.
- Develop self-guided interpretive trails.
- Develop informational brochures concerning orientation, trail guidance, birds, plants, and wildlife.
- Develop audio-visual programs for use at the campfire program and visitor centers.
- Install outdoor displays at campgrounds, trailheads, day-use areas, comfort stations, and places of special interest.
- Construct observation platforms at the north and south ends of the unit.

Franks Tract State Recreation Area

Overview of Resource Management Policies

The resource management policies summarized below are intended to protect the natural and cultural resources of the unit, thereby providing direction for future development efforts.

- Recommend and support all measures to maintain the quality and flow of hydrologic resources affecting the unit.
- Identify and avoid all geologic hazards to ensure structural stability and integrity.
- Develop recreation facilities suitable to the soils in the unit.
- Control Himalaya berry and other exotic plant species.
- Landscape with desirable or indigenous plant species.
- Protect and reestablish riparian and freshwater wetland ecosystems.
- Locate, protect, and manage existing rare and endangered plants.
- Develop a wildlife management plan.
- Perpetuate suitable habitat for animal species that are threatened, endangered, or of special concern.
- Report all cultural resource discoveries so that appropriate protective action can be taken.
- Acquire adjacent peat islands if they become available (contingent on availability of funds).
- Preserve the esthetics of the unit which typify the delta environment.

Overview of Proposed Uses and Facilities

Following is a general outline summary of the land acreage and facilities proposed for Franks Tract State Recreation Area.

- 500 acres of land (islands)
- 50 picnic tables
- 50 fire rings
- 15 chemical toilets
- 10 floating docks

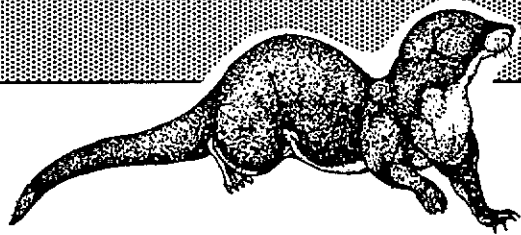
- Interpretive displays
- Observation tower with viewfinders

Overview of Proposed Interpretive Programs

The following proposals aim to enhance the public's recreational experience by improving the educational and informational opportunities available at the unit.

- Construct panels and signs for orientation and interpretation of the unit.
- Develop a self-guided interpretive water trail.
- Construct an observation tower for Delta and wildlife viewing.

Introduction



INTRODUCTION

This General Plan contains individual plans for two existing State Park System units that are located in the Sacramento-San Joaquin River Delta. They are Brannan Island and Franks Tract State Recreation Areas (see Figure 1).

Purpose of the Plan

Brannan Island State Recreation Area (SRA) was established in 1965, and Franks Tract SRA in 1966. Development at Brannan Island SRA has taken place without the benefit of a General Plan, while there has been no development at Franks Tract SRA. Brannan Island SRA needs substantially new and upgraded facilities, while Franks Tract SRA needs an expanded land base for boaters and new support facilities. Before any state-budgeted improvements can be made at either unit, a General Plan is required by law to set forth the department's long-term (generally 20 years) management objectives with respect to natural and cultural resources, visitor use, facility development, interpretation, and general operation.

The General Plan is intended to guide future acquisition, land use, development, and operation of the units. The precise design of facilities, configuration of new use areas, and nature of programs and concession arrangements will be further refined when specific aspects of the General Plan are funded by the State Legislature for implementation.

Objectives of the Plan

The General Plan attempts to meet the following broad objectives:

1. Develop the land base and facilities needed to help meet current and future recreation demands in the Delta.
2. Perpetuate both the environmental quality and wildlife habitat of the Delta, as well as other natural and cultural resources.
3. Provide appropriate interpretive services and facilities for educational and recreational purposes.

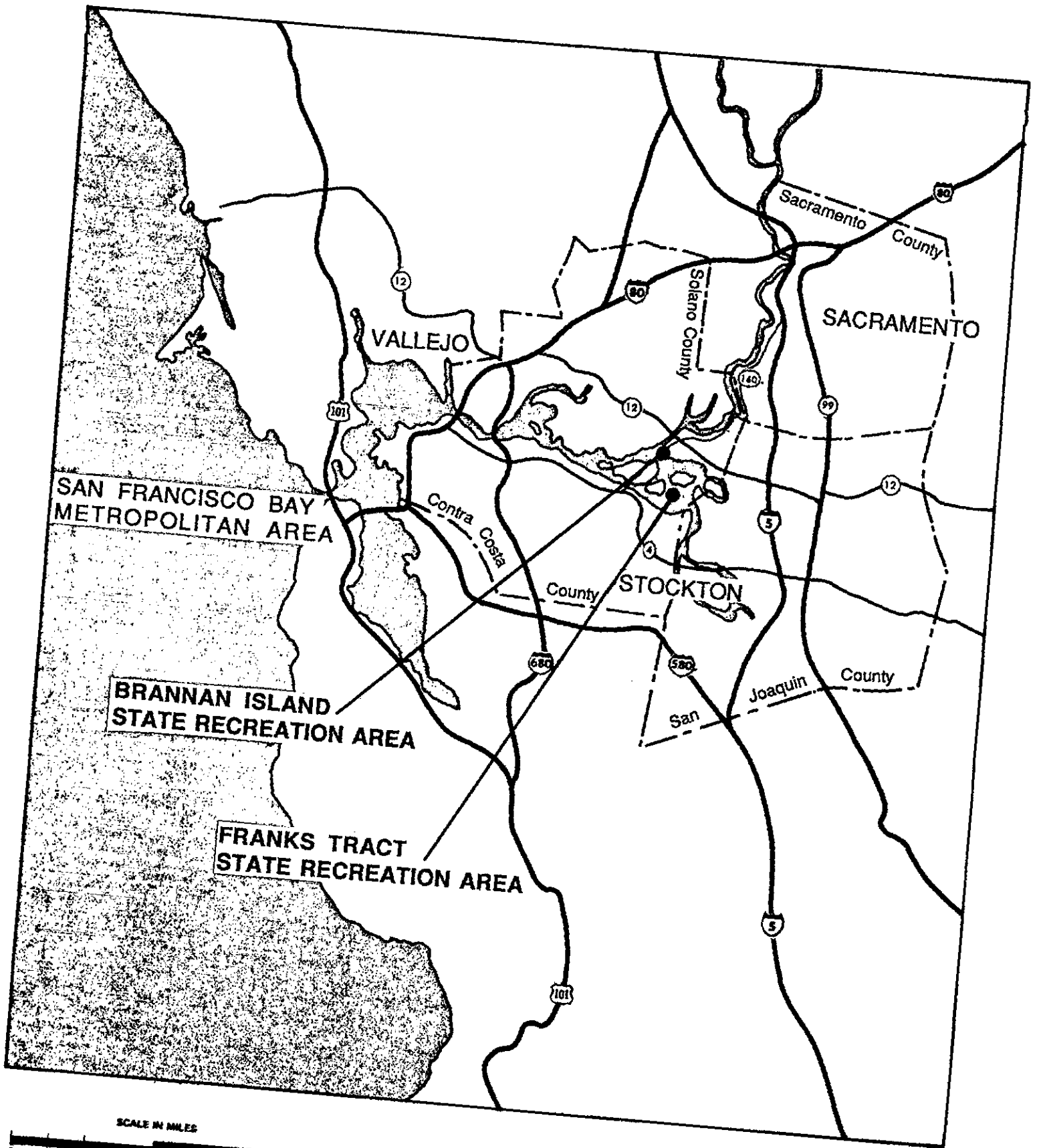


FIGURE 1

REGIONAL AREA

4. Provide opportunities for concession services and facilities, where appropriate.
5. Promote a safe, enjoyable, and well-managed recreational environment.
6. Equip the Department of Parks and Recreation, state and federal agencies, private organizations, and individuals with a tool for coordinating their efforts to meet these objectives.

The Planning Process

The process used in creating this General Plan was comprehensive, involving the consideration of public and agency interests and concerns, the opportunities and constraints of the units' existing land uses and physical resources, access to and circulation within the units, and legal constraints and conditions, as well as public recreation needs and wishes.

Tasks undertaken to arrive at this General Plan can be summarized into four broad steps: the resource inventory, the resource analysis, the development of alternatives, and the development of a single plan.

The natural resources inventoried for this General Plan include climate, topography, hydrology, geology, soils, and plant and animal life. Information also was collected on cultural, esthetic, and recreational resources, as well as property ownership status. The resource information was obtained through file and literature searches, field observation, and public/agency review and comment. This information has been summarized, and is contained in the Resource Element of this General Plan. Full documentation of the resource data is on file with the State Department of Parks and Recreation in Sacramento.

The resources were evaluated to determine what appropriate management policies would be needed to protect, enhance, create, or restore sensitive and important resources. Resource opportunities and constraints helped to establish those recreational use intensity levels which were considered appropriate and manageable, and which provided parameters for the planning options.

Alternative plans were generated to explore different kinds of day and overnight facilities that might be desirable, as well as various arrangements and capacities of use areas. The Brannan Island SRA alternatives considered maintaining the existing facilities to varying degrees, but focused on expanding opportunities into those portions of the site currently underused. The alternatives for Franks Tract SRA included the Optimum Plan that was prepared by the East Bay Regional Park District for the Department in 1986 as one of the alternatives for that particular unit.

Following comments from the public and agencies, graphic plans for each unit were developed incorporating facility improvements, interpretive program needs, concession concepts, and operational requirements.

Adjacent to Franks Tract SRA, several peat islands have been identified for potential acquisition to protect rare remnants of historic ecological habitat within the vicinity of the unit. Discussions in this General Plan about these islands are intended for planning purposes only, and do not represent a commitment for acquisition by the department.

Public Involvement

The public expressed their interests and concerns at various stages in the planning process. The first pair of meetings was held in Rio Vista and Brentwood, California, in January 1987, to introduce the project, explain some of the resource findings, and begin a dialogue between the planners and public. A second pair of meetings occurred at the same locations, in March 1987, at which time comments on the alternative plans were received. In June 1987, a third set of meetings was held to present the draft plan and receive comments on it.

During this time, four newsletters were issued to approximately 275 individuals and agencies on the mailing list. These newsletters enabled those unable to attend the meetings to be kept informed of the planning efforts. The newsletters contained comments from those who responded orally at the meetings as well as those who sent letters. Also included in the newsletters were the planning goals for Brannan Island and Franks Tract SRAs, and the key features of each alternative. The last newsletter mailed described the proposed land uses and facilities of the Draft Delta General Plan.

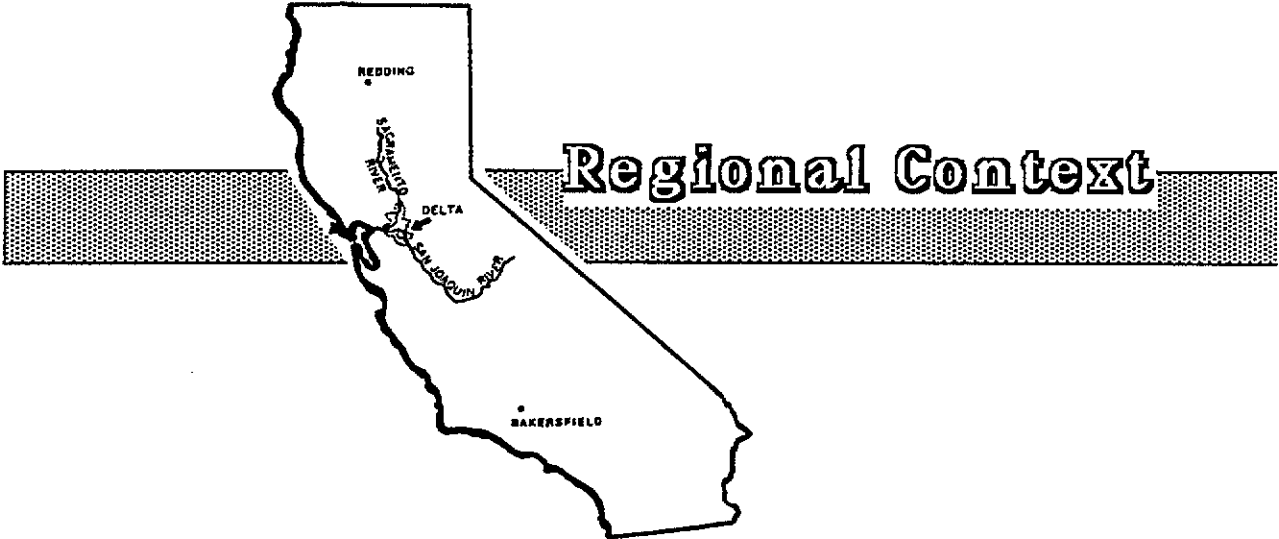
Agency and public comments to this Preliminary General Plan and Environmental Impact Report and the subsequent responses will be presented to the California Park and Recreation Commission in November of this year, after which the Final General Plan will be prepared.

Agency Coordination

Agencies that have been contacted or which have expressed interest in the General Plan include:

- U.S. Army Corps of Engineers
- California Department of Boating and Waterways
- California Department of Fish and Game
- California Department of Transportation
- California Department of Water Resources
- State Reclamation Board
- State Lands Commission
- East Bay Regional Parks District
- Contra Costa County
- Sacramento County
- San Joaquin County
- Solano County
- Bethel Island Municipal Improvement District

Other agencies, organizations, and individuals have contributed to this General Plan (see the individual references contained in the Resource Inventory, a separate document that is available at the State Department of Parks and Recreation and District Headquarters at Brannan Island SRA).



Regional Context

REGIONAL CONTEXT

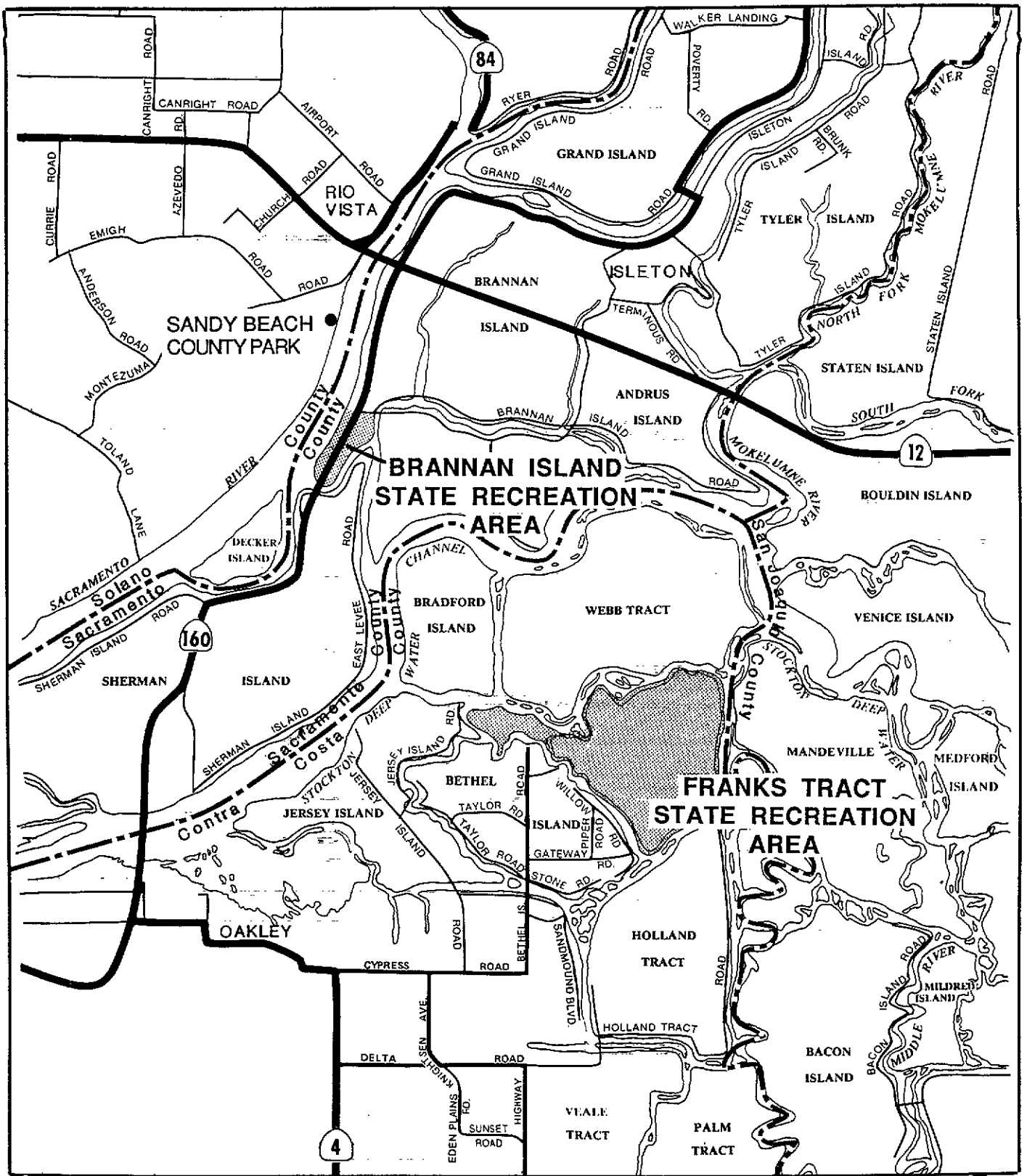
The following section briefly describes the Delta environment in which Brannan Island and Franks Tract SRAs are located, with emphasis on the recreational setting.

Regional Description

Brannan Island and Franks Tract SRAs are situated near the western edge of the middle section of the Sacramento-San Joaquin River Delta, centrally located among the cities of Sacramento, Stockton and Vallejo that are each within an hour's drive. The Delta is a large area extending into the corners of four counties (see Figures 1 and 2). It is composed of a maze of sloughs and sunken peat islands rimmed with levees constructed in the late 1800s. These were built to prevent the flooding of the nutrient-rich islands which are intensely managed for agriculture. Ownership is predominantly private. The landscape is flat and open; occasionally, rows of planted black walnut, eucalyptus, and other trees suggest the location of a roadway. Numerous transmission lines crisscross the Delta landscape. Rural development occurs only in isolated locations, except on Bethel Island, where residences and marinas line the island's perimeter. The wind blows incessantly during a great portion of the year, but the summers can become uncomfortably hot despite the wind. Fog can set in for weeks at a time during the winter. Wildlife and fish are not as abundant as they once were, partly because of the intrusion of saltwater from San Francisco Bay. This occurs when water flows are reversed during low-water flow periods as a result of upstream water diversions. However, sport fishers and waterfowl hunters still come to the Delta from great distances. Many wildlife species that depend on wetland habitat reside in areas of the Delta, including Franks Tract SRA, where they are least disturbed by human activity.

Regional Recreation Profile

The Delta is a unique natural and recreational resource serving a large regional area with large and growing populations. Recreational activities are diverse, and include motorboating, fishing, relaxing, driving for pleasure, sight-seeing, camping, picnicking, swimming, waterskiing, and boardsailing. The most concentrated areas of recreational use in the Delta occur around Bethel Island, which is dotted with privately-owned marinas, and a portion of the Sacramento River



SCALE IN MILES

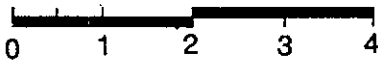


FIGURE 2

DELTA VICINITY

from Cache Slough (six miles north of Brannan Island SRA) to Collinsville (ten miles south of Brannan Island SRA).

According to the Sacramento-San Joaquin Delta Outdoor Recreation Survey, completed in 1980 for the State of California Department of Water Resources, recreationists generally spend one to three days in the Delta, and the majority are males between the ages of 25 to 34 and 50 to 59 who travel less than 50 miles to their boat launch or destination site, and originate from the Bay Area in Contra Costa County.

Visitor use from outside the region is increasing. This is due in part to an increase in recreational traffic along Highway 12, which is used as a scenic connector between Highway 101 and Interstate 5. Numerous marinas have been built in recent years, contributing to increased boat traffic. The Rio Vista section of the Sacramento River is rapidly becoming known as a world class boardsailing area, attracting boardsailors from across the country and abroad.

There are currently more than 150 resorts and boat harbors, as well as parks, scattered throughout the Delta, but a large majority of them are concentrated around the perimeter of Bethel Island. Many of the resorts provide full-service camping and picnicking facilities. With few exceptions, however, these are privately owned and facility oriented, with little regard for providing a natural and scenic environment.

Most of the public recreation facilities of the Delta are located in the eastern part. Within a ten mile radius of Brannan Island and Franks Tract SRAs, there are four public recreation sites: Browns Island, Antioch Regional Shoreline, Sandy Beach County Park, and Westgate Landing. Sandy Beach County Park is the most developed, but lacks shade and protection from blowing sand, among other problems. In combination with Westgate Landing (the only public site with immediate plans for expansion), these two sites offer a total of 50 campsites, the only public camping available in this part of the Delta outside of the two state recreation areas.

Recreation demand in the Delta has far surpassed the supply of available opportunities. Large numbers of campers, boaters, and other recreationists are regularly turned away from Brannan Island SRA during the peak use season, May through October. (See Table 1 for trends in visitor use at Brannan Island SRA.) For example, during the weekends of August 1986, 198 vehicles,

containing an average of four persons per vehicle, were unable to use camping facilities at Brannan Island SRA because the campgrounds were filled to capacity. Private resorts also report having to turn away many potential users, and often recommend that they try Brannan Island SRA.

Table 1

Attendance Records - Brannan Island SRA
(Number of Visitors Per Year)

<u>Year</u>	<u>Day Use</u>	<u>Overnight Use</u>	<u>Total Use</u>
1974	64,059	70,189	134,248
1975	80,896	48,994	129,890
1976	82,864	63,099	145,963
1977	99,229	73,608	72,910
1978	101,812	72,910	174,722
1979	97,380	72,867	170,247
1980	96,963	72,413	169,376
1981	90,891	77,950	168,841
1982	95,483	77,777	173,260
1983	96,294	63,530	159,824
1984	109,578	71,926	181,504
1985	113,811	77,358	191,169

A deficiency in recreation facilities, particularly public ones, has existed for quite some time in the Delta. San Joaquin County owns recreation sites at Mandeville Tip and on Spud Island, but has been unable to meet increasing recreation demands because of an imbalance between revenues and maintenance costs. The private facilities have helped to meet some of these deficiencies, but have worsened others by attracting even more boaters lacking places “to go” to picnic, swim, and camp.

According to the Delta Outdoor Recreation Implementation Plan, prepared in June 1981 for the State of California Department of Water Resources, there are a number of recreation-related problems in the Delta, including the following:

- While private development has evolved to accommodate recreation needs to some extent, public launch ramps, picnic sites, mooring/berthing facilities, swimming beaches, boater destination areas, bank fishing areas, trails, hunting areas, and interpretive services are practically nonexistent in the Delta.

- Public access to land in the Delta is limited. Since most land in the Delta is privately owned, access to the water is also severely restricted.
- Parking along public roads is limited because there are so few roads in the Delta, and public parking lots are sparse.
- There are many governing agencies in the Delta. Goals and policies may conflict due to different mandates and constituencies.

Of the 56 potential recreation sites identified in the Delta Outdoor Recreation Implementation Plan, very few have been or are programmed to be developed in the near future. Contra Costa County has no plans to expand or add new facilities in the Delta. Sacramento County is in the process of determining its recreation needs, and is concentrating only on the very northern end of the Delta. Solano County has identified needs at Collinsville and Decker Island, but nothing has been implemented, although a recreational facility may be planned soon for Grizzly Slough. San Joaquin County is the only one of the four which may provide new facilities soon. The county's five-year plan for Westgate Landing includes adding up to 40 campsites with full hook-up facilities, 30 boat berths, restrooms with showers, and other improvements. No known federal or state recreation projects in the Delta are budgeted for construction at this time. Yet, overall demand for recreation facilities, especially campgrounds, in the four affected counties (Contra Costa, Sacramento, San Joaquin and Solano) is expected to increase significantly through the year 2000 as projected by the state Park and Recreation Information System (see Table 2). All of these counties are expected to face increasing population growth with no anticipated change in this pattern over the next 30 years (see Table 3).

In summary, the primary recreation needs in the Delta include shoreline access, beach areas for day use activities, and camping opportunities. There are further concerns for the preservation of wildlife habitat which attracts many of the recreationists to the Delta.

Unit Description

Brannan Island State Recreation Area

Brannan Island SRA, approximately 336 acres in size, is crossed by Highway 160 a few miles south of the City of Rio Vista in Sacramento County (see Figure 2). The unit is located on the lower peninsular extension of Brannan Island, and is surrounded by the Sacramento River on the west, Three Mile Slough on the southeast, and Seven Mile Slough on the northeast. Brannan Island SRA is situated immediately north of Sherman Island and west of Twitchell Island. Having been a spoils depository in the past, the unit is a disturbed landscape of uneven but comparatively high topography. The eastern third of the site has been recreationally developed for camping, picnicking, swimming, boat launching, and docking. Landscaping is haphazard, consisting of a mix of exotic species, many of which are in poor condition.

Table 2

Projected Annual Recreation Demand on the Counties*

(In Participation Days)**

	<u>1985</u>	<u>1990</u>	<u>1995</u>	<u>2000</u>
Waterskiing	2,261,703	2,446,507	2,592,080	2,719,105
Power boating	1,031,043	1,413,631	1,229,801	1,306,584
Sailing	609,757	690,042	762,867	832,371
Stream fishing	4,494,573	4,892,046	5,277,621	5,579,488
Hunting	1,247,651	1,311,778	1,377,490	1,436,268
Picnicking	6,124,717	6,598,639	7,001,990	7,388,427
Nature appreciation	7,358,617	8,131,936	8,785,304	9,412,144
Freshwater swimming	2,749,422	2,942,443	3,119,402	3,296,786
Board surfing/sailing***	494,850	547,231	583,542	612,280
Camping	4,074,320	4,416,637	4,718,002	4,995,291

* Contra Costa, Sacramento, San Joaquin and Solano

** A participation day is one person engaging in a recreation activity for any amount of time in one day

*** Contra Costa and Solano Counties only; data were unavailable for the other two counties.

Source: California Department of Parks and Recreation, PARIS III.

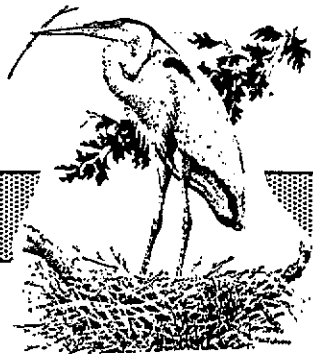
Table 3
County Population Estimates

<u>County</u>	<u>1985</u>	<u>2020</u>
Contra Costa	705,206	970,826
Sacramento	889,806	1,508,498
San Joaquin	401,894	667,275
Solano	279,558	520,637

Source: State of California, Department of Finance, 1983.

Franks Tract State Recreation Area

Four miles to the southeast of Brannan Island SRA in Contra Costa County lies Franks Tract SRA, which is bounded by the False River and Webb Tract on the north, Old River and Mandeville Island on the east, Sand Slough and Holland Tract on the south, and Piper Slough and Bethel Island on the west (see Figure 2). Accessible only by boat, the unit actually consists of two submerged areas bordered by partial levees. Franks Tract, comprised of 3,300 acres, was permanently inundated in 1938 when the levee system was breached. Little Franks Tract, 330 acres in size, flooded in 1981. Only segmented portions of the levee systems remain intact, and these are continually deteriorating. Due to the limited land base, lack of public access, exposure to strong winds, and shallow (less than ten feet) fluctuating water level, recreation use is limited primarily to anglers and waterfowl hunters. Boating occurs primarily in the waterways surrounding the submerged unit.



Resource Element

RESOURCE ELEMENT

This Resource Element presents long-range management objectives for the natural and cultural resources of Brannan Island and Franks Tract State Recreation Areas. Specific actions and limitations required to achieve these objectives are also provided. Maintenance operations and details of resource management are left for inclusion in specific resource management plans that will be prepared at a later date.

This element also identifies specific resource sensitivities and physical constraints, and establishes the department's guidelines for acceptable levels of development and use with respect to these concerns.

Brannan Island State Recreation Area

Resource Summary

A complete resource inventory from which this summary information was obtained is on file with the Department of Parks and Recreation in Sacramento.

Natural Resources

Topography

Brannan Island SRA is located in the southwestern and central portions of the Sacramento-San Joaquin Delta, which, in turn, lies on the western periphery of the Great Valley Geomorphic Province. This nearly flat, northwest-trending plain is bordered by the Sierra Nevada on the east and the Coast Ranges on the west. The primary determinant of topography in the Delta is the river system itself, which furnishes more than one-third of California's fresh water and comprises more than 700 miles of interconnecting channels and sloughs.

Bordered by the Sacramento River, Brannan Island SRA had served as the depository for spoils from channel dredging for almost a century, raising the elevation in some areas to more than 40 feet. The uneven, and, in places, barren, terrain includes a sandy beach, sand dunes, steep, rippapped cliffs, and extensive borrow and spoil areas.

Meteorology

Climate in the Delta is classified as Mediterranean, with cool, wet winters and hot, dry summers, although humidity can reach as high as 90% in the summer. Air masses from the Pacific Ocean regulate the climate. In the summer, cool air is drawn in from the bay and ocean eastward from the Carquinez Straits, ameliorating the surface heat from the interior valley and producing strong winds at the unit. Winter winds are southeasterly. Occasionally, "northers" or strong north winds result from cold, dry air from the Great Basin becoming heated as it flows into the Great Valley. Warmer air temperatures result, as do occasional heat waves in the spring months.

Precipitation in the summer is limited due to the semi-permanent high pressure area that lies over the northern Pacific Ocean. When the Pacific high pressure area moves south in the winter, northern storms move into central California with moderate precipitation. When the storm centers approach from a southerly direction, however, heavy rains result, often producing heavy flooding from river overflows. Annual rainfall for the unit averages from 14 to 16 inches, with the highest amounts registered in December and January. Between winter storms, low-level "tule fogs" are prevalent. High atmospheric humidity, low temperature, and lack of wind combine to produce this fog layer, which persists until sufficient heat evaporates the moisture.

Temperature inversions occur in the summer, resulting in brisk westerly surface winds caused by cool marine air intruding under a warm air mass. Fall inversions create "stable" conditions when warm air within a high pressure cell lowers the thermal inversion layer to 1000 to 2000 feet, restricting air movement. In the fall, when agricultural burning coincides with these days of stagnant air, air pollution becomes a hazard. Other forms of air pollution in the Delta result from wind-borne peat, particularly prevalent during dry, windy summer days, and industrial emissions from the San Francisco Bay Area surrounding metropolitan complex. The vast expanse of the Delta allows indigenous and imported pollutants from the Bay Area to mix and spread, thereby diminishing their severity before they reach Sacramento and Stockton. When these pollutants are transferred to water, adverse chemical effects are produced.

A small weather station is maintained at Brannan Island SRA by the California Department of Water Resources. Precipitation, air temperature, and wind movements are recorded daily.

Hydrology

As throughout the entire Delta, the Sacramento-San Joaquin Delta river system exercises the most profound effect on the structure, ecology, and history of the state recreation areas. Prior to the reclamation of delta lands and the construction of dams, this system flooded frequently from winter and spring run-off, and was subject to intrusions of salt water from the bay in summer months. With the construction of dams and pumping plants for the Central Valley Project (CVP) and subsequently for the State Water Project (SWP), inflowing waters are now stored and regulated, and water is transported from the Delta. Because the amount of water removed from the Delta is so great, the historic flow patterns have been changed. Instead of a net downstream flow, water is drafted south across the Delta, through the Delta Cross Channel into the Mokelumne River, and down Georgiana Slough. During periods of low outflow, water from Suisun Bay is drafted upstream into the Delta. The present method of storing, regulating, and pumping water across the Delta has four major effects on the region: 1) reduced Delta outflow, 2) reduced seasonal flow variations, 3) increased duration of salinity intrusion, and 4) reduction in the dilution capacity for waters discharged in the Delta.

The Delta is in a zone of transition between fresh water from inland sources and salt water from the Pacific Ocean. The zone within which this transition takes place is called the entrapment or null zone. It is approximately 30 miles long, and is formed as fresh water flows over the denser saline inflows. This zone shifts seasonally in response to river outflows, and may be as far downstream as the Carquinez Strait, or as far upstream as Rio Vista. Brannan Island SRA is located in this gradient zone. The entrapment created by the mixing of fresh and salt waters holds detritus, nutrients, plankton, larval fish, and invertebrates and is an important nursery for many types of fish. Since the operation of CVP and SWP, salinity encroachment has been limited to six miles east of Antioch on the San Joaquin River and two miles south of Rio Vista on the Sacramento River.

Due to water project diversions and dams, the original annual outflow of the Delta-San Francisco Bay estuary of 27,000,000 acre feet has been reduced by approximately 50%. Outflow is of major importance as it acts as a hydraulic barrier in controlling the intrusion of salt water into the Delta. When Brannan-Andrus Island flooded in the summer of 1972, water flows in the Delta were significantly altered, thereby increasing the potential for salinity intrusion. Upstream discharges were increased in an effort to maintain freshwater in the Delta. This strategy,

however, was only partially successful, and it was necessary to reduce export pumping in the Delta to maintain water quality.

Factors affecting water quality in the Delta include: seasonal and annual fluctuations of fresh water inflows; water withdrawals from the Delta; the extent of the salinity gradient; adequate collection, treatment, and disposal of urban, industrial, and agricultural wastes; and retention of existing channels and levees.

The main determinants of water quality are turbidity and salinity. Delta waters remain turbid throughout the year due to sediments carried down by tributaries during winter and spring, the effects of peat soils in the Delta, and algal blooms in spring, summer, and fall. Salinity is determined by the balance between fresh water outflows, diversions, and saline tidal inflows in a system that has a mixture of both ocean and land-derived salt components.

A major contributor to salts in the Delta is agricultural drainage. In this regard, in the period between 1968 and 1972, the San Joaquin River measured four times greater in salinity concentration than did the Sacramento River. During the late spring and summer seasons, a time of heavy agricultural irrigation, delta lands act as a salt reservoir. Salts are stored in the islands, and are released during fall and winter through leaching, or run-off from precipitation. Salinities increase in winter, particularly in western delta waters.

Adequate levels of dissolved oxygen (DO) in the waters of the Delta are necessary to maintain desirable fish and aquatic life, and vary with local conditions. DO is decreased by low flows, high temperature, discharge from municipal, industrial, and agricultural sources, and dredging activities, and is increased by high winds. Aquatic plants increase DO during daylight hours through photosynthesis, but decrease DO at night through respiration.

Groundwater in the Delta lies within silt and clay lenses of undetermined thickness which comprise a thick section of relatively fine-grained, unconsolidated Quaternary and late Tertiary deposits. Brannan Island SRA is located on the northern edge of the state-classified San Joaquin Hydraulic Study Area. Groundwater quality in this area is generally poor, and in many areas the water is unusable because of the high concentration of salts, dissolved solids, and gases associated with natural gas drilling. On Brannan Island SRA, surface gas tends to rise with the

water in water wells. Deep water wells at Brannan Island SRA, however, provide better quality water than those on other Delta islands with shallower water tables.

Floods are of constant concern throughout the Delta, and each of the 70 islands or tracts has been flooded at least once, if not several times. From 1930 to 1980, levee failure accounted for flood damage on 22 islands. In 1980 alone, six islands experienced flooding. The winter storms of 1986 caused major damage on many islands. While winter seasons with above average precipitation and high water levels cause most major flood incidents, between 1950 and 1982, four levee failures occurred in the late summer and fall. Although Brannan-Andrus Island has flooded, Brannan Island SRA has remained dry, undoubtedly due to its high elevation (25 to 40 feet above sea level).

Geology

The Great Valley Geomorphic Province, divided into two sub-basins, the Sacramento and the San Joaquin, is a long, low trough underlain by Quaternary sedimentary rock, lesser amounts of Tertiary sedimentary rock, and Cretaceous shales. This geologic base is overlain with alluvium and fill deposits including peat and detrital sediments that are interbedded with glacial sands and gravel washed down from the Sierra Nevada. Occupying the lowest part of the western Sacramento Basin is the Sacramento-San Joaquin River Delta. Originally, the Delta was part of the inland sea of Tertiary and post-Tertiary times, but during the Post-Pleistocene, the Delta became filled with many islands formed by waters moving through this region. During periods of flooding, sediments were deposited along the islands' shores, forming natural levees. Each island's interior became lower in elevation, and seasonal ponds provided an ideal environment for tule plants. These tule marshes have formed significant peat deposits throughout the Delta. The layered peat deposits at Brannan Island SRA have been overlain with substantial amounts of sedimentary sands (dredged materials) scoured from the bottom of the Sacramento River channel.

Three active faults lie to the southwest of the unit, and are capable of producing strong seismic shocks. Buried under recent alluvium, the northwest trending Midland fault zone is a major subsurface feature. Drill holes from gas fields indicate that the latest movement in this zone occurred in Eocene times. Yet, the California Division of Mines and Geology considers the possibility that the Vacaville earthquake of 1892 originated along this fault. The Antioch fault, running north/south through the city of Antioch, is very active, and has produced nine

earthquakes between 1962 and 1971, ranging from 2.5 to 5.0 on the Richter scale. There has been no historic activity on the Tracy-Stockton fault to the southeast of the unit; however, the possibility of seismic activity here is not discounted. The Greenville fault near the city of Livermore produced significant seismic activity in 1980, registering quakes of 5.5 and 5.8 on the Richter scale.

The most severe effect from earthquakes in the Delta would be damage to the levee system. Many levees in the Delta are water saturated, lack cohesion, and are constructed on extremely unstable soils that could amplify earthquake waves passing from bedrock to unconsolidated soil layers. The following effects could result from seismic shock:

- Liquefaction of levees or foundation soils. This threat is greatest where depth to ground water is shallow.
- Compaction and settlement of levees or foundation soils.
- Lateral spreading of levees or foundation soils.
- Slumping of levees.
- Ground cracking of levees.
- Lurching of levees.
- Erosion or topping of levees by seiches (oscillating waves resulting from seismic shock).

The probability of levee failure is increased during periods of high water when stress is greatest. With failure of large levees, substantial flooding would inundate those Delta islands with substandard or particularly fragile levees. According to the State Department of Water Resources, the majority of the levee system would fail during a severe earthquake.

Subsidence is an ongoing process affecting peat and other organic soils. Subsidence occurs throughout the Delta, and is due to varying causes: oxidation, shrinkage, wind erosion, tectonic movement, compaction, consolidation (gas withdrawal), burning, and export of peat. Brannan Island has subsided 5.2 meters (17 feet). Brannan Island SRA is located over the Rio Vista gas field, where subsidence due to gas extraction seems apparent.

Erosion from water is a problem at the unit. At Brannan Island SRA, a 305 meter (1,000 foot) stretch of shoreline from the confluence of Three Mile Slough and Seven Mile Slough down the

west bank of Three Mile Slough is extremely erodible. Erosion from waves, tidal action, and boat wakes create a constant problem.

Visitors' foot traffic has exacerbated erosion along the shoreline of Brannan Island SRA near the day use area. As this cliff erodes away, uncemented lenses of sand from the subsurface formation are exposed and transported by wind to form sand dunes north of this area. Eventual depletion of the sand source could result in the loss of the parent dune formation.

Discovered in 1936, the Rio Vista gas field is the largest single natural gas field in California, encompassing 22,770 acres. Mineral rights on Brannan Island SRA, on the southwest margin of the field, were retained by the Sacramento and San Joaquin Drainage District. Leases for nine wells have been granted in the unit, and production in 1986 totaled 988,684 thousand cubic feet (MCF). Production total for 1983 was 725,468 MCF.

Soils

Brannan Island SRA is located within Soil Region IV, Sacramento Valley. Soils in this region vary depending on the parent material, drainage, and age developed from alluvial deposition. The soil types found in the area of Brannan Island SRA are mixed alluvium and sedimentary alluvium.

The soils on Brannan Island SRA are xeropsamments, moderately well to excessively drained soils. Formed of the dredged material from the river bottom, these soils are derived from mixed rock sources, and early on were designated as human-made land. Permeability is rapid, with slow run-off, and erosion hazards from wind and water are high. The Soil Conservation Service is presently mapping the soils of Sacramento County, and although native soils may be present in the unit, particularly on the bluffs overlooking Three and Seven Mile Sloughs, they have not been recorded at this time.

Plant Life

The four vegetation types identified at Brannan Island SRA are disturbed/cultivated, ruderal, riparian scrub, and freshwater marsh. The disturbed/cultivated areas of Brannan Island SRA (picnic areas, campgrounds, and parking lots) are landscaped with mostly exotic (non-native) tree species. Trees include Monterey pine (*Pinus radiata*), beefwood (*Casuarina* spp.), eucalyptus

(Eucalyptus spp.), and acacia (Acacia spp.). A few natives do occur, including Fremont cottonwood (Populus fremontii), sycamore (Platanus racemosa), and willow (Salix spp.). Efforts have been made to reestablish some native species, particularly valley oak and coast live oak (Quercus lobata and Q. agrifolia). Ground covers include the low growing shrub, coyote brush (Baccharis spp.), bermuda grass (Cynodon dactylon), and saltgrass (Distichlis spicata).

The ruderal vegetation type which occupies the western two-thirds of Brannan Island SRA supports a few willow and eucalyptus trees, with deerweed (Lotus scoparius) being the most common shrub. Bush lupine (Lupinus arboreus) and coyote brush also appear. The herbaceous flora is dominated by mustard (Brassica geniculata), several thistles (Centaurea solstitialis and Salsola pestifer), western ragweed (Ambrosia psilostachya), wild radish (Raphanus sativus), and non-native annual grasses.

The riparian scrub occurs on channel islands and levees. Willow, white alder (Alnus rhombifolia), and Fremont cottonwood are the most common tree species, although an occasional valley oak, sycamore, or black walnut (Juglans hindsii) does appear. The sprawling Himalaya blackberry (Rubus procerus) is pervasive in this community, and together with various thistles (Carduus pynoccephalus, Cirsium vulgare, and Cynara cardunculus), often forms impenetrable thickets. Species found only in this area are moist habitat flora: aster (Aster chilensis var. lentus), delta tule pea (Lathyrus jepsonii ssp. jepsonii), water horehound (Lycopus americanus), and California loosestrife (Lythrum californicum).

Riparian scrub and freshwater marsh communities often intergrade, particularly where the riparian areas are subject to inundation. Trees are fewer, and tule (Scirpus acutus) and cattail (Typha latifolia) predominate in the freshwater marsh. Strips of freshwater marsh occur along waterways and on levees. Where these strips are more extensive, more species are found including sedges (Cyperus spp.), rushes (Juncus spp.), smartweeds (Polygonum spp.), and mudwort (Limosella subulata).

Recent fire history at Brannan Island SRA is linked to accidental or deliberate human caused ignitions, and is not part of a natural fire cycle. Dry vegetation, wind, and high temperatures in summer and fall months are correlated with reported fires. Natural fire cycles for riparian and

freshwater marsh vegetation are not well understood. It is known, however, that tules will burn intensely under a wide range of conditions, and cottonwoods are very susceptible to fire damage.

Mason's lilaeopsis (Lilaeopsis masonii), a state listed rare species, occurs along the shoreline of the unit. Populations are concentrated on the northwest shore along the Sacramento River, and on the northeast shore along Seven Mile Slough. A conflict could occur between preserving the species' habitat at the confluence of Three and Seven Mile Slough and maintaining the popular day-use swim area in this same location .

The state and federally listed endangered Antioch dunes evening primrose (Oenothera deltoides var. howellii) was introduced at Brannan Island SRA in 1967. Because it is not a native population, it is not protected by the State and Federal Endangered Species Acts to the same degree that native populations of listed species are. The primrose population at Brannan Island SRA has become established, and is reproducing.

California hibiscus (Hibiscus californicus) has been sighted in the vicinity and could occur in the unit. Appropriate habitat for the delta tule pea (Lathyrus jepsonii ssp. jepsonii) exists in this unit. Both species are federal candidate species and are listed by the California Native Plant Society as rare and endangered.

True successional changes in the composition of vegetation at Brannan Island SRA could only occur in the absence of human disturbance. Because Brannan Island SRA has and does experience a high rate of disturbance, no real succesional change in vegetation type has been documented.

Animal Life

Native species of animals have felt the impact of human action in the Sacramento-San Joaquin Delta, and now reflect an environment drastically different than that of the pre-Euroamerican intrusion. It is uncertain how much effect the prehistoric and protohistoric Indian populations had on faunal species; however, there can scarcely be any doubt that Euroamerican contact had profound results. In a matter of decades, in efforts to feed growing numbers of people who arrived in the aftermath of the discovery of gold, hunters decimated herds of tule elk, whose

estimated pre-exploitation population was about one-half million. Grizzly bear, antelope, deer, mink, and a variety of birds were also severely depleted or extirpated. Agricultural activities, water diversion, levee building, waste water disposal, and the constant introduction of exotic (non-native) species have had profound effects on all native fauna. Not the least of these effects has been the gross alteration of the benthic and planktonic communities from the scouring of the river bottom or the burying of species, preventing nutrient build-ups, pushing organisms downstream or inland to less favorable areas, and reducing the photic zone, thereby limiting the areas where photosynthesis can occur. In addition to disruption of the food chain and alteration in forage for fish species, many fish have had to contend with water-transport pumping, which disrupts migration patterns and causes severe losses among larval and juvenile fish.

It is still possible to locate and view a variety of terrestrial and semi-aquatic animals in some of the more isolated regions of the Delta, particularly where sloughs and secluded riparian channel islands provide suitable food, shelter, denning, and ranging areas. Less isolated areas, such as the ruderal habitat of Brannan Island SRA, support those species common to disturbed environments: rodents, rabbits, small carnivores and omnivores, such as skunks and raccoons, and, more rarely, coyotes and gray foxes. Similarly, birds include scrub jays, blackbirds, and sparrows, with kites, woodpeckers, and finches occurring in the ruderal area. Along the marshy margins of the island, muskrat and beaver have been sighted, and a variety of waterfowl, in addition to herons, gulls, kites, mourning doves, and other birds common to the island as a whole.

Rare, threatened, or endangered species of mammals are not known to occur within the unit, and although the potential habitats exist for many birds listed as rare, threatened, or endangered, none have actually been sighted except the state listed, rare Swainson's hawk (*Buteo swainsoni*), which nests north of Brannan Island SRA.

Reptiles are represented by lizards, gopher snakes, and racers; no pond turtles have been identified despite marshy habitat in Seven Mile Slough. It is likely that the marsh and riparian habitats support other reptile species, including the Pacific treefrog.

Of the more than 100 species of fish occurring in the Delta, at least 26 have been caught off Brannan Island SRA. Salmon and steelhead migrate up the Sacramento River each fall and

winter, and in the spring, striped bass and shad begin their migration upstream. Striped bass, as well as catfish, are the most important sport fish in the Delta. The most abundant species near Brannan Island SRA are the largemouth bass, native tule perch, squawfish, and introduced carp and threadfin shad. Tule perch are known to breed in the dense tule vegetation in the slow backwater habitat near Brannan Island SRA. Sturgeon and chinook salmon also occur around the unit.

The composition of the fish community within the Delta remains unstable due to water diversions, waste water disposal, pollution, and the appearance of newly introduced species that disrupt or displace residents. The introduction of the white bass into the San Joaquin River during the 1983 floods is the most recent example of this problem. Biologists fear that this voracious predator of juvenile stripers, salmon, and many native species will eventually enter the Delta and reduce, or extirpate, many delta fish species.

Two native species of fish have been extirpated in recent times, and a third has shown a precipitous decline. Now considered extinct, the thicktailed chub was last caught in the Delta in 1957, near Rio Vista. Only one Sacramento perch has been reported since 1972; however, this species has been introduced into several reservoirs, where it remains numerous. The once relatively abundant Delta smelt, known to spawn near Brannan Island SRA, has also dramatically declined. Many native species have gone through similar declines; unfortunately, they were never documented.

Several invertebrate species are found in delta waters. Most planktonic and benthic species are basic pillars of the food chain. The most important invertebrates in the Delta are probably mysid shrimp (Neomysis), because of their importance as fish food, and crayfish, because of their commercial value. Water flow patterns and velocity, salinity, temperature, sediment deposition, increase in dissolved solids affecting light penetration, availability of nutrients, and pollution, are all factors affecting the balance in populations of invertebrate species.

The only known listed rare, threatened, or endangered invertebrate species in the area of the SRA is the federally listed, threatened Sacramento anthicid beetle (Anthicus sacramento), which occurs in two sandy sites just north of Brannan Island SRA, on the west side of the Sacramento River

south of Rio Vista. Although no specimens were found on Brannan Island SRA, suitable habitat does exist in the unit, and, therefore, there is potential for establishing a population in the unit.

Ecology

Six major habitat types occur within the unit: terrestrial ruderal, high-use, riparian, semi-aquatic freshwater marsh, aquatic channel/open water, and backwater areas. All habitats show varying degrees of human impact, with the high-use and ruderal areas sustaining the most intense disturbance. Predictably, the latter areas are host to many introduced species of plants, and to wildlife associated with highly disturbed environments.

Freshwater marsh and riparian shrub-scrub comprise the habitats most favored by native mammals and a wide variety of birds. These habitats occur on levees and the bulk of the channel islands. The aquatic channels and open water areas around Brannan Island SRA contain numerous species of fish and birds. Backwater areas northeast of Brannan Island SRA provide important reproduction and feeding areas for many native species.

Climatic conditions in the Delta tend to be mild to moderate, with distinct summer and winter seasons. Variation in air and water temperatures, tidal flows, winds, winter storms, and spring run-off are typically not severe. In the Delta, water export, levee building and maintenance, urban, agricultural, and industrial development, and the introduction of exotic species are all ongoing activities, with negative impacts on native habitats. When several of these components act in unison, such as during the drought years of 1976 and 1977 or the flood years of 1981, 1983, and 1986, the flora and fauna of the Delta can sustain severe negative impacts.

Cultural Resources

Native American Resources

Because of widespread disturbance at Brannan Island SRA, the deep deposits of spoil which appear to cover most of the area, and the substantial alteration of natural topography by dredging operations, prehistoric resources are not evident.

There is the possibility that prehistoric resources could lie under the deep spoil deposit at Brannan Island SRA. Only the advent of large scale construction or land leveling could reveal such evidence.

Euroamerican Resources

The Euroamerican resources within Brannan Island SRA are of recent origin or construction, and lack the significance of historic resources. The historical value of the unit is the representative role the property has played in prehistoric lifeways and in the historic network of events that have produced the rich agricultural resource of today's Delta.

Prehistoric, Ethnographic, and Historic Overview

The Sacramento-San Joaquin River Delta ecosystem encompasses a wide range of vegetation and animal life. The river systems winding through these environments have provided varied resources for human use for many centuries. The prehistoric Indian economy was focused on an intensive pattern of gathering, fishing, and hunting. Native American lifeways persisted throughout the region until the latter half of the eighteenth century, when the first Spanish explorers were followed by eventual missionization and colonization. With the advent of immigration by Euroamerican peoples, and particularly with the substantial influx of people in response to the discovery of gold, these waterways became increasingly valuable as avenues of transportation. Consequently, in a broad sense, the story of human occupation in the delta region provides a focal point for prehistory and history of central California in particular, and of northern California in general.

Archaeological investigations within the Delta have provided the basic research and foundation for prehistory in central and northern California. The data used for determining Delta prehistory was gathered during archaeological investigations in areas adjacent to Franks Tract: Bradford, Bethel, Webb, and Holland islands. Evidence of burials here are linked to that period called the Early Horizon, or the Windmiller Pattern (2500 B.C. to 1000 B.C.), and possibly to the succeeding Middle Horizon, or Berkeley Pattern (1000 B.C. to A.D. 500). The Augustine Pattern, or Late Horizon, dated from A. D. 500 to approximately A. D. 1800, is marked throughout the Delta by large village sites known from ethnographic accounts and archaeological investigations.

The lands of the lower Delta were occupied prehistorically by the ancestors of the Bay and Plains Miwok peoples and subsequently by their ethnographic descendants. Scholarly research in mission baptismal records, historic accounts, linguistic research, and archaeological investigation

has provided the most consistent basis for distinguishing general settlements. Brannan Island SRA lay within the lands of the Plains Miwok triblet of the Guaypeme.

Undoubtedly part of the wide procurement territory for these people, Brannan Island SRA supplied a rich resource base for an economy based on intensive food gathering. Varied plants supplied both food and items of material culture. The tule was the source of matting for structures and household use, and stalks for woven "balsas," or boats. Faunal resources, such as salmon, sturgeon, elk, deer, and pronghorn (antelope), provided meat for food and bone for implements. Wood and imported stone were fashioned into food processing tools, bowls, and the mortar and pestle. Material exchange systems are evident in the rich mortuary offerings of clam shell disks and Olivella shell beads from coastal groups, and obsidian for projectile points from both eastern Sierra and northeastern Californian groups.

Miwok triblets, residing in primary villages with secondary hunting, fishing, and gathering locales, were characterized by social cohesion and local autonomy. The centers of triblet residency were occupied for many generations, and functioned as focal points for ceremonial activities and specialized crafts. Situated on high ridges and knolls near watercourses, these villages sustained substantial sedentary populations which, according to some estimates, could number up to 300 persons. These settlements represented the basic unit of sociopolitical organization, and were comprised of localized patrilineages under the aegis of a tribal chief, or headman. Cooperation between triblets appears to have been founded on economic relations, with access to key resources as a determinant of alliance.

Earliest contact with the Spanish came with the initial exploration of the upper Bay. Subsequent expeditions by priests and soldiers between 1776 and 1803 were devoted to exploration of the rivers, to the pursuit of deserting soldiers, and to early attempts to convert neophytes. With the increasing influx of Euroamericans and the settlement of land grants after the turn of the century, much of the aboriginal lifeway vanished.

With the exception of John Sutter's New Helvetia, the few ranchos did not prosper substantially. With the discovery of gold, the Delta sustained a veritable flood of people, and the life of the rancho became only a memory. The waterways of the Delta became a main transportation route for fleets of sail and steamboats, many docking at the new settlement of Rio Vista upstream from

Brannan Island SRA. Smaller, informal docks of brush and prunings marked the river, and served the small settlements that had sprouted on the higher natural levees.

As the rush for gold declined, the rush for agricultural wealth began. Delta lands such as Brannan Island became the focus of reclamation, intensive agricultural undertaking, and complex financial investments. The knowledge that the fertile peat-lands and surrounding regions could support substantial agricultural enterprise had been understood for some time. Originally, "swampland" survey units were granted to individuals who would be responsible for reclamation and development of the properties. The property that now comprises Brannan Island SRA was granted in 1859 to members of the Curtis family from Sacramento. N. Curtis Greene was a prominent Sacramento lawyer. Capital ventures in reclamation projects and Delta land sales for persons in the legal or business fields appears to have been relatively common during this period.

Early efforts to build levees and to reclaim much of these lands from the tule marsh environment were accomplished by reclamation districts which were established to authorize surveys and to levy taxes on landholders to cover reclamation and maintenance costs. The first levee on Brannan Island was built in 1871, with the final work completed in 1876. A lack of coordinated plans resulted in a myriad of private levees built by or for individual landowners, and often at the expense of their neighbors. Many levees, such as that of Gilbert Crum on lower Brannan Island, were considered improperly constructed and a hazard during flood season.

A major breakthrough in the construction of levees was the advent of the mechanical dredge, particularly the clamshell dredge. Prior reclamation had been accomplished primarily through the manual labor of migrant workers, such as the Chinese, who hand-built low levees. The mechanical dredge was capable of retrieving large amounts of sands and sediments from river channels, material that proved to be far more reliable and durable for levees than peat. Dredging firms engaged in contract work for reclamation districts, and, on occasion, owners of these enterprises, invested in lands in the Delta.

Many reclaimed islands were leased to tenant farmers who grew varied crops, mainly vegetables and grains, and later fruit. Labor for these enterprises was provided by many migrants to the western United States from diverse ethnic and social backgrounds. Chinese settlements grew up, especially in the western Delta at towns such as Walnut Grove and Isleton, while many Japanese

farmers as well as Sikhs, Koreans, Filipinos, and European migrants combined to make the Delta a rich center of agriculture for northern California.

Levee failure, and consequently flooding, was a constant worry in the Delta. Lower Brannan Island escaped the ever-present threat of floods, mainly due to increased elevation which was the result of continuous deposition of "spoil" from dredging operations by the U.S. Army Corps of Engineers. The corps was responsible for the maintenance of navigable channels in the Sacramento River, and the portion of Brannan Island that is now a state recreation area became a major disposal site.

The discovery of natural gas in 1936 heralded another wave of investment and land acquisition throughout the Delta, accounting for nine well sites on the property now comprising the Brannan Island SRA. The shifting sands and continuous winds of spring and summer proved to be a problem during construction of gas wells on Brannan Island.

The dredging of channels, the building of levees, the damming of sloughs, the drilling of wells, and the construction of the broad fields and orchards have left little in the way of pristine environment for most areas of the Delta. While the prehistoric and historic land use involving areas surrounding and including Brannan Island SRA reflect the chain of human activity in the delta region, little physical evidence remains in either area that can be evaluated as significant in this regard.

Esthetic Resources

The landscape at Brannan Island SRA is generally open and flat except where views are blocked by planted vegetation and the piling or excavation of spoils material. Although Brannan Island SRA is almost entirely surrounded by waterways, water is visible only near the shoreline and from areas of high elevation. The scenic quality is highest along the shoreline, where there is usually vegetation, particularly trees.

Negative scenic features at the unit include a random potpourri of mostly introduced plant species, many of which are dying or in need of horticultural attention. The scenic resources are further compromised by the presence of human-made features that are not normally associated

with a natural or recreational environment. These include above ground telephone and electrical facilities, gas wells, wire fencing, gravel pads, access roads, and disturbed areas.

The esthetic environment is limited in other ways as well. State Highway 160, which separates the southwestern portion of Brannan Island SRA from the remainder of the unit, is a constant source of noise. The gas well compressor station at the north end of the unit produces both noise (day and night) and offensive odors. In addition, there is insufficient shade and little protection from strong winds.

Recreation Resources

Brannan Island SRA provides opportunities for both water oriented and land based recreation activities, and both day and overnight use. Such activities include fishing, motor boating, water skiing, sailing, boardsailing, swimming, picnicking, hiking and camping. Boardsailing was uncommon in the area just five years ago. Now, the Rio Vista area (as it is referred to in boardsailing journals) is fast becoming recognized as a world class boardsailing area. Despite significant traffic hazards along State Highway 160, boardsailers currently reach the water at Glass Beach, one and one-half miles north of the unit. Although the southwestern shoreline of Brannan Island SRA offers more favorable conditions for boardsailing, it is much less accessible.

The greatest numbers of visitors to Brannan Island SRA arrive in July and August; the fewest, in January. The peak season begins in April or May, and continues through October or November.

Over the past twelve years, day and overnight use at Brannan Island SRA has steadily increased, as indicated by attendance records. During the peak season, individual campsites are filled to capacity each weekend, and to approximately 75% capacity throughout the week. The boat slips, the picnic facilities, and the boat launch parking lot are frequently at capacity, and the day use parking lot is typically two-thirds full during this time of the year. Visitors are repeatedly turned away, reflecting existing recreation deficiencies at Brannan Island SRA, as well as throughout the Delta. Demands for a variety of recreation opportunities, particularly camping, are projected to increase according to the California Department of Parks and Recreation Information System (PARIS) as the populations of the nearby areas continue to expand.

Resource Policy Formation

Classification

Classification of a State Park System unit forms the foundation on which all management and development policies are based. Classification statutes contained in Article 1.7 of the Public Resources Code specify broad management objectives and improvements appropriate in a state recreation area.

Brannan Island State Recreation Area was acquired by the state in 1954. Following establishment of the current State Park System classification system in the early 1960s, the State Park and Recreation Commission classified the unit as Brannan Island State Recreation Area. Classification by the commission directed the department to manage the unit as specified in Public Resources Code Section 5019.56. This section defines and describes a state recreation area as a type of state recreation unit:

5019.56. State Recreation Units. State recreation units consist of areas selected, developed, and operated to provide outdoor recreational opportunities. Such units shall be designated by the commission by naming, in accordance with the provisions of Article 1 (commencing with Section 5001) and this article relating to classification.

In the planning of improvements to be undertaken within state recreation units, consideration shall be given to compatibility of design with the surrounding scenic and environmental characteristics.

State recreation units may be established in the terrestrial or underwater environments of the state and shall be further classified as one of the following types:

(a) State recreation areas, consisting of areas selected and developed to provide multiple recreational opportunities to meet other than purely local needs. Such areas shall be selected for their having terrain capable of withstanding extensive human impact and for their proximity to large population centers, major routes of travel, or proven recreational resources such as manmade or natural bodies of water. Areas containing ecological, geological, scenic, or cultural resources of significant value shall be preserved within state wilderness, state reserves, state parks, or natural or cultural preserves.

Improvements may be undertaken to provide for recreational activities including, but not limited to, camping, picnicking, swimming, hiking, bicycling, horseback riding, boating, waterskiing, diving, winter sports, fishing, and hunting.

Improvements to provide for urban or indoor formalized recreational activities shall not be undertaken within state recreation areas.

Declaration of Purpose

A declaration of purpose describes the purpose of the unit, and identifies the prime resources, long-range management objectives, and the relationship between the unit's resources and recreational uses. A declaration of purpose for Brannan Island SRA was approved by the State Park and Recreation Commission on January 28, 1965. The declaration of purpose for the unit is as follows:

The purpose of Brannan Island State Recreation Area, located at the confluence of Three Mile Slough and the Sacramento River, is to make permanently available to the people the opportunity to use and enjoy a portion of the Delta region of California and its extensive inland waterways.

The function of the Department of Parks and Recreation at Brannan Island State Recreation Area is to provide facilities and opportunities for the enjoyment of a variety of water-oriented and other recreational activities, consistent with the declared purpose of the unit.

Zone of Primary Interest

The zone of primary interest is that area outside the unit in which land use changes could adversely affect the resources of the unit. For Brannan Island SRA, this area includes the nearby community of Rio Vista, the surrounding waterways of the Sacramento River, Three and Seven Mile Sloughs, and Twitchell and Sherman Islands.

In addition, the department should be concerned with activities on all lands, no matter how far from the unit, that can, through their development and use, adversely affect the resources and features in the unit. Air pollution generated from San Francisco communities and downwind industrial development could have a greater than already experienced affect on the unit.

Pumping stations in the southern Delta, upstream diversions, and agricultural run-off affect water quality and water flow around the unit. Water quality and flow relate directly to the health of the

fisheries in the area. A decline in the fish population would result in a direct impact on the recreational aspects of the unit. Development in the surrounding areas could alter the visual quality of the unit.

Department officials should be aware of these potential threats, and take action whenever possible to minimize them.

Resource Management Policies

Resource management in the State Park System is governed by laws contained in the Public Resources Code, by regulations in the California Administrative Code, by directives approved by the department's director, and by policies approved by the State Park and Recreation Commission. General policies related to the unit classification and the declaration of purpose have been addressed in previous sections.

Specific departmental Resource Management Directives amplify the legal codes, and provide clear management guidelines. Directives that are especially pertinent to existing or potential problems related to the management of resources within Brannan Island SRA are:

- #14 Private Uses and Development
- #15 State Recreation Units; protection of resources
- #33 Exotic Plant Species - Landscaping
- #34 Exotic Plant Species - Elimination
- #36 Wildlife Management
- #38 Erosion Control
- #46 Environmental Quality
- #60 Historical Interpretation

The term "wetland" refers to any watercourse or body of water, the lands underlying or adjacent to these waters, and the wildlife and natural communities dependent on the wetland habitat (California Administrative Code, Section 5812). With their diversity of plant and animal life, wetland areas are important natural, esthetic, and recreational resources. Riparian woodlands and freshwater marshes are types of wetlands. In recognizing the significance of wetland ecosystems, the California Administrative Code, Section 5816, states the following:

The departments shall give particular recognition to opportunities for protecting and preserving wetlands lying within, or adjacent to, existing units of the state park system, and consider state park acquisition projects and the acquisition of areas in proximity to state park system units which lend themselves to feasible wetlands management and protection and preservation, without creating inordinate additional management cost burdens.

In addition to systemwide policies, specific policies that pertain to existing or potential resource issues or problems have been formulated for Brannan Island SRA, and are given below by major subject.

Natural Resources

Microclimates

Microclimates created by shelter from the strong winds or the intense summer sun contribute to the recreational quality of the SRA.

Policy: The site design as well as engineering and architecture of the facilities at Brannan Island SRA will maintain and enhance sheltered microclimates.

Hydrologic Resources

The water features in the unit are important to the perpetuation of the recreation and esthetic values at Brannan Island SRA. Any significant alteration of the hydrologic systems supporting these water features, either within or outside of the unit, may affect them significantly. These impacts need to be identified, monitored, and prevented or corrected before major values of the unit are lost.

Policy: The department shall be actively involved in local, state, and federal land and water use decisions that may have an adverse impact on the unit's water features. Measures to maintain water quality, channel flow, and sediment rates shall be recommended and supported. No water shall be diverted within the unit's boundaries that will significantly affect the water features and the ecosystems they support.

Erosion

Following several years of significant storm damage in many coastal State Park System units, the department adopted a policy for coastal erosion on October 24, 1984. The intent of the policy is to avoid construction of new permanent facilities in areas subject to coastal erosion, and to promote the use of expendable or movable facilities where the expected useful life is limited due to their location in erosion prone areas. Based on this coastal erosion policy, the following policy has been developed for Brannan Island SRA.

Policy: The department shall avoid construction of new structures and facilities on unstable cliffs and in areas subject to erosion, unless specific determinations have been made that the risk of loss of the facility is clearly offset by the investment and need for the facility. Measures shall be taken to minimize human induced erosion by reducing: concentrated surface runoff from use areas, elevated groundwater levels from irrigation and urbanization, and surface disturbance of blufftop soils. In recognition of the unit's easily eroded shoreline, new structures and facilities located in areas known to be subject to erosion and unstable cliffs shall be expendable or movable. Structural protection and re-protection of developments shall be allowed only when the cost of protection is commensurate with the value (physical and intrinsic) of the development to be protected, and when it can be shown that the protection will not affect the shoreline or the near-shore environment in a negative manner.

Groundwater Quality

The spoils pits in "Parcel A" on Brannan Island SRA are used and regulated by the Sacramento-San Joaquin Drainage District (State Reclamation Board). The department does not currently monitor the district's activities. Dredgings taken from highly fertilized soils or from contaminated areas could have adverse effects on the groundwater quality.

Policy: In consideration of the potential adverse effects on the groundwater quality and the scenic quality of the unit, as well as constraints to recreational development, the department should seek to obtain all surface rights of "Parcel A".

Seismicity

Brannan Island SRA is within a seismically active area capable of producing strong seismic shaking. Recent earthquakes of 6.2 and 6.7 on the Richter scale damaged levees within the Delta. The California Department of Water Resources has indicated that earthquakes of 6.0 magnitude originating from nearby faults have a probability of occurring.

Policy: New facilities constructed at Brannan Island SRA shall be designed to withstand a Richter magnitude 6.0 earthquake, with a repeatable ground acceleration of 0.3 gravity (g).

Mineral Resources

The State Reclamation Board currently owns the gas, oil and mineral rights of Brannan Island SRA and leases the rights of usage to the Mobil Oil Corporation and the Amerada Hess Corporation. Collectively, these companies are responsible for the nine productive and two non-functioning gas wells distributed across Brannan Island SRA.

Policy: An agreement shall be sought with the State Reclamation Board to limit development of new gas wells. If new gas wells are allowed, certain esthetic conditions as well as financial benefits to the department must be met. The department shall attempt to obtain the gas, oil, and mineral rights of Brannan Island SRA.

Soils

Trails and shorelines in Brannan Island SRA are experiencing erosion. As visitor use increases, erosion of the sandy soils due to trail development and foot traffic could accelerate and cause undue damage. It may be necessary to actively manage those areas most severely eroded, and include soil erosion considerations in future plans for use of this unit.

Policy: The department shall endeavor to minimize human-caused erosion in Brannan Island SRA. Unnatural or destructive erosion shall be controlled and prevented by means that are consistent with the goals of the state recreation area. Where correction is necessary, all measures used shall be as unobtrusive as

possible, fitting naturally into the environment, with the objective of restoring the natural condition.

Exotic Plant Species

Exotic plant species have become naturalized within Brannan Island SRA, where they are successfully competing with native species. Exotic species have also been planted in the campground area. Perpetuation of native plant communities is dependent on the control and removal of exotic species.

Policy: The department shall pursue a long-range objective of removing exotic plants, in particular star thistle, black locust, tamarisk, and acacia, which have become established in the unit. High priority shall be given to eradicating those species most invasive and conspicuous in the landscape. An important element of long-range exotic species eradication programs shall be an active revegetation program using species native to the unit or the immediate area.

Landscaping

Exotic species detract from the natural appearance of Brannan Island SRA. Exotic species frequently have lower habitat value for native wildlife, and can become naturalized and displace native plant species. Exotics frequently require permanent irrigation, and can be more susceptible than native species to insect attack and disease.

Policy: In order to maintain the diversity of native species, landscaping in developed areas should consist of species indigenous to the unit.

Riparian and Freshwater Marsh Zone Management

In Brannan Island SRA, land use adjacent to and within the riparian and freshwater marsh communities has resulted in impacts to the natural vegetation through the introduction of non-native plant species, vegetation trampling, and soil erosion.

Policy: The integrity of riparian and freshwater marsh ecosystems within Brannan Island SRA shall be protected from activities which result in significant loss of native vegetation or development of a multi-layered community structure.

Existing or proposed recreational development along the shoreline shall be mitigated through protection and restoration of other areas of the unit.

Rare and Endangered Plants

Several rare or endangered plant species have been identified in the vicinity of and within Brannan Island SRA. Although populations of some of these species have been accurately located, site-specific information for these sensitive plants is often lacking. As a result, rare or endangered plants can be inadvertently destroyed by development of facilities, maintenance programs, visitor use, or other activities.

Policy: Rare or endangered plants within Brannan Island SRA shall be protected and managed for their perpetuation, in accordance with state law (PRC, Division 2, Chapter 10, Section 1900). Surveys for rare or endangered plants shall be made during the flowering season, prior to any potentially deleterious activity, including trail construction or relocation, or prescribed burns. Rare or endangered plant populations at Brannan Island SRA shall be mapped. Management plans for their protection and perpetuation shall be developed.

Wildlife Management

Animal life is an important part of natural ecosystems, and adds interest and variety to the outdoor recreation experience. Protection and perpetuation of natural wildlife populations is a management objective at Brannan Island SRA.

Policy: Altered natural habitats not being used or proposed for recreation facilities shall be restored as nearly as possible to conditions that would exist had natural ecological processes not been disrupted. Whether or not restoration of natural conditions is possible, it shall be the policy of the department to avoid significant imbalances caused by human influences on the natural wildlife populations. If it is necessary to regulate wildlife populations, methods used shall be based on sound principles of ecosystem management, shall be consistent with the general policies of the department, and shall avoid disturbance to other natural values of the state recreation area.

Wildlife Requiring Special Management Consideration

Several federal or state listed rare, threatened, and endangered species could potentially occur within Brannan Island SRA. These species include the bald eagle, peregrine falcon, Swainson's hawk, California black rail, California clapper rail, California yellow-billed cuckoo, greater sandhill crane, Aleutian Canada goose, giant garter snake, Delta smelt, and Sacramento anthonid beetle. These species are of concern to the State Department of Fish and Game due to a statewide reduction in breeding status, suitable habitat, or other threats to the populations. Other species are of special scientific, interpretive, or educational interest, such as sturgeon, splittail, and small-mouthed bass.

Policy: Specific management programs shall be developed when appropriate for animal species that are threatened, endangered, or of special concern. Necessary and suitable habitat, where it exists, shall be perpetuated. Programs or projects undertaken at Brannan Island SRA shall be planned and designed so animal life requiring special management consideration will not be adversely affected. Resource management actions will focus on natural processes, in recognition that natural processes are mutually beneficial to all important resources.

Cultural Resources

No cultural resources are known to exist at Brannan Island SRA. It is possible that cultural resources could be found, although none have ever been reported to date.

Policy: In the event that a cultural resource discovery is made at Brannan Island SRA, the incident shall be promptly reported to the appropriate departmental staff person, who will determine the validity and significance of the discovery, and take appropriate protective or stabilization action.

Esthetic Resources

Brannan Island SRA has numerous utility easements, including Pacific Gas and Electric's high-voltage and electric power lines and gas lines, and General Telephone's phone lines. These easements, in combination with the easements for the gas wells owned by the Mobil Oil

Company and the Amerada Hess Corporation, encroach on the landscape, and detract from the scenic features of the unit. The presence of the many roads which are necessary to maintain the facilities add to the negative physical and visual impact. The gas wells and the power lines significantly impair the esthetic qualities of the unit.

Policy: Management of Brannan Island SRA shall be toward the maintenance of water oriented viewsheds, natural landscape, and toward a reduction or elimination of human-made intrusions. The department shall work to reduce the negative impacts of easements in Brannan Island SRA. All utility companies shall be encouraged or required to reduce these impacts by rerouting or placing underground the utility lines that currently traverse the unit , by reducing the size of and rehabilitating gas well pads, and by screening and landscaping around the gas wells. The department is opposed to any new easements within the unit unless there can be mitigation work accomplished to create a clear net benefit to recreation area resources.

All organizations which use or maintain access roads into or through the park shall be required to adhere to departmental road use and maintenance standards. Utility companies which unnecessarily damage park resources shall be required to restore the site to natural conditions, or to pay the cost of restoration.

Allowable Use Intensity

The California Public Resources Code, Section 5019.5, requires that a land carrying capacity survey be made prior to the preparation of any development plan for any park or recreation area. Section 5001.96 further requires that attendance be held within limits so established. Allowable use intensity is a refinement of the land carrying capacity concept, and is prepared as part of the Resource Element of the General Plan in fulfillment of the above code sections.

Allowable use intensity is just one of several factors considered in developing the Land Use and Facilities Element of the General Plan. Other factors that may also be considered in determining land use for any unit of the State Park System are classification and purpose, recreation needs,

design considerations, and social carrying capacity (the desired quality of the recreation experience).

Allowable use intensity determinations establish the limits of development and use an area can sustain without an unacceptable degree of deterioration in the character and value of the scenic, natural, and cultural resources. Determinations are based on analysis and integration of resource management objectives as described herein, resource constraints, and resource sensitivity information.

Resource management objectives are defined by the Public Resources Code and other law, unit classifications and declarations of purpose, and by specific declarations of resource management policy presented in this Resource Element.

Resource constraints are those which would make visitor use or facility development unsafe, economically impractical, or undesirable. They are determined by evaluating such factors as erodibility and compaction potential of soils, geologic hazards, slope stability and relief, hydrologic conditions, potential for pollution of surface waters, and flooding.

Sensitivities are conditions, locations, or values of resources that warrant restricted use or development to protect resources. Sensitivities are evaluated by considering such factors as the ability of the ecosystem to withstand human impact (ecological sensitivity), not only in the short term but also over a more extended time span; the fragility and significance of archaeological and historical resources; vegetation characteristics such as durability, fragility, and regeneration rates; and wildlife considerations such as tolerance to human activity, population levels, and stability. Sensitivities may also include scenic resources; rare, threatened, or endangered plants, animals, and habitats; unique or scientifically important botanic features; and other resources of regional or statewide significance.

Based on the preceding factors, allowable use intensities for land within Brannan Island SRA were determined, and are shown on the allowable use intensity map (see Map 1).

Three recreation use intensity categories were developed for Brannan Island SRA: high, moderate, and low. Constraints and sensitivities in the low allowable use intensity zone include

rare or endangered plant habitat, riparian or freshwater marsh communities, slopes more than 25%, and those areas restricted to recreational use due to physical constraints. Physical constraints include those which because of their very existence pre-empt recreational use (e.g., gas well site). There are a few areas with sensitive plants or wetland habitat where less acceptable (higher) levels of recreation use are proposed. These areas will be mitigated by providing additional habitat elsewhere (refer to Landscape and Habitat Improvement Program). Steep slopes will be recontoured to lower the gradient.

Moderate allowable use is proposed along certain trail segments and the walk-in portion of the new family campground, where relatively heavy visitor use will not occur or is not desirable.

High allowable use intensity areas consist of existing use areas as well as the remaining areas intended for future recreational development. Unless otherwise indicated on the map, these areas are without sensitive plant or wildlife habitat, and consist of stable soils with gentle slopes. By providing opportunities for recreation along the shoreline and in the unit where none currently exist, use intensity can be increased.

Franks Tract State Recreation Area

Resource Summary

A complete resource inventory from which this summary information was obtained is on file with the Department of Parks and Recreation in Sacramento.

Natural Resources

Topography

Franks Tract SRA is located approximately six miles south and east of Brannan Island SRA, within the Sacramento-San Joaquin Delta. The unit includes two flooded islands, commonly referred to as Big Franks Tract and Little Franks Tract. The former was flooded in 1936 and 1938 while the latter was inundated in 1981. Few landforms remain exposed, with the exception of the remnant levees around Franks Tract and the broken levees around Little Franks Tract. The levees of Little Franks Tract may rise in some places to eight to twenty feet in elevation. The soil surface of the unit is under water, approximately eight feet below sea level.

Meteorology

Franks Tract SRA experiences much the same weather patterns as Brannan Island SRA. For an overview of these patterns, refer to Brannan Island SRA, Resource Summary, page 22 of this document.

Hydrology

As a part of the Sacramento-San Joaquin Delta, Franks Tract SRA is affected by the same hydrologic forces as Brannan Island SRA (see pages 23 -25 of this document). Franks Tract SRA has flooded several times, due to levee failure. Since the floods of 1938, the main eastern portion of the unit has been under water, and the smaller western portion has not been reclaimed since 1981.

Geology

Franks Tract SRA lies in the Great Valley Geomorphic Province, and therefore has undergone geologic history similar to Brannan Island SRA (refer to pages 25-26 of this document). The occurrence of subsidence at Franks Tract SRA is due to peat export. The water level at this unit, however, precludes determination of rate or amount.

Erosion of the levees and levee remnants at Franks Tract SRA from waves, tidal action, and boat wakes is a constant problem. Because Franks Tract SRA is buffeted by water within the levees as well as without, this double-sided action can only speed the erosion of the remaining sections.

Soils

Franks Tract SRA is located within Soil Region IV, Sacramento Valley. Soils in this region vary depending on the parent material, drainage, and age developed from alluvial deposition. The soil types found in the area of Franks Tract SRA are mixed alluvium and sedimentary alluvium.

The three underlying soils of Franks Tract SRA, grouped as a Rindge-Kingile Association, are nearly level, poorly drained mucks, with depths exceeding 60 inches. The fluvaquents, found in the sloughs and channels, are very poorly drained, loamy mineral soils consisting of stratified, fine sandy loam, loam, silt loam, and silty clay loam. Vegetation is comprised of tules, reeds, a few willows, and other hydrophytic plants. Subject to frequent flooding or inundation by high tides and run-off water, these soils are primarily of value as wildlife habitat.

The Rindge Series are very poorly drained organic soils that have formed in marshes through the accumulation of remains of tules, reeds, and aquatic plants. Highly organic in content (50% to 80%), a typical profile shows several layers of very strongly acid muck of progressively darker color. Permeability is rapid; soils are level or nearly so, with slow run-off. If the soil is tilled and exposed, soil blow-out is a moderate hazard. If allowed to dry, it shrinks irreversibly. During summer, it is subject to peat fires.

The Ryde Series are very poorly drained soils formed by the slow accumulation of reed and sedge remains stratified with fine-textured mineral sediments. A typical profile shows a stratified range of medium acid silt loam, medium acid heavy silt loam, and light clay loam stratified with thin layers of sandy loam and organic material. These soils are level or nearly so, with very slow run-off and no hazard of erosion where silts have been tilled and exposed.

Plant Life

There are two vegetation types identified at Franks Tract SRA. Occurring on channel islands and levees, riparian scrub supports willow (*Salix* spp.), white alder (*Alnus rhombifolia*), and Fremont cottonwood as the most common tree species. A pervasive species in this community is the Himalaya blackberry (*Rubus procerus*), which, in combination with various thistles (*Carduus pycnocephalus*, *Cirsium vulgare*, and *Cynara cardunculus*), forms impenetrable thickets. Species found only in this area are moist habitat flora: aster (*Aster chilensis* var. *lentus*), delta tule pea (*Lathyrus jepsonii* ssp. *jepsonii*), water horehound (*Lycopus americanus*), and California loosestrife (*Lythrum californicum*).

Among areas of inundation, riparian scrub and freshwater marsh often intergrade. Tule (*Scirpus acutus*) and cattail (*Typha latifolia*) predominate in the freshwater marshes, and occur along waterways and on levees. Other species found in this community are sedges (*Cyperus* spp.), rushes (*Juncus* spp.), smartweeds (*Polygonum* spp.), and mudwort (*Limosella subulata*).

Natural fire cycles for riparian and freshwater marsh vegetation is not well understood. It is known, however, that tules will burn intensely under a wide range of conditions, and cottonwoods are very susceptible to fire damage.

Two plant species classified by the California Native Plant Society as rare and endangered occur in the unit. These are the California hibiscus (Hibiscus californicus) and the delta tulle pea (Lathyrus jepsonii ssp. jepsonii). Both of these species are candidates for listing under the Federal Endangered Species Act.

Animal Life

Prior to the levee failure in 1981, Little Franks Tract was a noted wildlife area, and for many years served as the base for wildlife field trips for Mount Diablo School District students. Muskrat, raccoon, beaver, and river otter were all sighted, and during one year, seven beaver lodges were counted in this unit. Today's levee remnants still support otter, rabbit, and skunk. Rodents and rabbits also make use of the riparian habitat. During fall and winter, a large variety of waterfowl will be present on the open water habitat of Franks Tract SRA. It is generally agreed that Franks Tract SRA is used primarily as a resting place by waterfowl, as its depth of more than two meters exceeds the dipping/diving depth of most bird species. It is also generally believed that both hunting pressure and boat traffic limit the waterfowl use of this area. The Delta holds a key position in the Pacific flyway, the major pathway for migratory species on the west coast, and the greatest diversity of birds are present in the fall and winter. Year-round residents are gulls, great blue herons, terns, swallows, crows, blackbirds, cormorants, and kingfishers.

The abundance of wildlife on Little Franks Tract prior to the 1981 levee failure included more than 100 species of birds. The unique combination of minimal human traffic and continuous marsh and riparian habitat created an important roosting, feeding, nesting, and resting refuge. The yellow-headed blackbirds that occur irregularly elsewhere in the Delta were common in this tract. Black-crowned night herons maintained a thriving colony in the riparian woodland along the southern margin of the tract, and unusual vagrant species, such as the American redstart, golden eagle, and yellow-breasted chat, were commonly reported.

There have been no known sightings of rare, threatened or endangered species of mammals or birds within the borders of the State Recreation Area, although the potential habitats exist for many species.

Lizards, gopher snakes, and racers are representative of the reptiles at the unit. No pond turtles have been identified despite prime riparian and marshy habitat at Franks Tract SRA. It is likely that the marsh and riparian habitats support other reptile species, including the Pacific treefrog.

Of the more than 100 species of fish occurring in the Delta, at least 26 have been caught in and around Franks Tract SRA. The most numerous fish are the introduced largemouth bass, white catfish, striped bass, and native tule perch. Catfish and striped bass are the most important sport fish in the Delta. False River on the northern margin of Franks Tract SRA is sometimes a major spawning site for "stripers" during the spring. Sturgeon and chinook salmon also occur around Franks Tract SRA. Salmon and steelhead migrate up the Sacramento River each fall and winter. In the spring, stripers and shad begin their migration upstream.

Ecology

Four major habitat types occur within Franks Tract SRA: riparian, semi-aquatic freshwater marsh, aquatic channel/open water, and backwater areas. All habitats show varying degrees of human impact.

Mammals and a wide variety of birds favor the freshwater and riparian shrub-scrub habitat which occur on the levees and the bulk of the channel islands within and around Franks Tract SRA. The large flooded areas of the unit provide habitat for numerous species of fish and birds. The backwater areas around many of the channel islands surrounding Franks Tract SRA are important reproduction and feeding areas for many native species of fish and birds.

Cultural Resources

Native American Resources

Because of the substantial alteration of natural topography by peat dredging operations, prehistoric resources are not evident. There is the possibility that prehistoric resources could lie beneath the submerged lands at Franks Tract SRA. Only the advent of large scale construction could reveal such evidence.

Euroamerican Resources

At Franks Tract SRA, occasional historical elements, such as pilings, are evident, but these do not in themselves constitute a significant historic resource. Rather, the historical value of the unit

is the representative role the property has played in prehistoric lifeways, and in the historic network of events that have produced the rich agricultural resource of today's Delta.

Prehistoric, Ethnographic, and Historic Overview

For a prehistoric, ethnographic, and historic overview, refer to Brannan Island, Resource Summary, pages 32 -36 of this document.

While a zone of cultural sensitivity cannot be proposed for these areas, there is a zone of scientific sensitivity. The peat islands in False River, although not property of the Department of Parks and Recreation, have been evaluated as a resource of potential scientific significance in affording a paleoecological record of climate, vegetation, and water quality that can pertain not only to local conditions, but to the Delta as a whole. As this record may span 10,000 years of deposition, this resource is unique for the area. Moreover, study of the late sediments and soils within these lands may reveal information on the contamination of waters by heavy metals derived from the hydraulic mining operations of the historic past.

Esthetic Resources

Franks Tract SRA is an aquatic environment. It is open and flat, visually confined around its perimeter by levee shrubbery. The residences and marinas that line the northeastern shoreline of Bethel Island are the only development around the unit, and these are intermittently screened by levee remnants along Piper Slough. Water in the surrounding sloughs, particularly on the west and south sides of the unit itself, is generally smooth due to protection from the wind. On calm days, sounds carry across the water.

The esthetic environment of Little Franks Tract is very similar except that it is a much smaller and narrower body of water. Therefore, it has a scenic foreground, making it more visually attractive than the larger Franks Tract.

Recreation Resources

Franks Tract SRA is not a destination area; rather, it acts as a wide open, unregulated intersection for boats traveling in various directions to and from the many heavily used sloughs which reach or border its perimeter. Fishing occurs mostly along the northwestern and southern levee

remnants. The sloughs are used for waterskiing because of the calmer water; the open water for sailing and motorboating. Boardsailing does not occur here, primarily because of the lack of access on the windward side. Waterfowl hunting is permitted from October through January.

Because there is essentially no land base or facilities, and public access by road is practically non-existent, recreation at Franks Tract SRA is minimal. Local property owners, however, have complained of trespassing and resulting levee or vegetative damage where recreationists have sought places to picnic and swim, thereby indicating a need for waterfront public recreation opportunities within the vicinity of the SRA. The development of marinas around the perimeter of Bethel Island has contributed dramatically to an increase in boating activities, intensifying the demand for public boat-in day use and camp sites. As population growth continues in the surrounding counties, these recreation pressures will only increase.

Resource Policy Formation

Classification

Classification of a State Park System unit forms the foundation on which all management and development policies are based. Classification statutes contained in Article 1.7 of the Public Resources Code specify broad management objectives and improvements appropriate in a state recreation area.

Franks Tract State Recreation Area was acquired in 1959. Following establishment of the current State Park System classification system in the early 1960s, the State Park and Recreation Commission classified the unit as Franks Tract State Recreation Area. Classification by the commission directed the department to manage the units as specified in Public Resources Code Section 5019.56. This section defines and describes a state recreation area as a type of state recreation unit:

5019.56. State Recreation Units. State recreation units consist of areas selected, developed, and operated to provide outdoor recreational opportunities. Such units shall be designated by the commission by naming, in accordance with the provisions of Article 1 (commencing with Section 5001) and this article relating to classification.

In the planning of improvements to be undertaken within state recreation units, consideration shall be given to compatibility of design with the surrounding scenic and environmental characteristics.

State recreation units may be established in the terrestrial or underwater environments of the state and shall be further classified as one of the following types:

(a) State recreation areas, consisting of areas selected and developed to provide multiple recreational opportunities to meet other than purely local needs. Such areas shall be selected for their having terrain capable of with standing extensive human impact and for their proximity to large population centers, major routes of travel, or proven recreational resources such as manmade or natural bodies of water. Areas containing ecological, geological, scenic, or cultural resources of significant value shall be preserved within state wilderness, state reserves, state parks, or natural or cultural preserves.

Improvements may be undertaken to provide for recreational activities including, but not limited to, camping, picnicking, swimming, hiking, bicycling, horseback riding, boating, waterskiing, diving, winter sports, fishing, and hunting.

Improvements to provide for urban or indoor formalized recreational activities shall not be undertaken within state recreation areas.

Declaration of Purpose

A declaration of purpose describes the purpose of the unit, and identifies the prime resources, long-range management objectives, and the relationship between the unit's resources and recreational uses. A declaration of purpose for Franks Tract SRA was approved by the State Park and Recreation Commission on March 25, 1966. The declaration of purpose for the unit is as follows:

The purpose of Franks Tract State Recreation Area is to perpetuate, as a recreation resource, the flooded island in the Sacramento-San Joaquin Delta known as "Franks Tract", and to provide permanently the opportunity for water-related recreational activities so that the recreational, scenic, historic, scientific, and natural values of "Franks Tract" and related portions of the Delta may be enjoyed by the people.

The function of the Department of Parks and Recreation at Franks Tract State Recreation Area is to provide facilities and services for public enjoyment of the features and recreational opportunities afforded by this unit, in accordance with its declared purpose, and to protect and

enhance the area's recreational and natural values as a part of the Park System program for public recreation in the Sacramento-San Joaquin Delta.

Zone of Primary Interest

The zone of primary interest is that area outside the unit in which land use changes could adversely affect the resources of Franks Tract SRA. The zone of primary interest for Franks Tract SRA includes Bethel Island, False River, Piper Slough, Sand Mound Slough, and the peat islands surrounding the unit.

In addition, the department should be concerned with activities on all lands, no matter how far from the unit, that can, through their development and use, adversely affect the resources and features within the unit. Air pollution generated from San Francisco communities and downwind industrial development could have a greater than already experienced affect on the unit. Pumping stations in the southern Delta, upstream diversions, and agricultural run-off affect water quality and water flow in and around the unit. Water quality and flow directly relate to the health of the fisheries in the area. A decline in the fish population would result in a direct impact on the recreational aspects of the unit. Development in the surrounding areas could alter the visual quality of the unit. Department officials should be aware of these potential threats, and take action whenever possible to minimize them.

Resource Management Policies

Resource management in the State Park System is governed by laws contained in the Public Resources Code, by regulations in the California Administrative Code, by directives approved by the department's director, and by policies approved by the State Park and Recreation Commission. General policies related to the unit classification and the declaration of purpose have been addressed in previous sections.

Directives that are especially pertinent to existing or potential problems related to the management of resources within Franks Tract SRA are:

- #16 State Recreation Areas; protection of resources
- #31 Environmental Resource Management

- #33 Exotic Plant Species - Landscaping
- #34 Exotic Plant Species - Elimination
- #35 Wildlife Protection
- #46 Environmental Quality

The term "wetland" refers to any watercourse or body of water, the lands underlying or adjacent to these waters, and the wildlife and natural communities dependent on the wetland habitat (California Administrative Code, Section 5812). With their diversity of plant and animal life, wetland areas are important natural, esthetic, and recreational resources. Riparian woodlands and freshwater marshes are types of wetlands. In recognizing the significance of wetland ecosystems, the California Administrative Code, Section 5816 states the following:

The departments shall give particular recognition to opportunities for protecting and preserving wetlands lying within, or adjacent to, existing units of the state park system, and consider state park acquisition projects and the acquisition of areas in proximity to state park system units which lend themselves to feasible wetlands management and protection and preservation, without creating inordinate additional management cost burdens.

In addition to systemwide policies, specific policies that pertain to existing or potential resource issues or problems have been formulated for Franks Tract SRA, and are given below by major subject.

Natural Resources

Hydrologic Resources

The water features in the unit are important to the perpetuation of the recreation and esthetic values at Franks Tract SRA. Any significant alteration of the hydrologic systems supporting these water features, either within or outside of the unit, may affect them significantly. These impacts need to be identified, monitored, and prevented or corrected before major values of the unit are lost.

Policy: The department shall be actively involved in local, state, and federal land and water use decisions that may have an adverse impact on the unit's water features. Potential impacts include dredging, filling, marina development, stream

channelization, water diversion, and pollution. Measures to maintain water quality, channel flow, and sediment rates shall be recommended and supported. No water within the unit's boundaries shall be diverted so as to significantly affect the water features and the ecosystems they support.

Erosion

Following several years of significant storm damage in many coastal State Park System units, the Department adopted a policy for coastal erosion on October 24, 1984. The intent of the policy is to avoid construction of new permanent facilities in areas subject to wave generated erosion, and to promote the use of expendable or movable facilities where the expected useful life is limited due to their location in erosion prone areas. Based on this coastal erosion policy, the following policy has been developed for Franks Tract SRA.

Policy: The department shall avoid construction of new structures and facilities on unstable cliffs and in areas subject to erosion, unless specific determinations have been made that the risk of loss of the facility is clearly offset by the investment and need for the facility. Measures shall be taken to minimize human induced erosion by reducing: concentrated surface runoff from use areas, elevated groundwater levels from irrigation and urbanization, and surface disturbance of blufftop soils. In recognition of the unit's easily eroded shoreline, new structures and facilities located in areas known to be subject to erosion and unstable cliffs shall be expendable or movable. Structural protection and re-protection of developments shall be allowed only when the cost of protection is commensurate with the value (physical and intrinsic) of the development to be protected, and when it can be shown that the protection will not affect the shoreline or the near-shore environment in a negative manner.

Geologic Hazards

Potential geologic hazards at Franks Tract SRA include liquefaction, slumping and cracking of the levees, and seiches and seismic shaking. Site-specific investigations prior to new developments can help to avoid building in areas subject to these hazards.

Policy: New developments shall avoid geologic hazards. Site-specific geologic investigations shall be prepared by a registered geologist or certified engineering geologist prior to final siting of facilities to assure that geological hazards have been avoided or mitigated to the fullest extent feasible. The investigation shall identify potential geologic hazards of the site, and provide for mitigating measures to ensure structural stability and integrity .

Mineral Resources

Although Franks Tract SRA is the property of the department, the mineral and surface rights of many parcels in the unit are held by various owners. Several of these parcels are drilling site reservations. While most of these drilling site reservations occur on the levee remnants surrounding Big Franks Tract, two are located in the middle of the unit.

Policy: The department shall attempt to acquire the surface and mineral rights of Franks Tract SRA. If development occurs, it shall be limited and adhere to the Department's policies, as well as provide benefit to the Department.

Soil Constraints

The soils of Franks Tract SRA are poorly suited to the development of recreation facilities, roads, and buildings. Soil constraints cited in the Soil Conservation Service Soil Survey of Contra Costa County for the soils present in the unit include soil with a high shrink/swell potential adversely affecting plans for development of recreation facilities. Most soils in this unit are particularly suited to wetland plant habitat.

Policy: Soil characteristics shall be considered in the design and location of facilities. Soil loss due to erosion caused by facility development, visitor use, and unit operation and maintenance shall be monitored.

Exotic Plant Species

Exotic plant species have become naturalized within Franks Tract SRA. They are successfully competing with native species. Perpetuation of native plant communities is dependent on the control and removal of exotic species.

Policy: The department shall pursue a long-range objective of removing exotic plants such as the Himalaya berry and several thistle species that have become established in the unit. High priority shall be given to eradicating those species most invasive and conspicuous in the landscape. An important element of long-range exotic species eradication programs shall be an active revegetation program using species native to the unit or the immediate area.

Landscaping

Exotic species detract from the natural appearance of Franks Tract SRA. These species frequently have lower habitat value for native wildlife, and can become naturalized and displace native plant species. Exotics frequently require permanent irrigation, and can be more susceptible than native species to insect attack and disease.

Policy: In order to maintain the diversity of native species, landscaping in developed areas should consist of species indigenous to the unit.

Riparian and Freshwater Marsh Zone Management

Levee failure and the consequent flooding of Franks Tract SRA has greatly altered the riparian and freshwater marsh ecosystems within the unit. The current boundary of the unit excludes management of the surrounding wetlands of the neighboring peat islands.

Policy: The integrity of riparian and freshwater marsh ecosystems within Franks Tract SRA shall be protected and reestablished through development and implementation of a management plan. This management plan will include creating landforms by depositing sand and peat to form new ecosystems within the unit.

Rare and Endangered Plants

Several rare or endangered plant species have been identified in the vicinity of and within Franks Tract SRA. Although populations of some of these species have been accurately located, site-specific information for these sensitive plants is often lacking. As a result, rare or endangered plants can be inadvertently destroyed by development of facilities, maintenance programs, visitor use, or other activities.

Policy: Any rare or endangered plants within Franks Tract SRA shall be protected and managed for their perpetuation, in accordance with state law (PRC, Division 2, Chapter 10, Section 1900). Surveys for rare or endangered plants shall be made during the flowering season in the areas that will be affected, prior to any potentially deleterious activity, including trail construction or relocation, or prescribed burns. Rare and endangered plant populations at Franks Tract SRA shall be mapped, and if necessary, management plans for their protection and perpetuation shall be developed.

Wildlife Management

Animal life is an important part of natural ecosystems, and adds interest and variety to the outdoor recreation experience. Protection and perpetuation of natural wildlife populations is a major management objective at Franks Tract SRA.

Policy: Altered natural habitats not being used or proposed for recreation facilities shall be restored as nearly as possible to conditions that would exist had natural ecological processes not been disrupted. Whether or not restoration of natural conditions is possible, it shall be the policy of the department to avoid significant imbalances caused by human influences on the natural wildlife populations. If it is necessary to regulate wildlife populations, methods used shall be based on sound principles of ecosystem management, shall be consistent with the general policies of the department, and shall avoid disturbance to other natural values of the state recreation area.

Wildlife Requiring Special Management Consideration

Several federal or state listed rare, threatened, and endangered species could potentially occur within Franks Tract SRA. These species include the bald eagle, peregrine falcon, Swainson's hawk, California black rail, California clapper rail, California yellow-billed cuckoo, greater sandhill crane, Aleutian Canada goose, giant garter snake, Delta smelt, and Sacramento anthicid beetle. These species are of concern to the State Department of Fish and Game due to a statewide reduction in breeding status, suitable habitat, or other threats to the populations. Other species

are of special scientific, interpretive, or educational interest, such as mink, river otter, beaver, sturgeon, splittail, and small-mouthed bass.

Policy: Specific management programs shall be developed when appropriate for animal species that are threatened, endangered, or of special concern. Necessary and suitable habitat, where it exists, shall be perpetuated. Programs or projects undertaken at Franks Tract SRA shall be planned and designed so animal life requiring special management consideration will not be adversely affected. Resource management actions will focus on natural processes, in recognition that natural processes are mutually beneficial to all important resources.

Cultural Resources

No cultural resources are known to exist at Franks Tract SRA. It is possible that cultural resources could be found, although none have ever been reported to date.

Policy: In the event that a cultural resource discovery is made at Franks Tract SRA, the incident shall be promptly reported to the appropriate departmental staff person, who will determine the validity and significance of the discovery and take appropriate protective or stabilization action.

Paleoecological Resources

The peat islands in False River, although not property of the Department of Parks and Recreation, have been evaluated as a resource of the paleoecological record of the Delta. This resource is considered unique to this area.

Policy: If peat islands in False River become available, the department shall consider acquiring these properties as additions to Franks Tract SRA.

Esthetic Resources

Franks Tract SRA offers recreationists an opportunity to experience the natural environment of the Delta. With the increase of development, these opportunities will become fewer.

Policy: Management of Franks Tract SRA shall be toward the maintenance and preservation of the natural environment of the unit.

Allowable Use Intensity

The California Public Resources Code, Section 5019.5, requires that a land carrying capacity survey be made prior to the preparation of any development plan for any park or recreation area. Section 5001.96 further requires that attendance be held within limits so established. Allowable use intensity is a refinement of the land carrying capacity concept and is prepared as part of the Resource Element of the General Plan in fulfillment of the above code sections.

Allowable use intensity is just one of several factors considered in developing the Land Use and Facilities Element of the General Plan. Other factors that may also be considered in determining land use for any unit of the State Park System are classification and purpose, recreation needs, design considerations, and social carrying capacity (the desired quality of the recreation experience).

Allowable use intensity determinations establish the limits of development and use an area can sustain without an unacceptable degree of deterioration in the character and value of the scenic, natural, and cultural resources. Determinations are based on analysis and integration of resource management objectives as described herein, resource constraints, and resource sensitivities.

Resource management objectives are defined by the Public Resources Code and other law, unit classifications and declarations of purpose, and specific declarations of resource management policy presented in this Resource Element.

Resource constraints are factors which would make visitor use or facility development unsafe, economically impractical, or undesirable. They are determined by evaluating such factors as erodibility and compaction potential of soils, geologic hazards, slope stability and relief, hydrologic conditions, potential for pollution of surface waters, and flooding.

Sensitivities are conditions, locations, or values of resources that warrant restricted use or development to protect resources. Sensitivities are evaluated by considering such factors as the ability of the ecosystem to withstand human impact (ecological sensitivity), not only in the short term but also over a more extended time span; the fragility and significance of archaeological and historical resources; vegetation characteristics such as durability, fragility, and regeneration rates; and wildlife considerations such as tolerance to human activity, population levels, and stability. Sensitivities may also include scenic resources; rare, threatened, or endangered plants, animals, and habitats; unique or scientifically important botanic features; and other resources of regional or statewide significance.

Based on the preceding factors, allowable use intensities for lands within Franks Tract State Recreation Area were determined, and are shown on the allowable use intensity map (see Map 2).

Levee remnants of Franks Tract SRA are particularly sensitive to erosion caused by wave action and human intrusion. Because of this, and because of the great concern for protecting the natural environment and the quality of the recreation experience dependent on that environment, the portion of Franks Tract SRA referred to as Little Franks Tract and the levee remnants surrounding Franks Tract have been classified as low allowable use intensity. Within the water body of the larger Franks Tract, a more moderate level of allowable use is appropriate, except where wetland habitat protection is a greater concern than providing an increase in recreation opportunities.

Land Use & Facilities Element



LAND USE AND FACILITIES ELEMENT

This element of the General Plan addresses the current and proposed land uses and development at Brannan Island and Franks Tract SRAs. The specific proposals take into consideration regional recreational needs based on the department's projections, the expressed interests and concerns of the public and other agencies, and the opportunities and constraints of the natural and cultural resources. The suitability of the resources for accommodating recreational needs, as well as other resource objectives, are reflected in the resource management policies of the Resource Element.

Brannan Island State Recreation Area

Existing Conditions

Surrounding Land Use and Ownership

Land north of Brannan Island SRA is privately owned and farmed, as are the lands across the waterways that otherwise surround the unit. Directly east of the unit across Three Mile Slough at the northern tip of Sherman Island is a private marina with boat berths, restrooms, showers, picnic tables, and some full hook-up campsites. Sandy Beach County Park, which offers camping, picnicking, swimming, and boat launching opportunities, is approximately five miles by road from Brannan Island SRA, on the west shoreline of the Sacramento River. On Highway 160 immediately across Three Mile Slough, there is a small supply store. Rio Vista, approximately three miles to the north, is the local commercial center.

Vehicular Access and Circulation

Highway 160 enters Brannan Island SRA from the south after crossing a signal-controlled drawbridge (see Map 3). The entrance road is located 1400 feet north of the bridge. There is a left-hand turning lane into the unit for southbound traffic, but no deceleration turning lane for the northbound traffic. The primary route through the unit and most of the campground loops are paved, as are the parking lots.

Existing Facilities

Recreation facilities and use at Brannan Island SRA are concentrated in the eastern portion of the unit, leaving much of the site unused and inaccessible. It is a recreation oriented, rather than a natural preservation-oriented, unit, despite substantial undeveloped land.

Brannan Island SRA has six separate existing campgrounds, generally with tables, barbecue grills or fire rings, nearby drinking water, and some food cupboards (see Table 4). Family camping currently occurs in Cottonwood Campground and Willow Campground. These have a total of 102 campsites and four restrooms, none of which have shower facilities. Two campgrounds are intended for groups. The northern one has six designated gravel spurs, chemical toilets, and horseshoe pits. Tables are clustered at each group site. The southern campground was developed by a recreational vehicle club for the department. Up to thirty recreational vehicles have used this area for organizational group camping during peak use periods. Chemical toilets are provided. A boat-in/walk-in campground adjacent to the boat lagoon is available to those who berth their boats. There are thirty-two boat slips, and that many families could potentially camp overnight. Many families, however, sleep on their boats. This permits an overflow of tent campers to use either this campground or a nearby drive-in campground, referred to as the Olympic Campground. The latter has 12 gravel vehicle spurs. A restroom with showers, three covered tables, and a telephone booth are located nearby, next to the six-lane boat launching ramp. Upslope from the ramp is a paved parking lot with spaces for 158 vehicles with boat trailers.

There are two picnic areas in the day use area. The group picnic area, overlooking the confluence of Three Mile Slough and Seven Mile Slough, has four ramadas that shade the tables underneath, horseshoe pits, and a short interpretive trail. It is served by a 15-car parking lot. The family picnic area, which parallels Seven Mile Slough, has barbecue grills and tables strewn among trees, and a restroom with cold outdoor showers. Adjacent is a sandy beach and designated swimming area staffed with life guards during the summer season. A disabled-accessible fishing pier is located at the north end of the picnic area. In the past, a snack bar concession has operated in the day use area parking lot. The adjoining paved parking lot can accommodate 431 vehicles, far exceeding the capacity of the day use area.

Near the entrance station is a modest visitor center with a variety of small interpretive displays related to the natural and cultural history of the Delta. Public telephones and a sanitation disposal site are nearby.

An administrative site is located near the center of the unit, and consists of an office, maintenance buildings, one residence, four mobile home pads, and a storage area.

During the 1986-1987 fiscal year, 30 concrete tables are scheduled to replace existing wooden ones in the Seven Mile Slough picnic area. Also, 50 parking spaces will be added to the boat launch parking lot, and more than 1500 indigenous trees and shrubs will be planted throughout the unit. Other improvements have been tentatively earmarked for successive fiscal years. These include a restroom with showers for the interior of the northern group campground, three new unisex restrooms with showers for the family campground (replacing three of the four located there), and the paving of 75 spurs in two of the campgrounds.

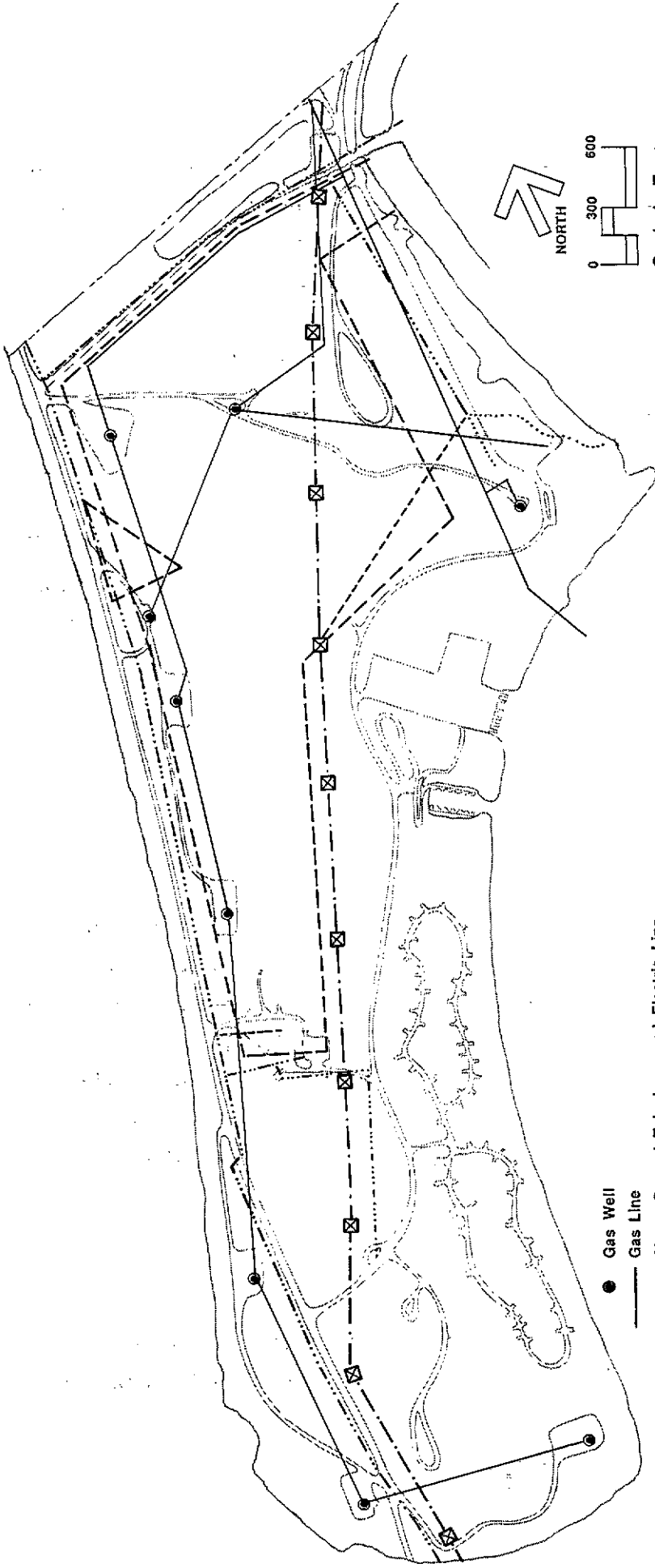
These proposed improvements have been evaluated for inclusion in this General Plan. All have been incorporated except for paving improvements intended for the overflow campground.

Vegetation

The heaviest landscaping occurs in the family campground and around the administration area. A linear windbreak of eucalyptus runs roughly parallel with the main road through the campground; otherwise, landscaping is sparse and generally limited to existing use areas. Exotic plant species, including annual grasses, cover a majority of the site. Along the shoreline, sparse riparian vegetation occurs, including the state listed rare *Lilaeopsis masonii* (Mason's lilaeopsis). A state and federal listed endangered plant, *Oenothera deltoidea* var. *howellii* (Antioch primrose), also occurs at Brannan Island SRA, where it was planted near the group picnic area and group campground.

Other Features and Legal Conditions

Although the Department holds title to Brannan Island SRA, there are a number of encumbrances involved with the unit in the form of surface rights; gas, oil and mineral rights; gas, oil, and mineral leases; and easements (see Figure 3).



- Gas Well
- Gas Line
- Above Ground Telephone and Electric Line
- Above Ground Telephone Line
- Below Ground Telephone Line
- Electrical Distribution Line
- Electrical Transmission Line
- ⊠ Transmission Line Towers
- Boundary of Surface Rights (held by Sacramento-San Joaquin Drainage District; see note 1)

NOTES:
 1. Remaining surface rights held by Department.
 2. All gas, oil, and mineral rights are held by Sacramento-San Joaquin Drainage District.

FIGURE 3
 LEGAL CONDITIONS and ENCUMBRANCES -
 BRANNAN ISLAND SRA

The surface rights of the entire unit, with the exception of Parcel A which comprises the northern half of Brannan Island SRA, are held by the Department. Surface rights to Parcel A are currently owned by the Sacramento-San Joaquin Drainage District (State Reclamation Board), and are in the process of being relinquished to the department. As sole owner of the unit's surface rights, the department will be able to alleviate past problems of borrowing and placing dredged spoils in this area.

The Sacramento-San Joaquin Drainage District also owns all of the gas, oil, and mineral rights to Brannan Island SRA, and has executed leases with the Amerada Hess Corporation and the Mobil Oil Corporation for extraction of natural gas. In the unit, there are nine productive gas wells, and two others which were drilled and subsequently capped. Three of these wells are shallow, and the others are deep. Each gas well has an extensive gravel pad (generally 175 by 400 feet) with unpaved access roads which connects it to Highway 160. Some of the wells are enclosed with wire fencing.

Operations concerning the gas wells are overseen by the State Lands Commission. Because the Sacramento-San Joaquin Drainage District owns the gas, oil, and mineral rights, the department does not have jurisdiction over leases contracted by the district. Furthermore, the district does not have to notify the department or gain the department's approval for future leases.

Numerous easements have been granted by the department to various utility companies, primarily for gas, telephone, and electric lines. Some of the utility easements benefit the unit by providing telephone and electric service to public restrooms, the administration area, and the day use area. The majority of the lines are buried; however, there is an overhead electrical distribution line and an electrical transmission line with ten towers.

General terms for the easements state that the grantee, on termination of the easement, will remove all equipment, and restore the premises to the prior condition. The grantee also has right of entry, provided existing roads are used. In addition, several of the grants of easement call for maintaining the easement in a manner satisfactory to the Department.

The department, at its expense, may serve a 180-day written notice to remove and relocate all improvements by the grantee, if the department has determined that the improvements interfere with the future development of the unit.

Land Use and Development Issues

Recreationists, particularly campers and boaters, are repeatedly turned away from Brannan Island SRA due to insufficient facilities. For such facilities as the boat launch ramps, peak demand periods are characterized by significant waiting lines.

Many of the existing facilities are old and in a deteriorating condition, poorly located, or otherwise deficient. For example, because there are no shower facilities in the family campground, many visitors drive to the day use restrooms, where there are showers. The group campfire program facilities are less than desirable, and exposed to strong winds. The interpretive facilities offer little information regarding the dynamic ecosystems of the Sacramento-San Joaquin River Delta. Campers who stay in the northern group campground complain of the noise from highway traffic and the drawbridge bells. The day use area along Seven Mile Slough is consistently overcrowded. This is partly because the oversized parking lot encourages excessive capacity, but also because it is the only beach in the unit. Another picnic area is available but underused because of its isolated location between the family campground and boat lagoon, and lack of shade. For those staying in the family campground, it is a long, hot walk along the main road or through the boat launch parking lot to the beach. There is no trail system to safely connect the different use areas, or to have an interesting hike or invigorating bicycle ride. Very little of the shoreline around Brannan Island SRA is accessible, and where visitors are reaching the water, erosion and habitat degradation is occurring.

Currently, boardsailors reach the Sacramento River just north of Brannan Island SRA, at a Highway 160 pull-off area referred to as Glass Beach. This access point does not have enough space for either boardsail rigging nor all the vehicles that attempt to park there. It is a particularly hazardous site because of passing high speed traffic. The western side of Brannan Island SRA has potential for use by boardsailors because of the wind conditions and available space. However, a requirement of developing use of any kind in this part of the unit includes ensuring safe pedestrian access across Highway 160 from the remainder of the unit, as well as controlling access for revenue collection.

An existing hazardous condition that does frequently occur during the peak use season on Highway 160 in this area is the back-up of traffic waiting to get into Brannan Island SRA. While

a turning lane for traffic from the north helps alleviate this problem, there is no turning lane available for traffic from the south. Traffic along Highway 160 through the unit does not slow down, as there are no entrance signs to make drivers aware that they have entered Brannan Island SRA. Where landscaping and signage along the highway could heighten this awareness, but none exists. Furthermore, because of where the entrance station is located, day use traffic currently passes by the family campground, contributing to noise and congestion impacts.

Vegetation at Brannan Island SRA, which has been planted sporadically through the years as funds have become available, is a random potpourri of mostly exotic species. Much of the ornamental vegetation is not well suited to delta conditions, and is dying. There is no unified park-like character that draws visitors into and around the site, defining use areas and providing climatic or esthetic benefit.

The scenic quality is further compromised by the utility structures and support features that dominate the unit, none of which are currently screened by landscaping. The gas well sites severely limit where recreational development expansion can occur. Independent gas well access roads and overhead electric facilities also present constraints to expansion. The lack of legal control the department has on the location, access, and appearance of future gas wells complicates future site planning decisions.

Land Use and Development Goals

In response to the recreation needs, problems, and issues at Brannan Island SRA, a set of goals was formulated to guide future recreation use and development:

1. Provide recreational opportunities of varying use intensity levels in the unit, but with an emphasis on overall high-intensity use.
2. Improve existing facilities, and add new ones to provide more recreational opportunities, especially for swimming, boating, boardsailing, camping, and trail activities.
3. Expand development where none currently exists, including the west side of Highway 160.

4. Improve access to and use of the surrounding water resources, particularly for swimmers, boardsailors, picnickers, campers, boaters, and fishermen.
5. Provide, to the greatest extent possible, access facilities for special populations.
6. Improve the visitors' enjoyment of the unit by providing better wind protection, more shade in more effective locations, a more attractive environmental setting, and more adequate facilities.
7. Encourage alternative modes of circulation by developing a multi-purpose paved trail system for bicycling, hiking, and jogging.
8. Provide safe pedestrian circulation by developing a trail system that connects the use areas, including a safe connection between those portions of the unit separated by Highway 160.
9. Improve hazardous traffic conditions on Highway 160 at the existing entrance into the unit.
10. Improve vehicular circulation using existing roads to the greatest extent possible, and clarify the relationships between the roads and parking/use areas they serve.
11. Increase the scenic quality of the Highway 160 corridor through the unit, highlighting the entrances at each end and screening the recreation use areas.
12. Reduce the existing visual impacts, and improve the environmental setting of all current and future use areas through landscaping and habitat enhancement.
13. Provide additional interpretive facilities to explain the cultural history of the Delta and its relevance to the State Water Project, as well as its natural history.

Land Use and Facility Recommendations

The overall concept for Brannan Island SRA is twofold: (1) to consolidate overnight use while concurrently expanding the number of campsites; and (2) to disperse day use and prevent the overcrowding of picnic areas and beaches (see Maps 4 and 5). To accomplish these, only the existing Cottonwood and Willow Family Campgrounds and part of the boat-in campground will remain intact, and new campsites will be provided at three additional locations. Three new day use areas will be created: on the Sacramento River shoreline; in the interior of the unit; and between the existing family campgrounds.

The unit's entrance will be relocated, significantly affecting existing circulation patterns. Only a small proportion of the day use traffic will drive by the existing family campgrounds on the way to the proposed Sacramento River use area. Access to the existing day use parking lot near Seven Mile Slough will be shifted slightly northward. Otherwise, use of the existing road system will not change significantly, although new roads will be required near the entrance. Also, a Highway 160 underpass for vehicles and pedestrians will be needed to connect the two portions of the unit separated by the highway.

All remaining recreation areas and facilities will be adjusted by varying degrees. Entirely new facility opportunities will become available, including a paved trail system, tent-only campsites, a boardsailing rigging area, and a visitor center. Improvements that are recommended throughout the unit include throw-away drip or permanent irrigation equipment, which is essential for the establishment and growth of plants; fire hydrants, which are to be located near all existing and proposed restrooms and comfort stations; signs, which not only help to orient and guide visitors, but also unify the facilities and give the unit an identifiable image; and trails, which connect all the activity areas. Paved trails will be readily accessible to the disabled. All new structures and parking lots will be designed for special population access and, when appropriate, braille signing will be used. Where facilities are removed, the sites will be revegetated.

New utility lines will be needed to many of the new facilities. These should be installed underground. Septic systems will be required for each new comfort station. The two existing water wells should be adequate for the anticipated increase in use for consumption and irrigation.

Below is an outline, by area, of proposed changes at Brannan Island SRA (as summarized in Table 4, following this descriptive narrative).

Existing Sites:

Entrance

- Remove all facilities and entrance road.

Riverside Family Campground (currently Cottonwood and Willow Family Campgrounds)

- Remove five campsites and the campfire program center from between the campgrounds.
- Excavate a shallow lagoon for swimming, and deposit sand around the bowl to create a beach.
- Remodel restrooms to include shower facilities.
- Construct floating boardwalks with ramps that adjust to tidal fluctuations alongside the family campgrounds. These should be separate from the shoreline to minimize damage to vegetation, and connected to the paved trail system.
- Gradually remove exotic plants, and replant with indigenous species. Riparian woodland plants are recommended for this area (see Table 5).
- Screen gas well #9 by berming around it and mass planting with shrubs.

Olympic Campground (to be renamed Brannan Overflow Boat-In Campground)

- Remove the roadway and spurs as well as some of the individual campsite facilities so the remaining sites are spaced farther apart. These campsites will be available to those who dock their boats overnight in the boat lagoon.
- Relocate water faucets as necessary to provide for spaced campsites.
- Remove the large piles of soil, and regrade.
- Landscape, using plants recommended for the existing family campgrounds (see Table 5, Riparian).

Brannan Boat-In Campground (currently referred to as the boat-in/walk-in campground)

- Establish boat-in campsites south of the boat lagoon.
- Add barbeque grills so there is a cooking facility at each campsite.
- Relocate water faucets as necessary to provide for spaced campsites.
- Partially remove the old levee, and regrade to indicate campsite locations and direct circulation.
- Landscape, using plants recommended for the existing family campgrounds (see Table 5, Riparian).

Group Campground

- Remove the roadway, camping spurs, and some of the facilities so the area can be renovated into a walk-in, tent-only portion of the proposed family campground.
- Excavate the northern end as part of the proposed wetland.
- Develop an unpaved loop trail around this arm of the proposed wetland.

Recreational Vehicle Campground

- Remove all facilities and the loop road.

Seven Mile Slough Day Use Area

- Remove the roadway and parking beyond the main parking lot.
- Reconfigure the main parking lot so capacity is limited to approximately 300 vehicles, and alter the access road to it.
- Relocate the picnic facilities from near the present fishing pier closer to the main parking lot.
- Expand the present comfort station to include another ten toilet fixtures and ten lavatories.
- Provide a snack bar concession between the beach and parking lot.
- Provide water as necessary.

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- Expand the present comfort station to include another ten toilet fixtures and ten lavatories.
- Provide a snack bar concession between the beach and parking lot.
- Provide water as necessary.

- Add a fish cleaning facility with water faucets at the north end of the boat launch ramps.
- Add a bait and tackle shop where fishing supplies, ice, and similar purchases can be made, also at the north end of the boat launch ramps.
- Screen the parking with riparian trees and shrubs on the north side, shrubs along the surrounding levees, and trees within the parking lot.

Boat Lagoon Area

- Expand the boat lagoon primarily northward to increase the number of boat slips from 32 to 80.
- Add a fish cleaning facility with water faucets near the center of the lagoon's end.

Administration Area

- Maintain all existing facilities, including residences.
- Enlarge the office to include a small meeting room and office space for a Chief Ranger.
- Consolidate the dump, and vegetatively screen from the proposed group campground; also, screen other administrative structures.

Proposed Sites:

Entrances

- Provide entrance signs and landscaping at both ends of the unit where Highway 160 enters Brannan Island SRA.
- Relocate the main entrance between gas wells #5 and #11; berm around, and vegetatively screen with small masses of shrubs.
- Plant a continuous strip of trees along the eastern side of the highway, along the western side at the south end, and along the entrance road to the contact station. Recommended plants include *Juglans hindsii* (black walnut) and *Quercus lobata* (valley oak).

- Install guardrails along either side of Highway 160 for safety reasons and to discourage highway parking.
- Provide an esthetically pleasing entrance through the use of plantings and topographic variety.
- Provide a contact station designed so that visitors can be processed on either side of the building during the peak use season. This will require three lanes of roadway. Also, provide a turnaround at the contact station.
- Develop a sanitation disposal station and septic system near the contact station, and screen from the entrance road.
- Provide electrical and telephone service to the contact station.

Montezuma Hills Group Campground

- Construct a looped road with multi-car spurs (five to ten spaces) at eight of the campsites, and a series of 30 closely spaced individual spurs among the remaining ten campsites (at the loop end) for self-contained recreational vehicles.
- Provide eight tables, two group-sized barbecue grills, and one group-sized campfire ring at each campsite.
- Provide three group-sized campfire pits inside the loop road.
- Provide water faucets between every other campsite.
- Provide two centrally located comfort stations, each with six toilet fixtures, lavatories, and hot showers.
- Provide electricity and water to the comfort stations and water lines to the campsite faucets, and develop septic systems for the comfort stations.
- Regrade the site to eliminate existing depressions.
- Plant an overstory of *Quercus lobata* (valley oak) throughout the campground and an understory of shrubs among the facilities, around the transmission line structures, and along the windward edge of the campground. Oak woodland species are recommended for this area (see Table 5).

Brannan Meadow Day Use Area

- Construct a 100-vehicle capacity parking lot to serve the picnic area and campfire center.

- Develop a sunken meadow approximately three acres in size. Provide drainage into the proposed lower riparian meadow.
- Provide a comfort station that has eight toilets and eight lavatories, with a fire hydrant nearby.
- Provide 55 picnic tables, five of which would be group-sized, 18 individual and five group-sized barbecue grills, and six water faucets.
- Provide electrical and water service and develop a septic system for the comfort station. Also, provide water to the picnic water faucets.
- Landscape with recommended oak woodland species (see Table 5).

Oak Ridge Family Campground

- Raise the overall elevation of the campground area with material excavated from the proposed wetland and meadow.
- Bury the existing overhead power line.
- Construct one large loop road with a two-way road and turnaround at the end of the loop.
- Provide 95 campsites with individual parking spurs (long enough to accommodate recreational vehicles) along the main loop and three five-car parking lots along the dead-end road section for 15 more campsites in the walk-in, tent-only camping portion of the campground.
- Provide 110 tables and barbecue grills and 13 water faucets (three tables and seven water faucets will be reserved from the existing northern group campground).
- Provide four comfort stations, each with five toilet fixtures, four lavatories, two hot showers, and a nearby fire hydrant.
- Provide a campfire program center. Install a group-sized fire ring, structural seating, and necessary program equipment, including electricity.
- Develop a paved trail through the campground connecting the Brannan Meadow day use area to the proposed Oak Ridge Meadow, and develop an unpaved section through the walk-in camping portion of the family campground.
- Provide electricity and water and develop septic systems for the comfort stations. Also, provide water to the campsite water faucets.
- Landscape with recommended oak woodland species (see Table 5).
- Berm around nearby gas well sites, and mass plant with shrubs.

Windy Cove Use Area

- Remove the old, unused portion of Highway 160.
- Initially provide access at a location directly across from the present entrance road into a parking lot designed with extra wide (15 feet) parking spaces for 136 vehicles. Fees can be collected by employees, or via the use of an Iron Ranger.
- Install a barricade along the west side of Highway 160 (leaving a lockable gate in what will become the old access) and a highway underpass wide enough for both vehicles and pedestrians. Control use by requiring vehicles to come by the contact station and through the underpass to the parking lot on the west side of Highway 160.
- Provide a load/unload lane for boardsailing equipment.
- Lengthen and lay back the slope of an existing sandy cove, and deposit sand.
- Provide an open lawn area for general visitor use; this space can also be used by boardsailors to spread out and rig their equipment.
- Provide 15 picnic tables on the south side of the lawn area and 15 tables for walk-in tent campers on the north side.
- Provide water and electricity and develop a septic system for the comfort station.
- Require all cooking to be done with camp stoves (rather than providing barbecue grills or fire rings) to minimize fire hazards on this windy side of the unit.
- Provide a comfort station with four toilet fixtures, lavatories and hot showers, and a nearby fire hydrant.
- Construct two staircases down to the water's edge to the south of the beach, and one to the north down to a proposed fishing pier.
- Construct an elevated observation platform where boardsailing activities can be observed. Electricity could be provided for loudspeaker capability for special events.
- Landscape to screen two gas wells and the parking lot, to define the walk-in campsites, and to shelter picnickers and campers from strong winds blowing across the Sacramento River (see Map 6 and Table 5).
- Designate, on the east side of the highway, an unpaved overflow parking lot (150 vehicles) for special events such as boardsailing competitions and overflow parking when the boat launch parking lot becomes full. Provide a nearby floating

shoreline dock so boaters can drop off passengers who can then drive boat trailers from the overflow parking lot back around to the boat launch.

- Relocate the access to gas well #9 through this parking lot.
- Berm around this overflow lot and the gas well so they cannot be seen from Highway 160 or the nearby campground.
- Implement a wildlife habitat enhancement program along the Sacramento River and Three Mile Slough shorelines, involving the possible development of groins to collect sediment and the planting of important fish habitat.

Oak Ridge Meadow

- Excavate the low area at the north end of the unit to an elevation that permits the upper Brannan Meadow to drain into it via an underground drainage system. The walk-in portion of the Oak Ridge Family Campground will also drain into this riparian meadow. Small islands will be created at a slightly higher elevation for riparian woodland species.
- Install two footbridges across the meadow linking a segment of the paved trail system with one of the riparian woodland islands.
- Install interpretive signs along the trail through the riparian area.
- Plant riparian grass and woodland plant species to enhance wildlife habitat (see Table 5).
- Establish the rare and endangered *Oenothera deltoidea* var. *howellii* (Antioch primrose) and other recommended species in the disturbed spoils area (see Table 5).

Table 4

**Facilities Summary
Brannan Island State Recreation Area**

Facilities and Amenities	Existing	Proposed	Total	Priority
<u>Existing Cottonwood/Willow Campgrounds</u>				
Campsites	102	-5	97	1
Tables	102	-5	97	1
Cooking facilities	133	0	133	--
Water faucets	150	0	150	--
Comfort station (a)	4	0	4	1
Fire hydrants	4	0	4	--
Beach and swimming lagoon	0	1	1	1
Floating boardwalks (linear feet)	0	2000	2000	3
<u>Existing Olympic Campground</u>				
Campsites	12	-5	7 (b)	2
Tables	12	-5	7 (b)	2
Fire rings	12	-5	7 (b)	2
Water faucets	12	-5	7 (b)	2
<u>Existing Boat-in/Walk-in Campground</u>				
Campsites	32	0	32	2
Tables	32 (c)	0	32	2
Grills and fire rings	23 (c)	9	32	2
Water faucets	22 (c)	0	22	2
<u>Existing Group Campground</u>				
Campsites	39	-39	0	2
Tables	39	-36	3 (d)	2
Grills and fire rings	18	-15	3 (d)	2
Chemical toilets	2	-2	0	2
Campfire pits	2	-2	0	2
Water faucets	14	-7	7 (d)	2
<u>Existing R. V. Campground</u>				
Tables	21	-21	0	2
Fire rings	21	-21	0	2
Chemical toilet	1	-1	0	2
Water faucets	4	-4	0	2
<u>Existing Seven Mile Slough Use Area</u>				
Comfort station (w/showers) ^(e)	1	0	1	1
Snack bar	0	1	1	1
Water faucets	23	0	23	2

Facilities and Amenities	Existing	Proposed	Total	Priority
Parking spaces	431	-131	300	2
Family picnic tables	55	0	55	2
Individual barbecue grills	39	0	39	2
Fire hydrant	1	0	1	--
Fishing pier	1	0	1	--
<u>Three Mile Slough Day Use Area</u>				
Staircase to water	0	1	1	1
Parking spaces	15	85	100	2
Family picnic tables	0	24	24	2
Individual barbecue grills	0	8	8	2
Group barbecue grills	4	2	6	2
Group picnic tables (covered)	23	12	35	2
Visitor center ^(f)	0	1	1	2
Chemical toilet	1	-1	0	2
Water faucets	0	3	3	2
Fire hydrant	0	1	1	2
Floating boardwalk (linear feet)	0	500	500	2
<u>Existing Boat Launch Area</u>				
Parking spaces	158	50	208	1
Boat ramps	6	4	10	1
Picnic tables	3	0	3	--
Fire hydrants	2	0	2	--
Comfort station (w/showers)	1	0	1	--
Public telephone	1	0	1	--
Fish cleaning facility (w/water)	0	1	1	3
Bait and tackle shop	0	1	1	3
<u>Existing Boat Lagoon Area</u>				
Boat slips	32	48	80	2
Fish cleaning facility (w/water)	0	1	1	2
Water faucet	0	1	1	2
<u>Existing Administrative Area</u>				
Maintenance buildings	6	0	6	--
Residence	1	0	1	--
Mobile home pads	4	0	4	--
Office (g)	1	0	1	1
<u>Proposed Entrances</u>				
Signs	1 (h)	3	3	1
Contact station	1 (h)	1	1	2
Sanitation disposal station	1 (h)	1	1	2
Telephone	1 (h)	1	1	2

Facilities and Amenities	Existing	Proposed	Total	Priority
<u>Proposed Montezuma Hills Group</u>				
<u>Campground</u>				
Campsites	0	18	18	2
Tables (in groups of eight)	0	144	144	2
Group-sized grills	0	36	36	2
Comfort stations (w/shower)	0	2	2	2
Campfire pits	0	3	3	2
Water faucets	0	9	9	2
Fire hydrants	0	2	2	2
Parking spaces	0	90	90	2
<u>Proposed Brannan Meadow Day</u>				
<u>Use Area</u>				
Meadow (acres) (i)	0	3	3	2
Parking spaces	0	100	100	3
Family picnic tables	0	50	50	3
Group picnic tables	0	5	5	3
Family barbecue grills	0	18	18	3
Group barbecue grills	0	5	5	3
Comfort station	0	1	1	3
Water faucets	0	6	6	3
Fire hydrant	0	1	1	3
<u>Proposed Oak Ridge Family Campground</u>				
Campsites	3	107	110	2
Tables	3	107	110	2
Barbecue grills	3	107	110	2
Water faucets	7	13	20	2
Comfort stations	0	4	4	2
Fire hydrants	0	4	4	2
Campfire center	0	1	1	2
<u>Proposed Windy Cove Use Area</u>				
Parking spaces	0	136	136	1
Beach and lawn	0	1	1	1
Comfort station (w/showers)	0	1	1	1
Fire hydrant	0	1	1	1
Highway underpass	0	1	1	2
Overflow parking (east side of Highway 160)	0	150	150	2
Family picnic tables	0	15	15	2
Campsites (tables only)	0	15	15	2
Staircases to water	0	3	3	2/3
Fishing pier	0	1	1	3
Observation platform	0	1	1	3
Floating dock (east side of Highway 160 - linear feet)	0	150	150	3

Facilities and Amenities	Existing	Proposed	Total	Priority
<u>Circulation (miles)</u>				
Pedestrian bridges	0	2	2	1
Roads	3.2	2.8/-1.6	4.4	1-3
Paved trails	0	3.8	3.8	1/2
Unpaved trails (j)	0	0.3	0.3	2
<u>Wildlife Habitat Enhancement</u>				
Riparian Meadow and Woodlands (acres)	0	12	12	2
Shoreline Wetland (linear feet)	0	10,000	10,000	2

Notes:

- a Showers proposed
- b To be incorporated into overflow boat-in campground
- c To be incorporated into new Brannan Boat-in Campground
- d To be incorporated into new family campground
- e To be expanded
- f To include an elevated observation platform, restroom facilities, snack bar, and public telephone.
- g To be enlarged to include a meeting room and an office for a Chief Ranger
- h To be removed and replaced at a new location
- i To be developed as an open, sunken meadow with drainage into the proposed lower Oak Ridge Meadow.
- j Visitors have made trails with repeated use, but no designated, improved trails exist.

Landscape and Habitat Improvement Program

Both the resource management policies and the development goals for Brannan Island SRA exemplify an active role of stewardship for the Delta landscape. A majority of the unit's existing physical character may aptly be described as a disturbed landscape, with limited habitat and esthetic value. With the implementation of this General Plan, much of the unit will be transformed into a landscape typifying the indigenous delta environment.

Recontouring and revegetating the landscape will result in a greater diversity of plant associations, increase the value of the landscape as fishery and wildlife habitat, and preserve and enhance the presence of the unit's rare and endangered plant species. Renovation activities will also enhance the visitors' recreation experiences in existing use areas, and provide expanded, inviting opportunities in new areas.

Landscape and habitat management zones are described below. Various planting strategies will be implemented to realize overall resource management, interpretive, and recreation use goals. Each zone recommends specific native plant associations and species (see Table 5). The zones are further defined by one of three levels of visitor use control, including:

- **Open Access:** Where recreation activities are emphasized.
- **Controlled Access:** Where visitors are limited to well defined trails and roadways.
- **Restricted Access:** Where visitors are not permitted except for approved research activities.

A wide variety of exotic species is currently planted at Brannan Island SRA. Many of these compete with indigenous species; others are not well adapted to site conditions. Therefore, these species should eventually be controlled (see Table 6).

The general landscape character to be developed for each zone, as shown on the Management Plan (Map 6), are:

Map Key Landscape and Habitat Management Zone Description

- AP** **Antioch Primrose/Controlled Access:** In these areas, *Oenothera deltoidea* var. *howellii* (Antioch primrose), a federally listed rare and endangered plant, and other important species will be planted and protected from indiscriminate foot traffic.
- CLI** **Cultural Landscape/Open Access:** The picnic areas will be planted primarily with riparian woodland species. They will be relatively open, with lawns that are permanently irrigated.
- CL2** **Cultural Landscape/Open Access:** The eucalyptus windbreak that runs north/south through the unit will be initially thinned. When the planted oaks begin to mature, the eucalyptus will be removed altogether.
- CL3** **Cultural Landscape/Controlled Access:** Highway 160 and the entrance road into the core of the unit will be developed as a shaded, tree-lined corridor so that the image of Brannan Island SRA is extended to the passing motorists as well as the incoming visitors. The recommended species of *Juglans hindsii* (black walnut) and *Quercus lobata* (valley oak) could be alternately planted. These trees were selected because of their historical use in the Delta as highway trees. As the oaks mature, the walnuts could be removed.
- FW1** **Freshwater Wetland/Controlled Access:** Developed for wildlife habitat, passive recreation, and interpretive/educational value, these areas emphasize the typical plant species found in delta freshwater wetlands. Unique plants such as the *Lilaeopsis masonii* will be planted especially for their interpretive value.
- FW2** **Freshwater Wetland/Restricted Access:** Emphasizing wildlife and fish habitat and species diversity, these areas will be developed as prime freshwater wetland environments. Access for scientific research and other educational projects will be permitted, but all other use will be discouraged. A number of groins could be constructed to help establish a larger wetland community. Appropriate study should be commenced as potential funding is identified.

- OW1** **Oak Woodland/Open Access:** *Quercus lobata* (valley oak) with fewer *Quercus agrifolia* (coast live oak) and associated upland shrub species will act as the unifying landscape element throughout the unit. These will be planted most heavily in and around the new family and group campgrounds.
- OW2** **Oak Woodland/Controlled Access:** The oak woodland described above will extend into other centrally located portions of the unit where public use is limited to trails.
- RM** **Riparian Meadow/Restricted Access:** This is a low-lying area located at the north end of the unit that will be planted with native riparian grasses. Brannan Meadow and the surrounding area will drain into this meadow.
- RW1** **Riparian Woodland/Open Access:** These include nearly all of the developed use areas adjacent to the sloughs and the undeveloped area by the Sacramento River. Planting will emphasize shade and wind protection.
- RW2** **Riparian Woodland/Controlled Access:** Recreation use in these areas is limited to trails, docks, and staircases to minimize vegetation disturbance and erosion.
- RW3** **Riparian Woodland/Restricted Access:** Like FM2, this type of management restricts recreational use in favor of wildlife habitat.
- SB** **Sandy Beach/Open Access:** This management zone applies to all areas that are to be designated as beaches for recreational use.
- UH** **Upland Habitat/Controlled Access:** Buffer areas surrounding the gas wells, between the major use areas, and paralleling Highway 160, will be recontoured with low mounds, and planted with upland shrubs to provide wildlife cover and screen views. Shrubs will be planted in strategic locations, and allowed to naturalize and spread in these areas.

Table 5

Landscape and Habitat Improvement Program
Recommended Species*

Plant Community	Botanic Name	Common Name
Cultural Landscape**	<i>Juglans hindsii</i>	black walnut
	<i>Quercus lobata</i>	valley oak
		ornamental grasses
Oak Woodland/Upland	<i>Amsinckia</i> spp.	fiddleneck
	<i>Baccharis pilularis</i> var. <i>consaguinea</i>	coyote brush
	<i>Brodiaea pulchella</i>	blue dicks
	<i>Chlorogalum pomeridianum</i>	soap plant
	<i>Eriogonum fasciculatum</i>	California wild buckwheat
	<i>Escholzia californica</i>	California poppy
	<i>Heteromeles arbutifolia</i>	toyon, California-holly
	<i>Lotus scoparius</i>	deerweed
	<i>Lupinus arboreus</i>	bush lupine
	<i>Lupinus bicolor</i>	lupine
	<i>Mimulus aurantiacus</i>	bush monkey flower
	<i>Mimulus glutatus</i>	monkey flower
	<i>Quercus agrifolia</i>	coast live oak
	<i>Quercus lobata</i>	valley oak
	<i>Quercus wislizenii</i>	interior live oak
	<i>Rhamnus californica</i>	California coffeeberry
	<i>Ribes malvaceum</i>	chaparral currant
	<i>Sambucus mexicana</i>	elderberry
	<i>Sambucus callicarpa</i>	elderberry
	<i>Symphoricarpos rivularis</i>	common snowberry
<i>Zauschneria californica</i>	California fuchsia wildflowers native perennial grasses	
Riparian Woodland	<i>Acer negundo</i> var. <i>californicum</i>	California box elder
	<i>Alnus rhombifolia</i>	white alder
	<i>Aristolochia californica</i>	dutchman's pipe
	<i>Artemisia douglasiana</i>	mugwort
	<i>Baccharis glutinosa</i>	false willow
	<i>Baccharis viminea</i>	mule fat
	<i>Cephalanthus occidentalis</i>	button bush
	<i>Equisetum</i> spp.	horsetail
	<i>Lonicera involucrata</i>	twin-berry honeysuckle
<i>Platanus racemosa</i>	California sycamore	

Plant Community	Botanic Name	Common Name
Riparian Woodland (cont'd)	<i>Populus fremontii</i> <i>Populus trichocarpa</i> <i>Rosa californica</i> <i>Rubus ursinus</i> <i>Salix hindsiana</i> <i>Salix laevigata</i> <i>Salix lasiolepis</i> <i>Vitis californica</i>	cottonwood black cottonwood California rose wild blackberry sandbar willow red willow willow wild grape perennial bunchgrasses
Riparian Meadow	Miscellaneous	Native Grasses
Freshwater Wetland	<i>Cyperus</i> spp. <i>Eryngium articulatum</i> <i>Helenium bigelovii</i> <i>Hibiscus californicus</i> * <i>Hydrocotyle</i> spp. <i>Juncus effusus</i> <i>Lathyrus jepsonii</i> * <i>Lilaeopsis masonii</i> * <i>Polygonum</i> spp. <i>Sagittaria sanfordii</i> * <i>Scirpus acutis</i> <i>Typha latifolia</i>	sedges eryngium sneezeweed California hibiscus soft rush Delta tule-pea Mason's lilaeopsis knotweed valley sagittaria tule cattail
Sandy, Disturbed Areas	<i>Eriogonum auriculatum</i> <i>Erysimum capitatum</i> var. <i>angustatus</i> * <i>Oenothera deltoides</i> var. <i>howellii</i> *	wild buckwheat Contra Costa wallflower Antioch Dunes evening primrose

*Rare and endangered

Notes:

These lists are not necessarily all inclusive but indicate desirable species to be considered. Where appropriate (e.g., picnic areas), cultural landscapes include riparian woodland species.

Table 6

Existing Plant Species to be Removed at Brannan Island SRA

<u>Botanical Name</u>	<u>Common Name</u>
Acacia spp.	acacia
Asparagus officinalis	garden asparagus
Arundo donax	giant reed
Cirsium spp.	thistle
Convolvulus arvensis	bindweed
Cortaderia selloana	pampas grass
Cynara cardunculus	cardoon
Cynodon dactylon	Bermuda grass
Eucalyptus globulus	blue gum
Foeniculum vulgare	fennel
Iris pseudacorus	iris
Lolium perenne	perennial rye grass
Lotus corniculatus	lotus
Mentha arvensis	mint
Mesembryanthemum edule	hottentot fig
Nicotiana glauca	tree tobacco
Plantago lanceolata	English plantain
Populus alba	silver poplar
Pyracantha spp.	pyracantha
Rubus procerus	Himalaya berry
Rumex acetosella	sheep sorrel
Rumex crispus	curly dock
Salix babylonica	weeping willow
Tamarix spp.	tamarisk
Verbena bonariensis	vervain

Sequence of Actions

The level of priority assigned to the proposed changes at Brannan Island SRA generally reflects the level of need. The priorities are tempered, however, by the growth (time) requirements of the plants (especially trees) needed to create the park-like and climatic environment in which to site the recreational facilities. Because demand is high for so many of the potential opportunities at Brannan Island SRA, it is important that none of the existing facilities be removed before new ones are in place.

Proposed changes are grouped into three levels of priority. Individual actions in each group are presented in a recommended sequence. Many factors can influence this development program; and, therefore, it should be treated only as a guideline.

Priority 1 actions, those that should be made in the near future, represent relatively minor changes to existing conditions. Several of the developed areas are targeted for facility improvements to alleviate or eliminate current and impending problems. Undeveloped portions of the site will be made accessible with a new trail system. The Windy Cove use area west of Highway 160 will also be made available for recreation use, beginning with minimal site improvements. Other areas in the unit will be regraded and planted in preparation for future development.

Under Priority 2 actions, the Windy Cove use area will be fully developed, requiring the installation of the highway underpass and relocation of the entrance road into the park and related facilities. Priority 2 actions include the development of the new Oak Ridge Family and Montezuma Hills Group Campgrounds, which will help meet overnight use needs. Picnic and boat docking facilities will also be provided to reduce those growing demands. With increased visitor use, the shoreline will be subject to far greater use-related damage, so a wildlife habitat and revegetation program will be implemented along the shoreline, including the development of the riparian area.

Any facility deemed desirable but not necessarily essential is categorized as a Priority 3, long-term action item.

PRIORITY 1

- Add entrance signs along Highway 160 at both the northern and southern ends of the unit, and process visitors at both sides of the contact station during the peak use season by directing outgoing traffic along the turnaround road.
- Add showers to the restrooms in Riverside (Cottonwood and Willow) Campground.
- Expand the boat launch parking lot.
- Add four boat launch ramps.
- Add a stairway to the beach on Seven Mile Slough.
- Remove five of the existing campsites and campfire center, and create a beach-lined swim lagoon.
- Construct a beach, open lawn area, 136-vehicle parking lot, and comfort station in the Windy Cove use area.
- Upgrade the comfort station at the Seven Mile Slough day use area, and add the snack bar concession.
- Expand the headquarters office to include a meeting room and an office for a Chief Ranger.
- Recontour the land where the new family and group campgrounds, meadows, and interior day use area are proposed. Also, berm around the gas well sites. Revegetate all disturbed areas.
- Develop the paved trail system on the east side of Highway 160. Install two pedestrian bridges through the wetland.
- Implement the landscape improvement plan, beginning with the proposed campgrounds and extended day use area near the confluence of Three and Seven Mile Sloughs.

PRIORITY 2

- Complete the planting program, including wildlife habitat enhancement along the shoreline and in the riparian area.
- Remove the roadway and all campsite facilities in the recreational vehicle campground.
- Install the highway underpass, relocate the roadway, and close off the Windy Cove use area from Highway 160.

- Add picnic and camping facilities to the Windy Cove site, and two of the staircases to the water.
- Relocate the roadway to the Seven Mile Slough day use area.
- Provide a new parking lot at the Three Mile Slough day use area, and construct the visitor center with the observation platform, restroom, snack bar, etc.
- Remove and relocate the entrance road, contact station, visitor center, and sanitary disposal station.
- Develop the proposed Oak Ridge Family Campground and facilities, including the sunken meadow and campfire program center.
- Develop the new Montezuma Hills Group Campground and facilities.
- Remove the roadway into the existing group campground and part of the campsite facilities, and excavate the remainder of the Oak Ridge Meadow.
- Remove the end of the parking at Seven Mile Slough, rehabilitate the site, and relocate the picnic tables closer to that part of the parking lot which will remain.
- Remove the road system and five of the campsite facilities in the Olympic Campground. Rehabilitate the entire site adjacent to the boat lagoon, and relocate proposed facilities.
- Expand the boat lagoon by an additional 48 boat slips.
- Add a fish cleaning facility adjacent to the boat lagoon.
- Expand the existing group picnic area parking lot, and add the picnic facilities and floating boardwalk.
- Complete the trail system.
- Develop an overflow parking lot.

PRIORITY 3

- Construct the parking lot, provide a comfort station, and add picnic facilities to the Brannan Meadow day use area.
- Build the remaining floating docks.
- Add the observation platform, fishing pier, and third staircase at the Windy Cove use area.
- Add the concession-operated bait and tackle shop and fish cleaning facility adjacent to the boat launch.

Unresolved Issues

Implementation of this General Plan will help resolve all the current resource and recreation land use issues except future impacts of non-conforming uses. Contractual agreements between the department and various interests affect the future potential of this unit. Efforts to renegotiate such agreements should be examined so that implementation of these proposals are neither hindered or affected in the future. Furthermore, negotiations will help determine when or if the department should invest in certain rights in order to enhance and protect the natural and recreational potential of the unit.

Franks Tract State Recreation Area

Existing Conditions

Surrounding Land Use and Ownership

Properties on the surrounding tracts of land are privately owned, and with the exception of Bethel Island, are in agricultural production. Of all the islands in the Delta, Bethel Island is the most subdivided and developed. Dwelling units line the perimeter; these are interspersed with private marinas, many of which have overnight camping facilities, restaurants, and small supply stores.

Access and Circulation

Access to Franks Tract SRA is by boat only, although float planes have occasionally landed there. Many boaters arrive from Brannan Island SRA which is accessible by vehicle. In addition, privately owned boat launching facilities are available to the public at numerous sites around Bethel Island.

Existing Facilities

Franks Tract SRA has no developed facilities. The land base is limited to narrow levee remnants that are generally soggy and covered with dense vegetation.

Vegetation

No ornamental landscaping exists at Franks Tract SRA, although some exotic species have naturalized. The levee remnants are generally covered with indigenous vegetation, primarily riparian shrubs.

Other Features and Legal Conditions

Franks Tract SRA is divided into several parcels and drilling site reservations, with a variety of owners holding the surface rights and gas, oil, and mineral rights to the unit (see Figure 4). The department is the sole title owner, and owns all but seventeen acres of the surface rights to the unit. This seventeen acres of surface rights, plus gas, oil, and mineral rights, is owned by six individuals, and is divided into one 5-acre and twelve 1-acre drilling site reservations. The gas, oil, and mineral rights to the acquisition parcels are held by eight different owners. There are five unlocated easements for electrical pole lines and one located easement for an underground telephone line.

Nine of the unit's parcels are limited in the right to disturb the property within 100 feet of the surface. The remaining two parcels and all of the drilling site reservations are without limitations on the owners' rights to exploit the property. Because the owners of the drilling site reservations own both the surface and gas, oil, and mineral rights, they could establish drilling operations at these locations. The department does not have jurisdiction over leases contracted by the various owners to individuals or corporations interested in exploiting the gas, oil, and mineral rights, nor does the department have to be notified or give approval for such leases.

The telephone and electrical easements maintain rights of entry for patrol and maintenance purposes, but may not interfere with levee operations in any way.

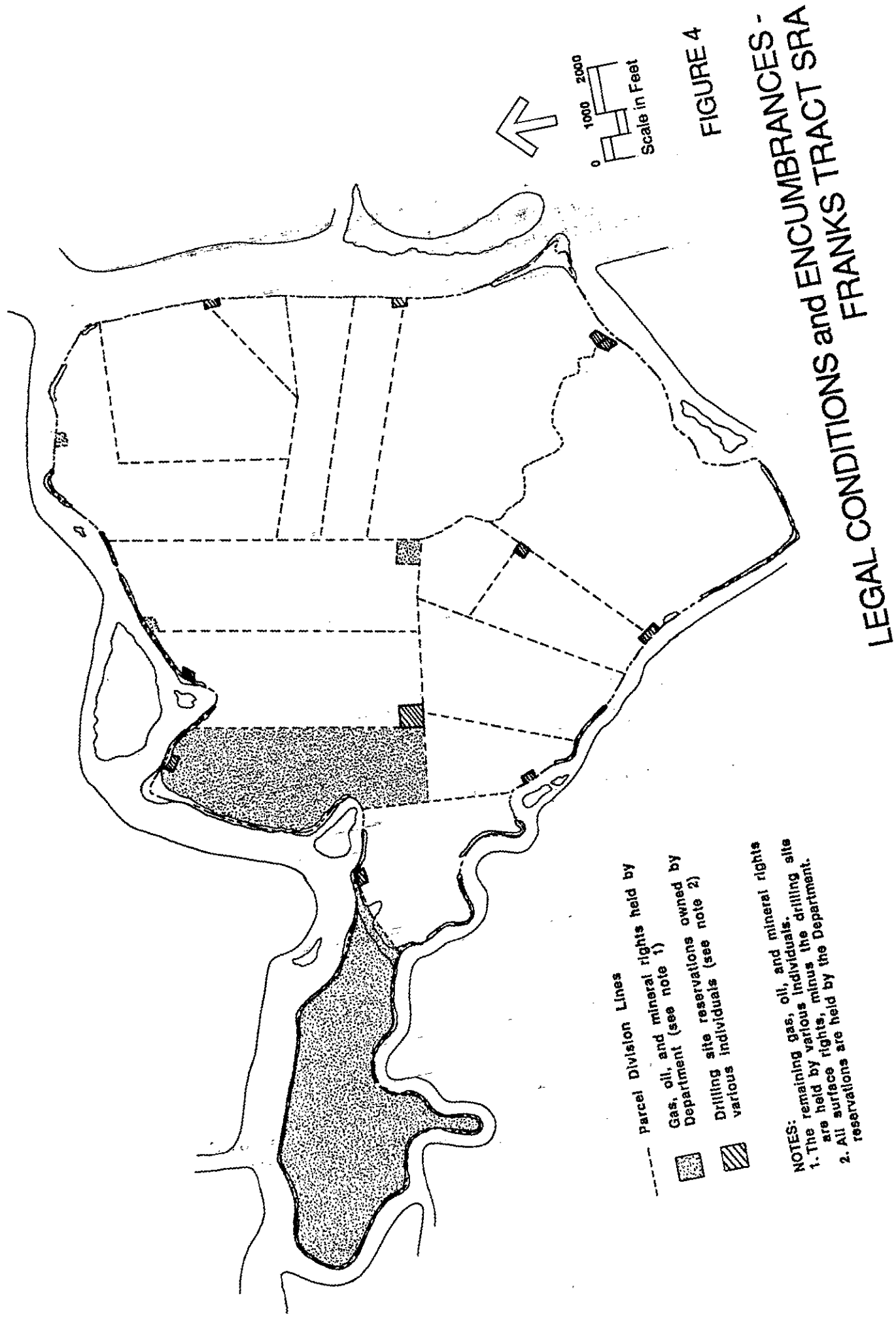


FIGURE 4
LEGAL CONDITIONS and ENCUMBRANCES -
FRANKS TRACT SRA

- Parcel Division Lines
- ▒ Gas, oil, and mineral rights held by Department (see note 1)
- ▨ Drilling site reservations owned by various individuals (see note 2)

NOTES:
 1. The remaining gas, oil, and mineral rights are held by various individuals.
 2. All surface rights, minus the drilling site reservations are held by the Department.

Land Use and Development Issues

There are no docks, tables, barbecue grills, restrooms, drinking water sources, or any other recreational facilities at Franks Tract SRA. However, the need for recreational facilities may not be nearly so great as the simple need for a larger land base. With the greatest concentration of marinas in the Delta adjacent to the unit at Bethel Island, boating has increased substantially in the area. Yet, at high tide, there is virtually no place for boaters to land to picnic, swim, sunbathe, or camp.

Interpretive programs were conducted at Little Franks Tract until 1981, when it, too, was inundated. Group visits were organized by the Alexander Lindsay Junior Museum, the Mt. Diablo Audubon Society, the East Bay Regional Park District, Contra Costa County schools, and others, contributing to 5,000 to 10,000 visitor days per year. There is strong public interest in resurrecting the interpretive environment of Little Franks Tract by restoring the wetland that is now submerged.

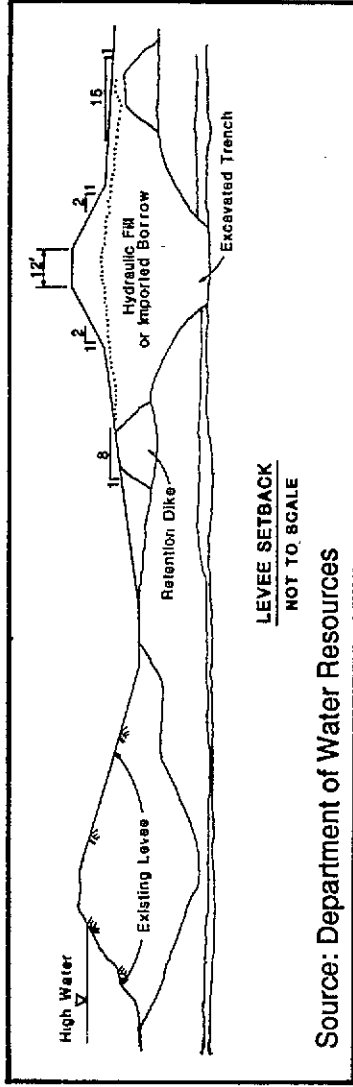
Land Use and Development Goals

In response to recreation needs and issues at Franks Tract SRA, a set of goals was generated to guide future recreation use and development:

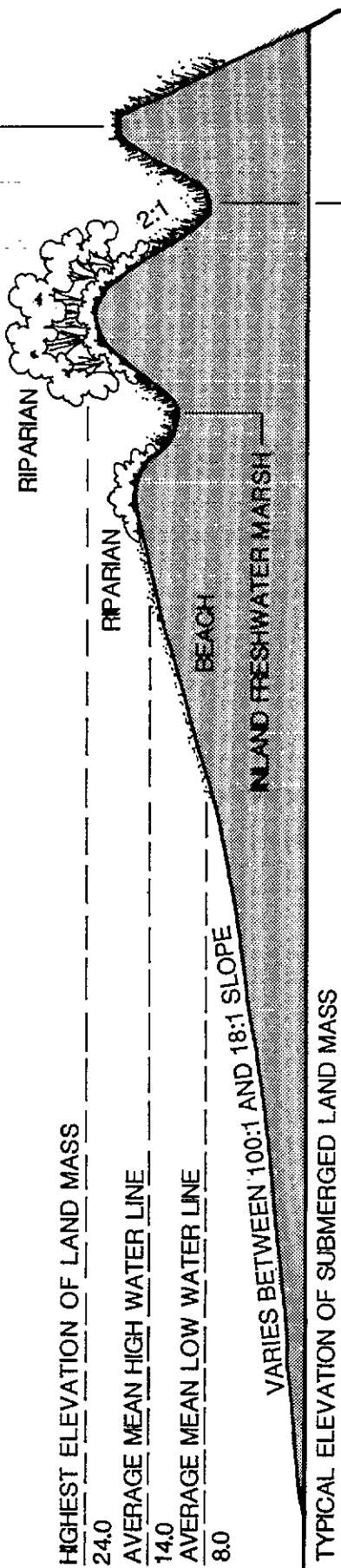
1. Provide low-intensity recreational opportunities by creating additional land base (especially beaches) for recreation activities.
2. Provide only the minimum of recreation facilities to accommodate the needs of boat-in visitors.

Land Use and Facility Recommendations

To fulfill the goal of increasing the land base acreage at Franks Tract SRA for recreation use, a series of islands will be created. These islands, as shown on Map 7, are diagrammatic, and intended for planning purposes only. The concept is to construct these with appropriate dredged material, and plant them with upland riparian woodlands on the windward bank for stabilization (see Figure 5). They will gradually slope into peat-underlain wetland and sandy intertidal coves



EXISTING LEVEE REMNANT



HIGHEST ELEVATION OF LAND MASS

24.0

AVERAGE MEAN HIGH WATER LINE

14.0

AVERAGE MEAN LOW WATER LINE

8.0

VARIES BETWEEN 100:1 AND 18:1 SLOPE

TYPICAL ELEVATION OF SUBMERGED LAND MASS

SOURCE: EDRAW, INC.

NOTES: Fill material will be contoured so that boats will be able to reach dry land at strategic locations during periods of low tide. This conceptual sketch is diagrammatic only. It represents the general opinions of various agencies and consulting hydraulic engineers as to how the islands may be successfully constructed.

NO SCALE

FIGURE 5
TYPICAL CROSS SECTION OF ISLAND AT
FRANKS TRACT SRA

and beaches. They will be built at such elevations that at high tide there will still be a significant land mass. Fill material will be contoured to permit dry land access at low tide. All but a large central island will be located near the perimeter of the main submerged tract, adjacent to or between the existing levee remnants. The islands will be constructed separately from the existing levees and peat islands to further protect them from erosion, rather than inducing additional structural failure. Much of Little Franks Tract will be restored into islands and freshwater wetlands.

Although most of the natural materials, i.e., sand and peat, needed to create the islands and marsh areas already exist in the state recreation area, it is likely that imported dredge spoils and other materials may also be used in realizing the plan. The quantity of material required to construct 500 acres of dry land is estimated to be between 30 and 45 million cubic yards of fill. Given the total scale of this undertaking, it would be beneficial for the state to consider accepting excess fill materials from nearby projects. Priority should be given to such materials that can be supplied at no cost to the state, and are appropriate for the intended recreation and habitat uses. It is estimated that a typical five acre island and surrounding wetland area located adjacent to an existing levee remnant would cost between \$1,250,000 and \$2,250,000 in 1987 dollars. Major cost variables include configuration of the islands and surrounding wetlands, and the need for imported fill materials.

The beaches will act as the main attraction for day use activities: swimming, sunbathing, picnicking, etc. Facilities such as picnic tables, barbecue grills, and sealed chemical toilets (portable or floating) will be provided at these sandy coves (see Table 7). Floating docks and platforms will also be provided on those islands where use is most encouraged, especially camping.

Camping will be permitted only on islands away from rich wildlife habitat areas (Little Franks Tract and peat islands in False River) and away from Bethel Island, where waterways are already congested with boats. Camping areas will be designated by signage on beaches and docks/platforms that are sheltered from prevailing winds.

Interpretive signs will direct boaters along a water course through and around Little Franks Tract. In Little Franks Tract, motorized boating will be controlled. On the island in the middle

of Franks Tract, there will be an observation platform to allow visitors to view wildlife in the nearby wetlands, and learn more about the delta ecosystem.

Waterfowl hunting will be permitted to continue in the area currently designated for hunting. During the hunting season when there is a potential for user conflicts, management activities will be altered in the designated area, and the public will be informed of temporary use restrictions for other kinds of recreation.

Several unaltered peat islands in False River should be acquired to help guarantee their preservation. This is, however, subject to review under the department's acquisition program and guidelines.

To promote safe boating, underwater debris near the surface of the water at normally low tides will be removed.

Table 7
Facilities Summary
Franks Tract State Recreation Area

Facilities and Amenities	Existing	New	Total Proposed	Priority
Land base (approx. acreage above water)	30	500	530	1-3
Picnic tables	0	50	50	2/3
Barbecue grills	0	50	50	2/3
Chemical toilets	0	10	10	2/3
Floating docks (for boating and camping)	0	10	10	2/3
Interpretive displays	0	6-18	6-18	2
Observation platform with view finders	0	1	1	3

Landscape and Habitat Improvement Program

Plants that are recommended for planting where islands or wetlands are to be created include:

Riparian Woodland	<p>Acer negundo var. californicum Alnus rhombifolia Aristolochia californica Artemesia douglasiana Baccharis glutinosa Baccharis viminea Cephalanthus occidentalis Equisetum spp. Lonicera involucrata Platanus racemosa Populus fremontii Populus trichocarpa Rubus ursinus Salix hindsiana Salix spp. Vitis californica</p>	<p>California box elder white alder ducthman's pipe mugwort false willow mule fat button bush horsetail twin-berry honeysuckle California sycamore cottonwood black cottonwood wild blackberry sandbar willow willows wild grape perennial bunchgrasses</p>
Freshwater Wetland	<p>Cyperus spp. Eryngium articulatum Helenium bigelovii Hibiscus californicus* Hydrocotyle spp. Juncus effusus Lathyrus jepsonii* Lilaeopsis masonii* Polygonum spp. Sagittari sanfordii* Scirpus acutis Typha latifolia</p>	<p>sedges eryngium sneezeweed California hibiscus soft rush Delta tule-pea Mason's lilaeopsis knotweed valley sagittaria tule cattail</p>

*Rare and endangered

The Himalaya berry and several thistle species that have naturalized on the levee remnants should be eradicated and replaced with the above riparian species.

Sequence of Actions

The first step in implementing this plan is to develop one or two islands as a pilot project. The project will be designed and located to achieve maximum recreation use and wildlife habitat

benefits, as well as the secondary benefit of blocking wind-generated wave action that now affects Bethel Island. An engineering feasibility analysis will be conducted over a period of time to ensure that the islands can be maintained successfully and inexpensively. Only when this is established can the plan continue to be implemented. The second priority is the restoration of Little Franks Tract and the development of interpretive facilities around it. The remaining area is of lowest priority, including construction of the observation platform.

Unresolved Issues

The single most important issue to the residents of Bethel Island is the protection of their own levee system. The perspective of many of the residents is that the department should reconstruct and maintain the levee system around Little Franks Tract and along the southwest side of Franks Tract, to reduce adverse wave action against Bethel Island.

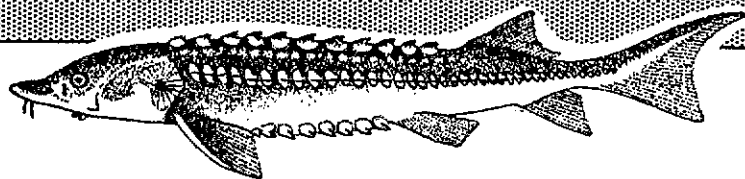
The concept of creating islands near existing levee remnants for recreational purposes may actually provide the secondary benefit of further protecting Bethel Island levees. While this may occur, it is the intent of the department to provide natural resource preservation and enhancement, while expanding recreational opportunities.

Should the engineering evaluation of the pilot project determine that the islands cannot be established with any certainty or maintained inexpensively, the recreation needs of boaters and the concerns of Bethel Island residents may go unresolved unless other alternatives can be considered.

Other issues raised which remain unresolved are those of public vehicular access and public launch facilities within the immediate vicinity of Franks Tract SRA, and emergency vehicle access. Currently, there is no public access to the waterways surrounding Franks Tract SRA. The department does not propose to acquire any of the land around Franks Tract SRA for public access since such access is already available at nearby Brannan Island SRA. The department is better able to expand these popular access facilities if it does not also have to provide similar facilities at Franks Tract SRA. Interest has also been expressed concerning improving roads on Bethel Island for emergency vehicles, and reducing traffic congestion in general. These issues are perhaps more appropriate as part of the Bethel Island Specific Plan, which is currently being prepared by the Contra Costa County Planning Department.

In the interest of preserving some of the last remaining peat islands in the Delta, this plan does propose that the department consider acquisition of several islands along False River which are now privately owned. Because no determination has been made regarding the landowners' willingness to sell or the availability of funds for this purpose, this proposal does not constitute a commitment to acquire any property. These islands are proposed for preservation purposes only, and would not provide for vehicular access.

Interpretive Element



INTERPRETIVE ELEMENT

Through an increased understanding of the surrounding environment, the public's appreciation and enjoyment of the natural and cultural aspects of that environment are enhanced. The Interpretive Element identifies themes for the natural and cultural resources unique to a unit, and outlines interpretive programs and facilities appropriate for the presentation of those themes in the unit.

Brannan Island State Recreation Area

Interpretive Period

A flow of history, including the geologic formation of the Delta, its earliest inhabitants, the Euroamerican immigration, and agricultural development will be interpreted at Brannan Island State Recreation Area (SRA).

Interpretive Themes

Primary Themes

California's Water Wheel

The Sacramento-San Joaquin Delta is comprised of a 700-mile network of waterways which supplies more than one third of California's fresh water through such engineering feats as the State Water Project. Located on the Sacramento River, Brannan Island SRA is a main component of this system.

Hydrology: Interpretation should contrast the original flow of the Delta's waters to the altered flow that currently exists, and explain why this alteration occurs. The relationship between the fisheries and water flow, the gradient zone, and the water quality (amount of dissolved oxygen) should be explained. The State Water Project, which provides more than 2.5 million acre feet of water annually to the rest of the state, should be interpreted.

The Delta's Rich Farmlands: As the gold rush declined, the importance of the fertile peat lands of the Delta became evident. The reclaimed islands were leased to farmers who hired migrant laborers with diverse ethnic and social backgrounds. The development of the Delta as a rich center of cultural history and agriculture for northern California should be explained.

Delta - Transportation Link: After the initial exploration of the upper Bay by the Spaniards in the mid-1700s, the waterways of the Delta became a main transportation route for sail and steamboats. The settlement of Rio Vista became a major docking point, and many smaller, informal docks marked the less populated settlements. Today, the Sacramento River Deep Water Ship Channel is maintained as a major transportation route, connecting the Port of Sacramento to the waterways of the Pacific Ocean.

Brannan Island SRA's Resources

Brannan Island's habitat and uses have been altered over the years, but certain aspects of the Delta have remained. Several plants, birds, and fish which are representative of the Delta can be found in this environment.

Ecological Communities: The natural order of the different ecological zones and biotic communities of Brannan Island SRA should be explained to visitors to increase their understanding of the environment. Visitors should understand how the physical and vegetative make-up of each area determines what wildlife will be present.

Endangered Native Plants: Interpretation should include the history of the Antioch dunes evening primrose: how it was rescued from the disappearing Antioch dunes, planted at Brannan Island, and its successful reseeded. The primrose's environmental requirements of shifting sands should be explained. The other rare plant occurring at Brannan Island State Recreation Area is Mason's lilaeopsis. Interpretation should aid visitors in identifying these species and understanding their habitats.

Appearance and Uses Change with Time: Interpretation should begin with the Plains Miwok tribelet and their prehistoric lifestyle of gathering, fishing and hunting. As

historical maps of the Delta illustrate, the arrival of early Spanish explorers opened the waterways to the Euroamericans in search of gold. Brannan Island has a colorful history of past ownership. Because of its higher elevation and close proximity to Rio Vista, a busy stop on the river travel system, Brannan Island was settled earlier than other Delta islands. Visitors should know that prior to its becoming a state recreation area, the site was used by the U.S. Army Corps of Engineers for deposition of dredgings from the Sacramento River. The use of the unit as a spoils site has raised and altered the original topography, causing Brannan Island to become one of the highest spots in the Delta.

A Valuable Foundation: Explanation of the formation and discovery of the Rio Vista Gas Field, which is expected to produce until the end of the century and is the largest single natural gas field in California, would help visitors understand the presence of the numerous gas wells within the unit.

Recreation at Brannan Island SRA

Brannan Island SRA is heavily used by urban dwellers for water-oriented recreation and a change of pace from the city life.

Ride the High Wind: This theme will inform visitors of the opportunities the strong winds provide for boardsailing and sailing. Explanation of techniques, regulations, and developed points of access should be included.

Angling: Fishing techniques and regulations should aid visitors in the sport of fishing. What types of fish, their lifestyles, and migration patterns should be explained. The sturgeon, unchanged for 200 million years, should be highlighted.

Recreation History: What is now primarily a recreation outlet was once a means of survival for many. This theme will point out the changes in recreation over the years by contrasting earlier uses of the Delta (hunting, trapping, fishing, and boating) with today's recreation use.

Nature Study: Various animals find their homes in Brannan Island SRA. Through interpretation, visitors will learn to identify the birds and mammals of the area.

Secondary Themes

Safety and Management at Brannan Island SRA

With the increased development planned for Brannan Island SRA will come an increase in the already great numbers of visitors to the unit. Informing visitors of their responsibility to safely enjoy the unit and respect management efforts will help their experience be a pleasant one.

The Fragile Shoreline: Interpretation will stress how visitors using their own trailways affect the erosion of the shorelines, eventually leading to the shorelines' destruction. Visitors will be reminded to use the designated pathways and stairways for their own safety, as well as that of the environment.

Safely Enjoying Brannan Island: Interpretation will alert visitors to the strong currents along Three Mile Slough and general water safety, including boating regulations. Visitors should also be made aware of the possibilities of sunburn and heat exhaustion, and how to administer aid if they should occur. Fire hazards should be pointed out, as well as proper campfire methods.

Trail Safety and Manners: Trails for bicycle and foot traffic should be clearly marked. Interpretation should stress public cooperation in order to minimize potential use conflicts and maximize public safety.

Sharing the Environment: This theme stresses the importance of the environment and the visitor's interaction with it. Such topics as removing all trash and respecting fellow recreation users and wildlife should be included.

Brannan Island Improves its Image: The purpose and value of management techniques which will be occurring at the unit should be explained to visitors. The

removing and realignment of roads, the new plantings and campgrounds, and progress updates with expected completion dates should be explained.

Interpretive Services

Facilities

Visitor Center: A visitor center can offer visitors a chance to familiarize themselves with opportunities for recreation and interpretation in the unit. An exhibit using a time-line approach to the natural and cultural history of the unit could be used to introduce visitors to the unit. The present collection of mammals, birds, and fish should be expanded, and the exhibits could be changed with the seasons. For instance, migratory birds could be displayed during the time of year they are present within the unit. The center would be an ideal setting for historical photos and maps of the Delta, as well as historic artifacts relating to the area. The development of an audio-visual program would help to convey information regarding interpretive themes. Outdoor exhibits would be useful for visitors arriving after-hours.

Observation Platforms: These low profile scenic outlooks would help visitors gain a perspective of the surrounding landscape and the myriad of waterways that constitute the Delta. Both towers would be oriented close to the day-use areas, allowing for observation of recreational activities and special events.

Interpretive Nature Trails: These trails should be self-guiding, and information should be provided to allow visitors to educate themselves about the unit's resources. Information on plant resources, particularly the Antioch evening primrose and Mason's lilaepsis, and the animals and birds of the wetland/marsh zone should be included. Wheelchair access and provisions for the visually impaired should be designed into these trails.

Panels: Panels of appropriate styles, located throughout the recreation area would help present information to visitors. Panels that should be included are orientation panels with maps and regulations; low-profile signage at observation towers to identify landmarks and urban areas; trailhead panels explaining uses and features of the trails; interpretive trail signage; campground panels interpreting campfire safety and responsibilities; recreation and resource information panels

at the group camp; erosion and safety panels at shorelines and stairways; recreation information panels at the boardsailing area; moveable panels to be installed in areas of management and alteration activities; and information panels on fishing resources and safety at the fishing pier, docks, and bait and tackle shop.

Campfire Center: The campfire center, with a substantial wind screen, should be equipped with electrical service to allow park personnel to use audio-visual equipment during presentations.

Brochures: Inexpensive maps and brochures on the unit's attractions should be available at dispensing machines throughout the unit, and at the visitor center. Such topics as nature trails, orientation, native plant identification, birding, etc should be included. Braille brochures for the visually impaired should be available.

Activities

Campfire Programs: Campfire programs allow visitors to interact with park personnel on an interpretive level. Current topics at the existing campfire program include Delta Recreation, Local Bird Life, Beavers, and the C.C.C. Program. New topics could cover such interest areas as rare and endangered plants, ecological communities present within the unit, the Delta's importance to California as a water source, Delta history from Native American to Euroamerican, etc. Topics could be presented in a variety of media, from slide programs to videos.

Nature Walks: Walks led by rangers or docents could travel varied routes depending on the resource themes presented. Visitors would have a chance to interact with knowledgeable personnel while becoming familiar with the unit.

Interpretive Development Recommendations

Priorities

- Install panels with orientation maps and regulations at the entrance, campgrounds, trailheads, comfort stations, and day-use areas.
- Develop a self-guided nature trail with access for disabled and visually impaired visitors.

- Produce brochures for orientation and trail guidance, birding, and native plant identification.
- Construct a visitor center with exhibits and information panels; develop a new group campfire center.
- Install interpretive panels at campgrounds, day-use areas, trailheads, and for temporary locations where management activities are taking place.
- Construct observation platforms with information panels.

Franks Tract State Recreation Area

Interpretive Period

Interpretation at Franks Tract SRA will begin with the geologic history, and progress to the present.

Interpretive Themes

Primary Themes

The Delta's Wetlands

Wetlands support significant fish, wildlife, recreational, esthetic, and scientific resources. But over the years, wetlands have decreased in number. Because of this loss of habitat, certain species of fish, wildlife, and plants have also decreased in number. The Delta, at one time, supported a large number of riparian and marsh communities, which come under the heading of wetlands.

New Islands Have Something for Everyone: The intent of the newly constructed islands is to provide appropriate habitat for diminishing species while allowing visitors a chance to recreate in this unique environment. Interpretation should explain the actual formation of the new islands and the sequence of succession that occurs with the establishment of the plant communities and the animals that follow.

Ecosystems within Franks Tract SRA: Willow/cottonwood riparian woodland and tule/cattail marsh communities are two important ecosystems in Franks Tract SRA. The natural order of these ecological zones should be explained to visitors to increase their understanding of the environment. Visitors should understand how the physical and vegetative make-up of each area determines what wildlife will be present, and their relationships to one another in the natural environment.

The Pacific Flyway: The Pacific Flyway is a major migratory route for birds traveling north/south along the western region of the continent. Franks Tract SRA is located in the path of this migration, and is a convenient resting spot for wintering waterfowl. Interpretation should aid visitors in identifying the great diversity of birds present in the fall and winter.

Residents of the Delta: The river otter and beaver, two busy residents of the Delta's wetlands, as well as the California hibiscus and the delta tule pea, two rare and endangered plant species, should be interpreted. Visitors should be able to identify them, and be made familiar with their lifestyles and preferred habitat.

Water-Oriented Recreation

Anglers and hunters have long been aware of the opportunities for their sports provided by Franks Tract SRA. With the increase of land mass and essential habitat for fish and wildlife, this area will become more popular to all water-oriented recreationists.

Sport Fish in the Delta: This theme will discuss the Delta's popular sportfish, catfish, and striped bass. Lifestyles and migration patterns, as well as fishing regulations, should be posted.

Waterfowl Season: Hunting regulations, including species, limits, and areas open to hunting, should be posted within the unit.

Recreational Use: Interpretation should alert visitors to the areas in the unit that allow for camping, boat tie-up, day-use activities, waterfowl hunting, and non-motorized boating.

Sharing the Environment: This theme stresses the importance of the environment, and the visitor's interaction with it. Such topics as removing all trash and respecting fellow recreation users and wildlife should be included.

Secondary Themes

The Historic Past

Prior to becoming a state recreation area, Franks Tract was a reclaimed island used for farming. The concentration of peat in the soils provided a fertile bed for crops, and supplied material for levee construction.

Peat Soils: The geologic formation of peat in the Delta and the history of Franks Tract as a major source of peat export should be explained to visitors. How peat soils offer a nutrient-rich base for plants and why they are a poor substance for levee construction should be explained.

The Formation of Franks Tract: Flooding in the Delta is a constant concern. The unit's history of reclamation and flooding would help to explain the current state of the unit. Levee remnants surrounding the unit, including remnant pilings, could be pointed out to illustrate the method used for making the original levees.

Interpretive Services

Facilities

Panels: Appropriately styled panels located throughout the unit should present information to visitors. Panels that should be included are orientation panels with maps and regulations; panels explaining new islands and their construction; signage at the observation tower to identify wildlife and landmarks; campground panels interpreting campfire safety and responsibilities; interpretive trail signage; recreation and resource information panels located throughout the heavily used islands; and panels concerning the wetlands communities in areas near the sensitive environments.

Observation Platform: This structure would allow visitors to observe wildlife, particularly waterfowl within Little Franks Tract, without intruding on some of the more sensitive species. It would also allow visitors to gain a perspective of the Delta and its rich ecosystems.

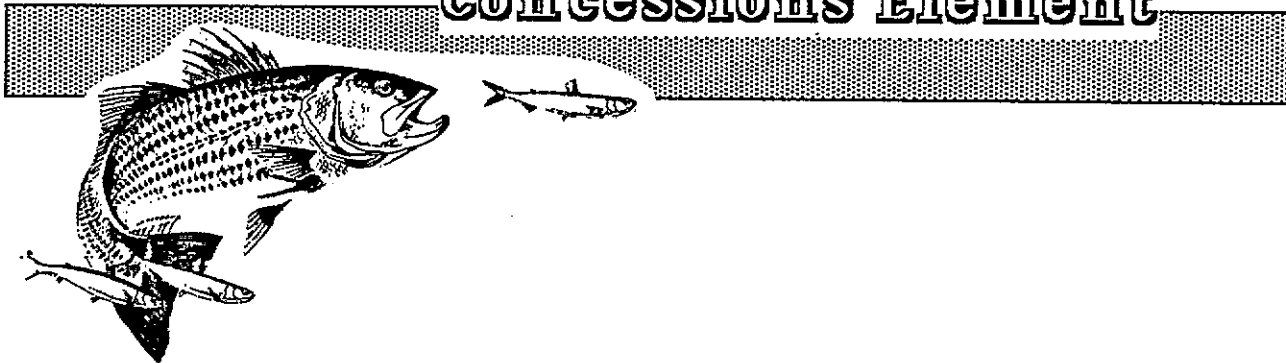
Interpretive Water Trail: A self-guiding water course would allow boaters in non-motorized boats to educate themselves about the resources in Little Franks Tract. Signs would direct boaters around and through the unit. Information on plants, birds and animals found in the unit should be included.

Interpretive Development Recommendations

Priorities

- Install information panels concerning orientation, regulations, and interpretive themes as the islands are built and the campsites are developed.
- Develop an interpretive water trail in and around Little Franks Tract.
- Construct an observation platform with interpretive signage.

Concessions Element



CONCESSIONS ELEMENT

A concession is a general term for a grant of authority by the department to another party, permitting that party to provide goods, services, and/or facilities for visitor use, enjoyment, convenience, and safety which the department cannot provide as conveniently or efficiently. Such concessions should not create added financial burden on the state, and wherever possible, shall either reduce costs or generate revenues that aid in maintaining and expanding the State Park System.

Brannan Island State Recreation Area

Current Conditions and Needs

Although there are no current retail commodity concessions at Brannan Island SRA, a snack bar operated in the day use area until it was closed several years ago by the concessionaire. Since then, visitor use at the unit has increased considerably, raising the likelihood that such a concession might be successful. There is an existing concession operating in the unit which provides for boardsailing instruction.

Proposed Concessions

The proposed changes at Brannan Island SRA will more than double the number of current visitors; therefore, several concessions are proposed.

First priority is reestablishing a snack bar in the existing day use area. It will provide limited meal service, cold drinks and ice cream products. It should be located near the beach, where it can be conveniently reached by beach users and delivery vehicles. A second snack bar could be incorporated into the new visitor center. It could provide the same services and products, as well as edible and non-edible shelf products.

A small bait and tackle shop is another potential concession. It will be conveniently located adjacent to the expanded boat launch, and will provide basic supplies such as ice for all-day fishing trips.

To the extent practicable, concession operations should be consolidated in the fewest possible contracts.

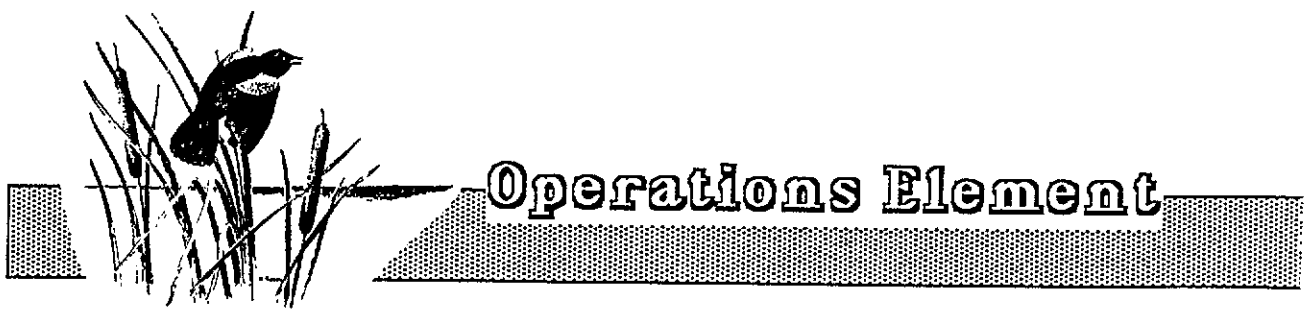
Franks Tract State Recreation Area

Current Conditions and Needs

There are no concessions at Franks Tract SRA. A concession is not considered desirable due to the relatively low density of existing and projected recreationists, the lack of suitable land base area, and locally available commercial services.

Proposed Concessions

No concession operations are proposed as part of this General Plan.



Operations Element

OPERATIONS ELEMENT

Brannan Island State Recreation Area

Brannan Island SRA is one of three units supervised by the Delta District, which is part of the Inland Region. Franks Tract SRA and Delta Meadows are the other two units. The Delta District Headquarters is located at Brannan Island SRA, in the administrative area.

Existing Operation

There are nine permanent employees at Brannan Island SRA, and ten interns from the California Conservation Corps (CCC). The employees include maintenance personnel, rangers, an office assistant, and the District Superintendent. There are four maintenance and park aides who are employed during the summer seasons. Lifeguards are also hired seasonally. There are two volunteers.

Problems

While the existing staff manages to maintain the facilities, serve the visitors, enforce regulations, and perform other necessary functions, any increase in responsibility would be difficult to manage. Despite the need for the CCC staff who are paid by that organization and not the department, training and supervision of these individuals strains existing staff resources. Of particular concern is the lack of a Chief Ranger who would serve as the acting supervisor on weekends when the District Superintendent is absent. With such large numbers of visitors, emergencies do arise occasionally that warrant the presence of that kind of authority.

Special Considerations

The CCC has been actively involved at Brannan Island SRA for many years, and is very supportive of the program at the unit. However, at any given point in time, the CCC may assign fewer workers to Brannan Island SRA, or none at all. Without the support of the CCC, staffing would be inadequate, and would severely affect the operations of the unit. Therefore, some consideration should be given to the reliance on a somewhat tenuous staff.

General Plan Implementation

Goals

Several goals have been generated in response to current operational conditions and needs at Brannan Island SRA:

1. Add a Chief Ranger to the present staff.
2. Ensure that the CCC continues to provide supplemental staff.
3. Increase the staff commensurate with the proposed expansion of uses and facilities.

Operational Needs and Solutions

With the implementation of this General Plan, there will be two to three times as many facilities at Brannan Island SRA. The geographical area that will have to be managed will more than triple in size, and will be more widespread. Some areas will be accessible only by foot.

In order to minimize maintenance, new facilities should be well designed and constructed with durable materials and good workmanship.

Restoration and management of the natural landscape will be a major function of the staff. This will involve an extensive planting program, exotic species control, wetland and woodland management, fisheries and wildlife management, and fire control. Irrigation maintenance will be significant during the first few years until the indigenous species become established, but after that initial period, landscape maintenance will be limited primarily to the picnic areas.

Implementation of the proposed interpretive programs will require only minimal additional staff, since the emphasis is on physical rather than programmatic improvements.

In summary, Brannan Island SRA will require increases in staffing to accommodate the operational needs of this General Plan when fully implemented.

Volunteerism

No volunteer program is being proposed as part of this General Plan. However, this option should be explored further as improvements are made at the unit.

Franks Tract State Recreation Area

Franks Tract SRA is one of three units supervised by the Delta District, which is part of the Inland Region. Brannan Island SRA and Delta Meadows are the other two units.

Existing Operation

Management of Franks Tract SRA is limited to six to twelve patrols a year by boat around the unit. The staff inspects the levees and enforces waterfowl hunting regulations. Boating accidents and other emergencies are handled by the Contra Costa County Sheriff Patrol and U.S. Coast Guard.

Problems

Boating accidents, including non-collision injuries, do occur. Intensified management might reduce the number of the occurrences or quicken emergency response to them, but will not prevent them altogether. Some accidents are caused when boats hit debris near or on the surface.

The levee systems surrounding Franks Tract SRA have continued to erode and collapse since the islands were permanently flooded.

General Plan Implementation

Goals

The prime operational concerns at Franks Tract SRA are to:

1. Provide a safe recreational environment.
2. Restore and protect the natural resources.

Operational Needs and Solutions

Implementation of this General Plan will require more frequent patrols of the unit. Daily or weekly patrols will be necessary to minimize deterioration of the facilities and natural resources.

Signs will be relied on for much of the management: to control visitor use in wildlife protection areas and to minimize recreation use conflicts and hazards. Motorized boating will be controlled within the boundary of Little Franks Tract to keep wildlife disturbance to a minimum. Interpretive services will be facility rather than personnel oriented.

Campsites will be available on a first come, first served basis.

Recreation use other than waterfowl hunting will be temporarily restricted in the designated hunting area during the waterfowl hunting season.

Volunteerism

No volunteer program is being proposed as part of this General Plan. However, there is considerable public interest in reestablishing an interpretive program at Little Franks Tract. As the island is restored as planned, public involvement in such a program should be arranged so group interpretive walks or boating excursions could be provided by a staff of volunteers.

Environmental Impact Element



ENVIRONMENTAL IMPACT ELEMENT

This Environmental Impact Element, combined with the other elements of the General Plan, serves as the environmental impact report required by the California Environmental Quality Act. The project and existing conditions are described in the General Plan, and are incorporated by reference.

The broad level of detail in the Environmental Impact Element is commensurate with that of the General Plan. As specific development plans are proposed, they will be subject to further environmental analysis and documentation.

This Environmental Impact Element addresses the development and management of both Brannan Island and Franks Tract State Recreation Areas.

Brannan Island State Recreation Area

Significant Environmental Effects

The General Plan proposes to more than double the capacity of the existing facilities at Brannan Island SRA. Significant long-term impacts will potentially occur on-site as well as off-site. However, because the proposed development has been conceived in response to existing environmental constraints and sensitivities, on-site impacts caused by this additional capacity will be marginal, especially in comparison to the impacts of most other types of development and development that occurs in more urbanized areas. During project construction, short-term impacts will be more noticeable. In weighing the potential adverse impacts against the beneficial effects of solving numerous existing problems, the overall net impact will be positive rather than negative.

The significance of on-site impacts relates to the quality of the site, the goals of the General Plan, and the gas, oil, and mineral operations at Brannan Island SRA. Off-site impacts are considered significant if the quality of delta resources, levels of traffic in the Delta, or private property are adversely affected.

Under state parks and recreation guidelines, a General Plan lacks the detail necessary to make any quantifiable projection; therefore, potential impacts can only be described as presented below:

1. Implementation of the General Plan will significantly increase the number of visitors, resulting in such potential direct impacts as increased soil erosion, vegetative loss, disturbance of wildlife and fish habitat, vandalism, noise, fire hazard potential, and vehicular traffic within the unit.

Due to an increase in the numbers and concentration of watercraft, particularly motor boats, levee erosion, off-site water and air pollution, noise, and vandalism will rise, as well as the potential for watercraft accidents.

Highway traffic to the unit, especially along Highway 160, will also be greater. The estimated 1986 annual average daily trips (ADT) along Highway 160 south of Brannan Island SRA near the Antioch Bridge was 7,700 ADT, and 7,000 ADT near the Highway 12 intersection. The peak-month ADT at these two locations are, respectively, 9,500 ADT and 8,500 ADT. These sections of the highway have either a 24 or 40 foot wide roadbed. During peak use periods, a "D" to "E" level of service is currently experienced along the narrower portions, and a "C" level of service exists along the wider stretches. These generally represent less than desirable traffic conditions. Current 20-year projections by CALTRANS anticipate an average annual daily traffic volume of about 15,000 ADT.

A worst-case projected traffic scenario for the full development of Brannan Island SRA indicates an addition of approximately 725 ADT over current volumes during peak-use months, representing an eight to ten percent increase in current Highway 160 traffic. This assumes that all campgrounds and day use parking areas are full, and there is a 25 percent overall turnover rate on any given day. This would result in an "E" to "F" level of service along the narrow, winding portions, and a "D" level of service along the straighter, wider portions of Highway 160 between the Antioch Bridge and Highway 12 intersection, relative to current use volumes and without any changes in current highway conditions.

2. If contracts are renegotiated, companies with gas, oil, and mineral rights at Brannan Island SRA may be affected by General Plan policies that restrict, in various ways, access, facilities, operations and future activities.
3. Construction activities will temporarily produce such direct impacts as noise, air pollution, fuel consumption, and road closures and delays. Residual impacts resulting from construction include soil erosion, soil compaction, sedimentation, vegetative loss, and disturbance of wildlife and fish habitat.
4. Increased use and expansion of the swim area on Seven Mile Slough will impact the state listed, rare Mason's lilaeopsis (Lilaeopsis masonii) which occurs along the shoreline in this area.

Unavoidable Environmental Effects

Potential long-term, on-site environmental impacts will be partially or fully mitigated with adoption of the General Plan and any supplemental mitigation measures developed during subsequent site planning. Since the department has jurisdiction only over its own property, off-site impacts cannot be mitigated, although some may be reduced somewhat. Short-term impacts caused by construction are also unavoidable, although they too may be minimized.

Mitigation Measures

1. The potential for soil erosion is highest along the steep shoreline where visitors reach the water. To control shoreline access, boardwalks, piers, and trails will be constructed. The boardwalks will be parallel to the shore and accessible by ramps at strategic locations. Piers will be accessible from staircases or paved trails that are set back from the water or cliff. A barrier will be installed along the west side of Highway 160 to prevent automobiles from parking along the Sacramento River shoreline. The gradients of existing slopes (e.g. around the group campground and at the proposed Windy Cove beach) will be lowered.

2. Sedimentation caused by grading of the new lagoons and beaches will be partially mitigated by first building a structure to trap and settle sediment until construction and any proposed planting has been completed. Grading will be conducted during the dry season or within a compact time frame on dry weather days during the rainy season.
3. One purpose of the proposed landscape and habitat improvement program is to enhance existing vegetation; another is to mitigate potential loss of vegetation. Of particular concern are rare, endangered, and other important species. The shoreline facilities described above will further protect existing vegetation as well as proposed plantings. Impacts to the state listed, rare, Mason's lilaeopsis from increased use and expansion of the Seven Mile Slough swim beach will be mitigated by establishment of new, suitable habitat areas with the state recreation area.
4. Some wildlife and fish habitat will be disturbed or destroyed during construction, and some will continue to be disturbed by recreationists. However, a substantial amount of wildlife and fish habitat will be created as part of the landscape and habitat improvement program. Furthermore, the management plan sets aside certain wetlands and riparian areas for protection from recreation use.
5. Traffic noise will be reduced through the implementation of the landscape and habitat improvement program. For example, a continuous planting strip is designated along Highway 160 and the main entrance road. This will act as an absorption buffer between these more heavily traveled routes and the proposed campgrounds. Noise standards for motorboats have been established, and an enforcement program can be implemented if necessary.
6. The increased fire hazard potential will be offset somewhat by an increased number of fire hydrants. A fire management plan reflecting changes proposed in the General Plan will be developed and coordinated with the Rio Vista Fire Department and other appropriate agencies.

7. Increases in vehicular traffic on-site will be mitigated by improved access and circulation. Existing traffic hazards along Highway 160 will be mitigated by a change in the location and design of the contact station and entrance road, and by the provision for parking at the Windy Cove site. Also, through traffic will be made more cognizant of being in the unit because of additional entrance signs and improved landscaping. Necessary improvements to Highway 160 for turning lanes will have to be coordinated with the State of California Department of Transportation. Work that will interfere with the flow of traffic will be scheduled during periods of low traffic volumes, and published in advance in local newspapers.
8. The General Plan encourages more boating and other watercraft activities, but also helps to disperse some of this use along Three Mile Slough and around to the Sacramento River. The surface area for non-motorized watercraft has also been expanded with the extension of Seven Mile Slough into the unit.
9. Although a considerable amount of new development is proposed, including less desirable visual features such as roads, parking lots, utilities, and buildings, the General Plan provides for sensitive siting, extensive planting, earth mounding, undergrounding of utilities, and attractive building materials to avoid adverse visual impacts.
10. In order to enhance the scenic quality of the site, contracts will be negotiated or renegotiated with the owners and leaseholders of the gas, oil, and mineral rights to modify existing facilities and minimize impacts to the extent practicable. Improvements may be required to improve esthetics and minimize impacts.
11. If cultural resources are discovered on excavation, appropriate state agencies will be immediately notified.

Alternatives

The Conceptual Land Use Plan proposed as part of the General Plan represents a combination of ideas extracted from three alternative plans that were developed early in the planning process and presented to the public for comment. The Conceptual Land Use Plan was preferred because it best resolves existing and potential problems, is the most sensitive to natural resource opportunities and constraints, and meets all recreation land use and development goals.

The preferred plan reflects relatively high levels of development in comparison to the alternative plans considered. It should be realized, though, that the General Plan does not exclude the option of less intensive development, although the ramifications of any changes must first be thoroughly understood.

If a “no project” alternative was selected, only minor development would occur as funds became available to upgrade facilities. The regional demand for recreation opportunities would go unmet, and a variety of problems would persist: inadequate, aging, poorly located, and underused facilities and use areas; lack of developed shoreline access and subsequent erosion problems; poor visual quality; a weak environmental education program; traffic hazards on Highway 160 at the entrance to the unit; unnecessary day use traffic past the family campground; use conflicts with protected plant species in certain areas; and incompatible non-recreation uses.

Other key alternative concepts considered include:

1. Maintain the existing entrance, but modify the contact station and roadway so incoming visitors can be processed at either side of the building, and encourage the Department of Transportation to construct an additional turning lane on Highway 160. This alternative was rejected in favor of moving it to a new location, primarily because (1) it was believed that even with these modifications, traffic problems would persist with the additional proposed capacity; and (2) it was determined desirable to reduce, rather than increase, the traffic that passes by the existing family campground.

2. Provide either a control signal and crosswalk or a structural overpass across Highway 160 to connect the main portion of the unit to the portion located on the west side. The first option was not favored by the Department of Transportation for various reasons, including proximity to Three Mile Slough drawbridge. An overpass was rejected as too urban, visually unattractive, and less conducive to bicycle and pedestrian trail use than an underpass.
3. Relocate the recreational vehicle campground, and replace it with an expanded family campground. Due to complaints about the noise of the drawbridge at night and exposure to wind, camping in this part of the unit was deemed undesirable.
4. Extend the existing day use area on Seven Mile Slough away from the shoreline to include the highest terrain in the unit (west of gas well #3), and locate the proposed family campground in the center of the unit. This option denied use of this more attractive environmental setting as a campground.
5. Convert the existing group campground into the day use parking lot, replacing existing parking with a picnic area and requiring the relocation of group camping. Lack of direct vehicular access to the beach, comfort station, and proposed snack bar was considered unacceptable.
6. Remove boat-in campsites altogether and allow only day use activities. Boaters would have the option of sleeping in the family campgrounds. This alternative should be evaluated again after the boat lagoon is expanded to determine the actual need for campsites at the lagoon.
7. Provide for an aquatic exhibit concession such as the Neptune, a 140-foot long clamshell dredge that was built in the early 1900s and is currently moored in Isleton, California. This structure has been offered to the department for mooring at Brannan Island SRA.

Relationship Between Short-Term Uses and Long-Term Productivity

The proposed short- and long-term use is natural resource protection and recreation.

There are nine productive gas wells operating within the unit. These will be protected in coordination with the Division of Oil and Gas and the Department of Water Resources. However, the development of new gas wells will not be permitted in accordance with Public Resources Code Section 5001.65 unless there are existing leases and pipeline easements. The ultimate goal is to remove all non-conforming uses from the unit.

Irreversible Environmental Changes

No new land areas or natural resources will be irreversibly committed with the implementation of the General Plan. Development proposals generally involve areas of previous impact or suitability for development, and the nature of the development is such that it could be removed, and sites returned to a near pre-development condition. Only the building materials and the energy consumed in construction, operation, and maintenance may be considered an irreversible commitment of resources.

Growth-Inducing Impacts

There will be a minor growth-inducing impact due to the increased recreational capacity and use. The increased recreational capacity will influence demand for support facilities such as service stations, grocery stores, restaurants, and sports equipment outlets. However, the impact is not expected to be significant or negative. This demand is expected to be accommodated by existing services in the immediate vicinity. The potential for attracting new users will be relatively small compared to the amount of recreation demand the project will satisfy. The needs created by potential staff increases will be typical of residential growth (schools, hospitals, etc.), but will be insignificant.

Effects Not Found Significant

1. The proposed plan will create additional impervious surface area which will alter the rate and timing of runoff, and slightly increase pollutants. However, in comparison to the total watershed area, this increase will be insignificant.
2. While air quality may be adversely affected by construction activities and additional vehicular traffic, impacts will not be significant, since there are no known sensitive facilities such as hospitals, or land use, within the immediate vicinity.
3. Sewage and waste production and water and fuel consumption will rise proportionally with public use. However, sewage and water facilities and waste services are provided at the unit. Fuel consumption will not be significant because a majority of the visitors will come from within the region.
4. No rare or endangered plants or animals will be significantly affected since mitigation measures are incorporated in the plan.
5. The project will produce a more diverse vegetative mosaic, as compared to that which currently exists.
6. Because site surveys have revealed no important cultural resources, impacts of this kind are not anticipated.

It should be realized that this General Plan will have numerous benefits as well as potential negative impacts. The most significant benefits include: increased recreational opportunities, improved esthetic characteristics, additional habitat for rare and endangered plant species, additional wildlife and fish habitat, and improved traffic and parking conditions along Highway 160 in the unit. Of particular importance, the development of the Windy Cove site will attract boardsailors and potentially transfer use from Glass Beach on Highway 160, where there currently exists a hazardous conflict between boardsailors and highway traffic.

Franks Tract State Recreation Area

Significant Environmental Effects

Because the General Plan calls for nonintensive development in an area that is rural in character, impacts may be considered significant only in view of the quality of the environment and the goals of the department to preserve and protect the resources.

The potential impacts described below cannot be quantified at this time due to the general nature of the proposed development:

1. Implementation of the General Plan will significantly increase the number of visitors, particularly boaters, resulting in such potential indirect impacts as increased soil sedimentation, disturbance of wildlife and fish habitat, vandalism, noise, trash, fire hazards, water pollution (from motor boats), and boating accidents. These kinds of impacts will occur as well in the surrounding waterways.
2. Gas, oil, and extraction will be affected by General Plan policies that restrict the development of these resources (e.g., prohibiting the disturbance of property within 100 feet of the surface).
3. Island construction will produce such direct impacts as soil sedimentation, water pollution, fuel consumption, and noise, all of which will be temporary with the exception of soil sedimentation.

Unavoidable Environmental Effects

The indirect impacts of increased use are unavoidable, although they may be reduced.

Gas, oil, and mineral extraction will have to meet all environmental and operational criteria. Only those who own existing gas, oil, and mineral rights will be permitted to extract these resources in accordance with Public Resources Code Section 5001.65 and in conformance with existing contractual obligations.

None of the short-term impacts can be avoided. However, methods of construction will help minimize soil sedimentation.

Mitigation Measures

1. As island materials are deposited in place, the turbidity of the water will increase sharply. This can be partially mitigated in the long run by using rock revetments and planting wetland plant species. Creating islands in the Delta is a relatively new concept. One or two island pilot projects will be constructed and studied to determine the best fill materials, configurations, and underwater slopes to minimize erosion and sedimentation. Fill material is anticipated to come primarily from within the unit. However, appropriate fill material from off-site may be acceptable or necessary.
2. To reduce the disturbance of wildlife and fish habitat, certain wetland areas will be protected from recreation use. Signs, fencing, thorny shrubbery, shallow or narrow levee openings, and interpretive information will be employed to help achieve this goal. Motorized boating in Little Franks Tract will be controlled.
3. Vandalism will be controlled with frequent patrolling. Facilities will be as vandal-proof as possible.
4. Facilities and designated campsites will be located away from Bethel Island and existing wildlife habitat areas to minimize the impact of noise and congestion.
5. Trash will be controlled via a "carry in, carry out" policy that will be reinforced through educational facilities and by management presence.
6. Fire hazards will be minimized by installing barbecue grills in fill material that is least likely to support plant growth (i.e., sand), and siting them in wind-protected locations.

7. Boat use will be controlled primarily through educational programming and management by patrol. Emergency response plans will be coordinated with the Coast Guard, Contra Costa County Sheriff Patrol and Bethel Island Fire Department.
8. If gas, oil, and mineral activities are affected, contracts will be renegotiated as required to meet the objectives of the plan.
9. If cultural resources are discovered on excavation, appropriate state agencies will be immediately notified.

Alternatives

Two alternative plans for Franks Tract SRA were considered: a “no project” alternative; and the Optimum Plan, Franks Tract State Recreation Area, prepared and adopted in 1986 by the East Bay Regional Park District.

The “no project” alternative would be a continuation of past policy; that is, do nothing and make no improvements. The current land base cannot adequately accommodate boating activities or support recreation facilities. With a declining land base and no installation of basic facilities, recreation needs will only intensify, as will associated problems like trespassing. Demands for interpretive programs will also go unsatisfied, and wetland habitat will continue to decline.

The Optimum Plan was developed, to a great extent, in response to the concerns of Bethel Island residents regarding the eroding levees of Franks Tract SRA that historically have helped protect their own levees. The Optimum Plan recommended that the levee remnants be reconstructed and wave-blocking islands be added. The entire Little Franks Tract was proposed to be restored as a freshwater marsh and lake. The Optimum Plan extended beyond the boundary of the unit to recommend staging and access areas with recreation facilities on Bethel Island and Holland Tract. The latter would have required a new access road across private land. Little additional wildlife and fish habitat outside Little Franks Tract was proposed.

It was determined that the Optimum Plan would not sufficiently respond to projected recreation demand, so the island concept was further developed and expanded in the selected alternative. Less emphasis was placed on Little Franks Tract; full restoration is not cost-effective from the department's perspective. Furthermore, levee reconstruction specifically for flood control purposes is not a mission of the department. The acquisition and development of private property for recreational purposes outside the unit as outlined in the Optimum Plan was also judged to be inappropriate. Linkage of the two units in this plan is viewed as meeting the complementary needs of each, including access to Franks Tract SRA which is provided indirectly at Brannan Island SRA.

Relationship Between Short-Term Uses and Long-Term Productivity

The proposed short- and long-term use is recreation and natural resource protection. Long-term commercial extraction of gas, oil, and mineral resources would be in direct conflict with these policies and Section 5001.65 of the Public Resources Code. Short-term contractual obligations must, however, be recognized.

Irreversible Environmental Changes




No new land areas or natural resources will be irreversibly committed with the implementation of this plan. The nature of the proposed recreation development is such that it could be removed. Only the energy consumed in construction, operation, and maintenance may be considered an irreversible commitment of resources.

Growth-Inducing Impacts

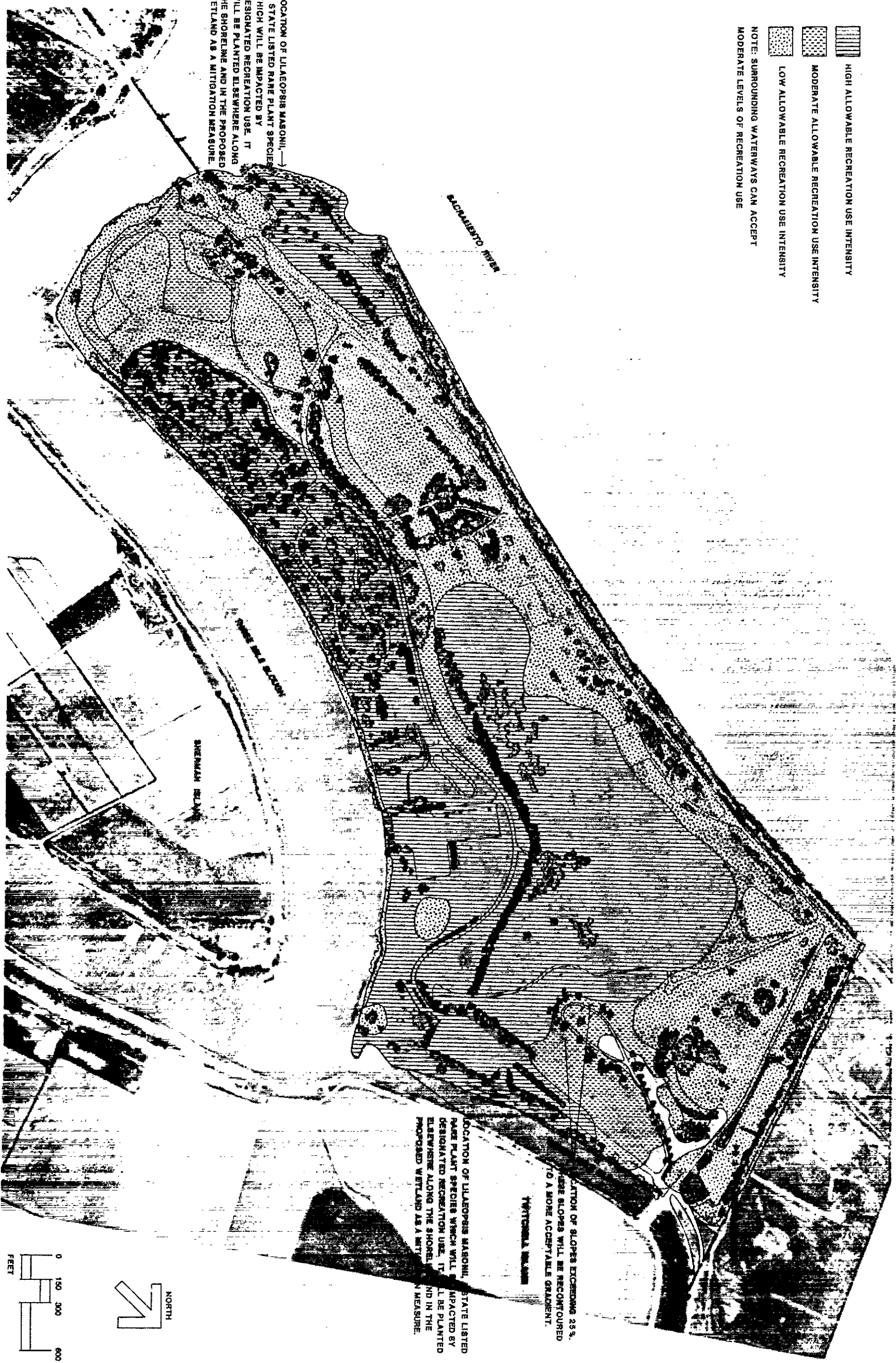
The increased recreational capacity may influence demand for support facilities such as service stations, grocery stores, restaurants, and sports equipment outlets. However, the impact is not expected to be significant or negative. The potential for attracting new users will be relatively small in comparison with the amount of existing demand the project will fulfill.

Effects Not Found Significant

1. Soil erosion on the existing levee remnants will not be caused by the project; rather, the proposed recreation and habitat islands will help stabilize them. The wave-blocking islands will, as a secondary benefit, also help to protect private neighboring levees.
2. The project will produce more, rather than less, vegetation growth. All islands will be planted with riparian woodland species and extensive wetlands will be developed. Vegetation on the existing levee remnants will be protected except where undesirable species may be replaced (see No. 4 below).
3. Although fish and wildlife may be disturbed by increased use, substantially more habitat will be created and protected. Several undisturbed channel islands may also be acquired. Efforts to maintain the quality of the sport fisheries will be coordinated with the Department of Fish and Game.
4. No rare or endangered plants or animals will be significantly affected. In contrast, some rare and endangered plant species will be introduced, and invasive exotics will be removed.
5. Because Franks Tract SRA is accessible only by boat, visitors are expected to originate from throughout the Delta; therefore, no significant impacts to the region's highway system are expected.
6. Air quality impacts will be insignificant since there will be little grading above the high water level, and the wind will disperse motor boat emissions.
7. Because site surveys have revealed no important cultural resources, impacts of this kind are not expected.

-  HIGH ALLOWABLE RECREATION USE INTENSITY
 -  MODERATE ALLOWABLE RECREATION USE INTENSITY
 -  LOW ALLOWABLE RECREATION USE INTENSITY
- NOTE: SURROUNDING WATERWAYS CAN ACCEPT MODERATE LEVELS OF RECREATION USE

LOCATION OF LILAEOPSIS MASONII, A STATE LISTED RARE PLANT SPECIES WHICH WILL BE IMPACTED BY DESIGNATED RECREATION USE. IT WILL BE PLANTED ELSEWHERE ALONG THE SHORELINE AND IN THE PROPOSED WETLAND AS A MITIGATION MEASURE.



SACRAMENTO RIVER

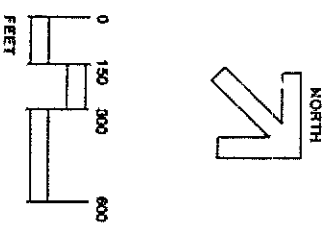
WETLAND

SHERMAN WETLAND

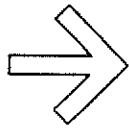
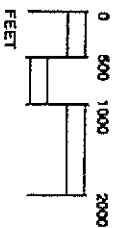
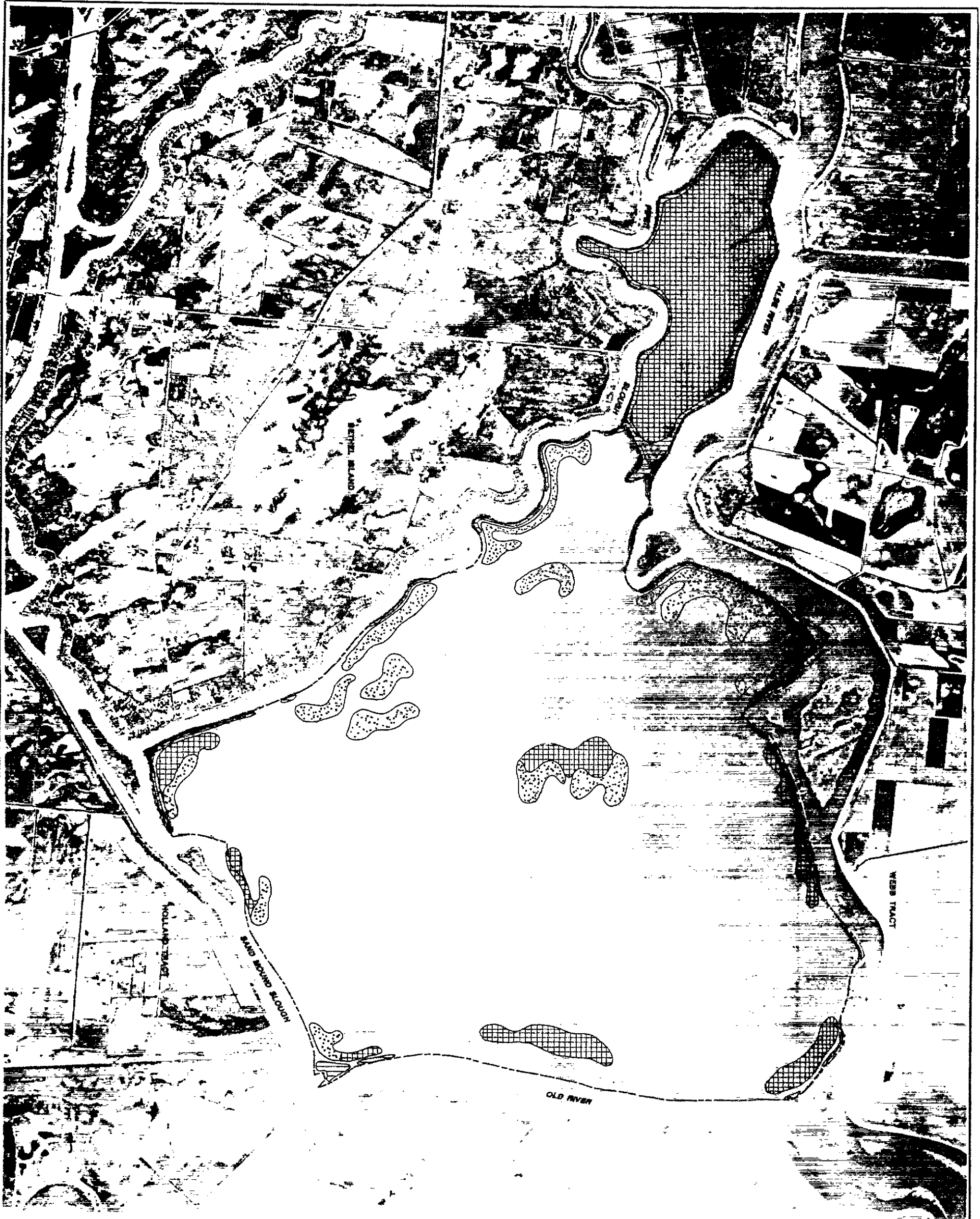
LOCATION OF SLOPES EXCEEDING 25%. THESE SLOPES WILL BE RECONTOURED TO A MORE ACCEPTABLE GRADIENT.





LOCATION OF LILAEOPSIS MASONII, STATE LISTED RARE PLANT SPECIES WHICH WILL BE IMPACTED BY DESIGNATED RECREATION USE. IT WILL BE PLANTED ELSEWHERE ALONG THE SHORELINE AND IN THE PROPOSED WETLAND AS A MITIGATION MEASURE.

WETLAND

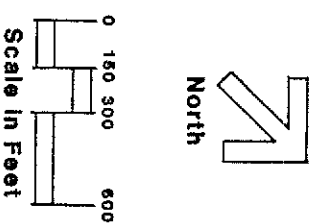
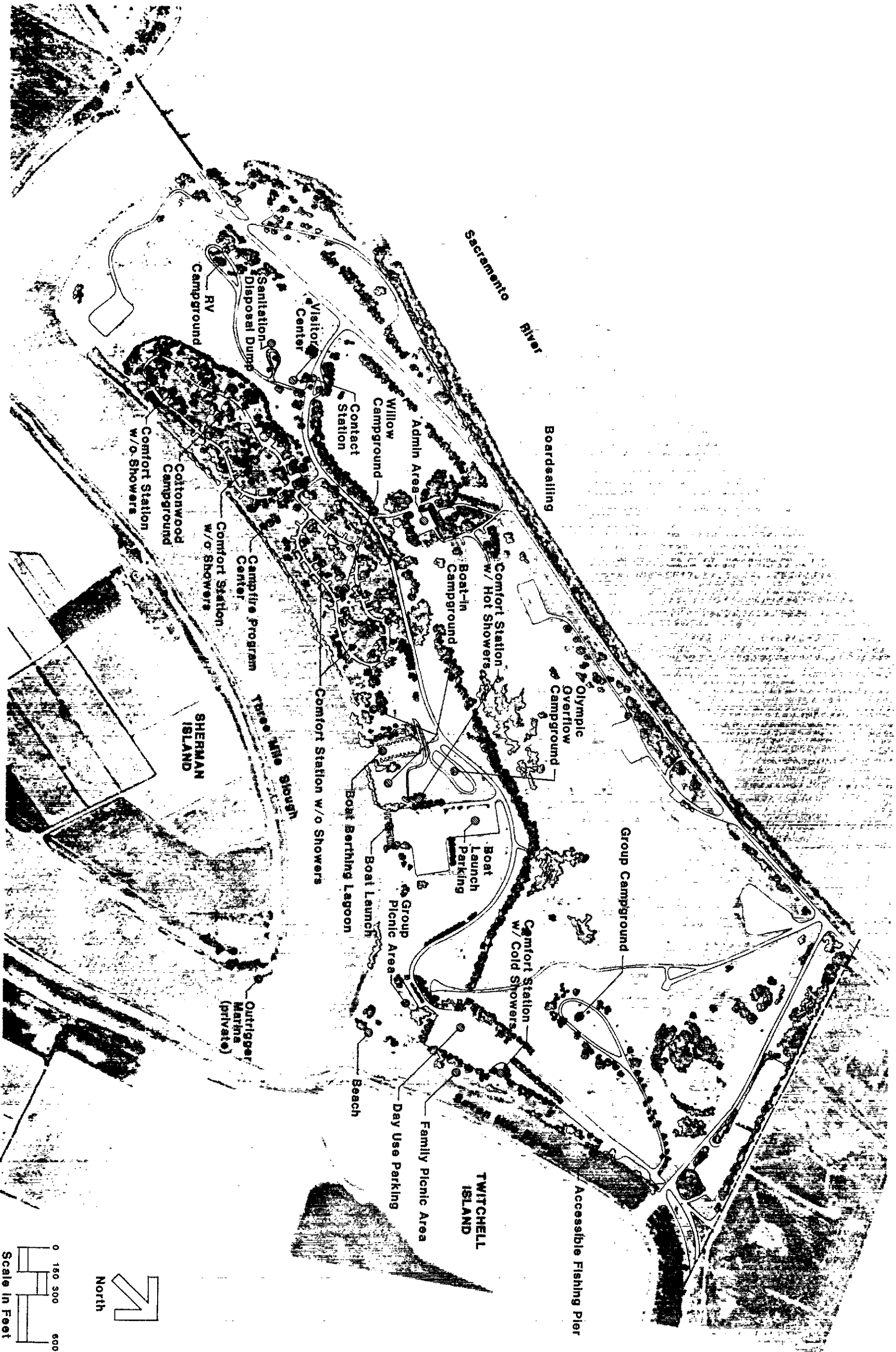


BRANNAN ISLAND STATE RECREATION AREA ALLOWABLE USE INTENSITY	RESOURCES AGENCY OF CALIFORNIA DEPARTMENT OF PARKS AND RECREATION		REVISIONS	DATE	DESIGNED
	APPROVED _____ DATE _____				DRAWN
	DRAWING NO. 1	SHEET NO. 1			CHECKED



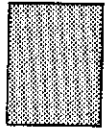



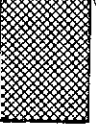




-  MODERATE ALLOWABLE USE INTENSITY (NEW LAND AREAS)
-  LOW ALLOWABLE USE INTENSITY (NEW LAND AREAS)
-  LOW ALLOWABLE USE INTENSITY (NEW LAND AREAS)
-  OPEN WATER

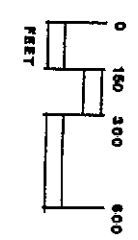
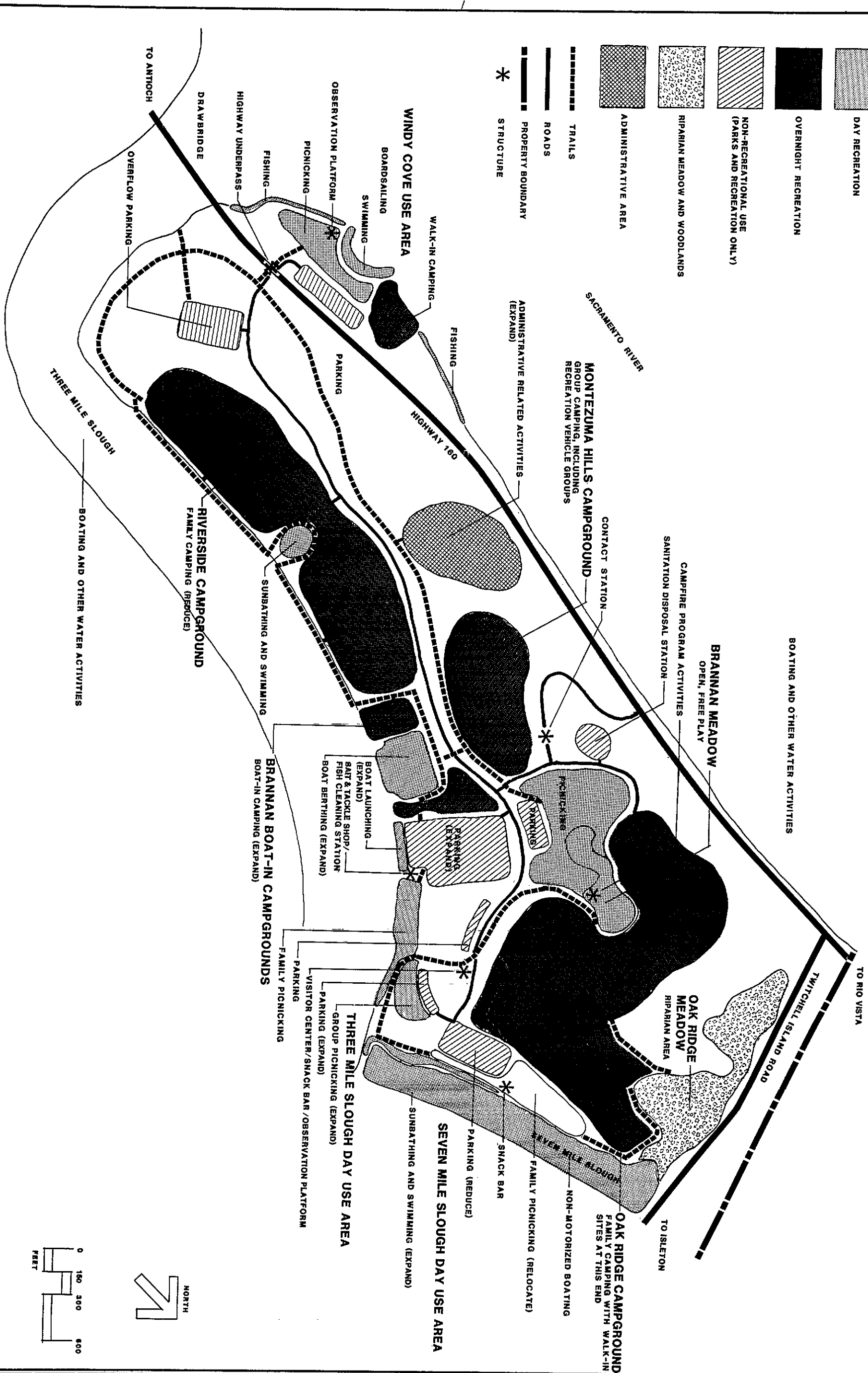
2	DRAWING NO 2	FRANKS TRACT STATE RECREATION AREA ALLOWABLE USE INTENSITY MAP	RESOURCES AGENCY OF CALIFORNIA DEPARTMENT OF PARKS AND RECREATION		REVISIONS	DATE	DESIGNED
			APPROVED _____ DATE _____				DRAWN
						CHECKED	



DRAWING NO. MAP 3 SHEET NO.	BRANNAN ISLAND STATE RECREATION AREA EXISTING FACILITIES		RESOURCES AGENCY OF CALIFORNIA DEPARTMENT OF PARKS AND RECREATION		REVISIONS	DATE	DESIGNED
			APPROVED _____ DATE _____				DRAWN
							CHECKED

LEGEND

-  DAY RECREATION
-  OVERNIGHT RECREATION
-  NON-RECREATIONAL USE (PARKS AND RECREATION ONLY)
-  RIPARIAN MEADOW AND WOODLANDS
-  ADMINISTRATIVE AREA
-  TRAILS
-  ROADS
-  PROPERTY BOUNDARY
-  STRUCTURE



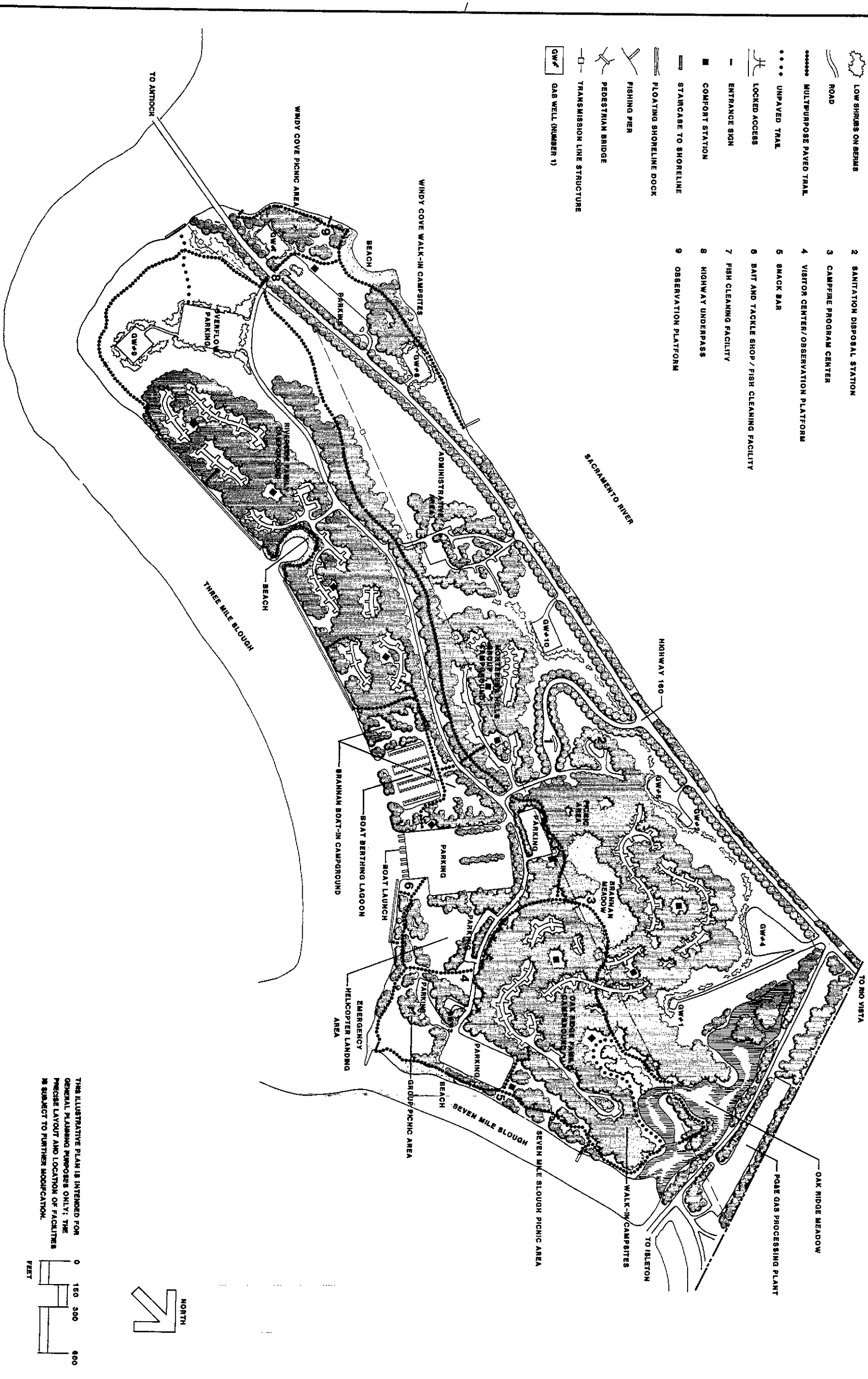
BRANNAN ISLAND STATE RECREATION AREA CONCEPTUAL LAND USE PLAN	RESOURCES AGENCY OF CALIFORNIA DEPARTMENT OF PARKS AND RECREATION		DESIGNED	DATE
			DRAWN	
			CHECKED	
DRAWING NO. MAP 4 SHEET NO.	APPROVED _____ DATE _____			

SYMBOL LEGEND

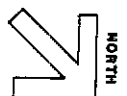
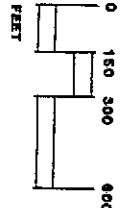
- TREES ON TALL SHRUBS
- LOW SHRUBS ON BERMS
- ROAD
- MULTIPURPOSE PAVED TRAIL
- UNPAVED TRAIL
- LOCKED ACCESS
- ENTRANCE SIGN
- COMFORT STATION
- STAIRCASE TO SHORELINE
- FLOATING SHORELINE DOCK
- FISHING PIER
- PEDESTRIAN BRIDGE
- TRANSMISSION LINE STRUCTURE
- GAS WELL (NUMBER 1)

NUMBER LEGEND

- 1 CONTACT STATION
- 2 SANITATION DISPOSAL STATION
- 3 CAMPFIRE PROGRAM CENTER
- 4 VISITOR CENTER/OBSERVATION PLATFORM
- 5 SNACK BAR
- 6 BAIT AND TACKLE SHOP / FISH CLEANING FACILITY
- 7 FISH CLEANING FACILITY
- 8 HIGHWAY UNDERPASS
- 9 OBSERVATION PLATFORM



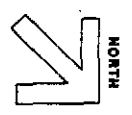
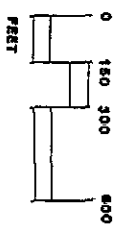
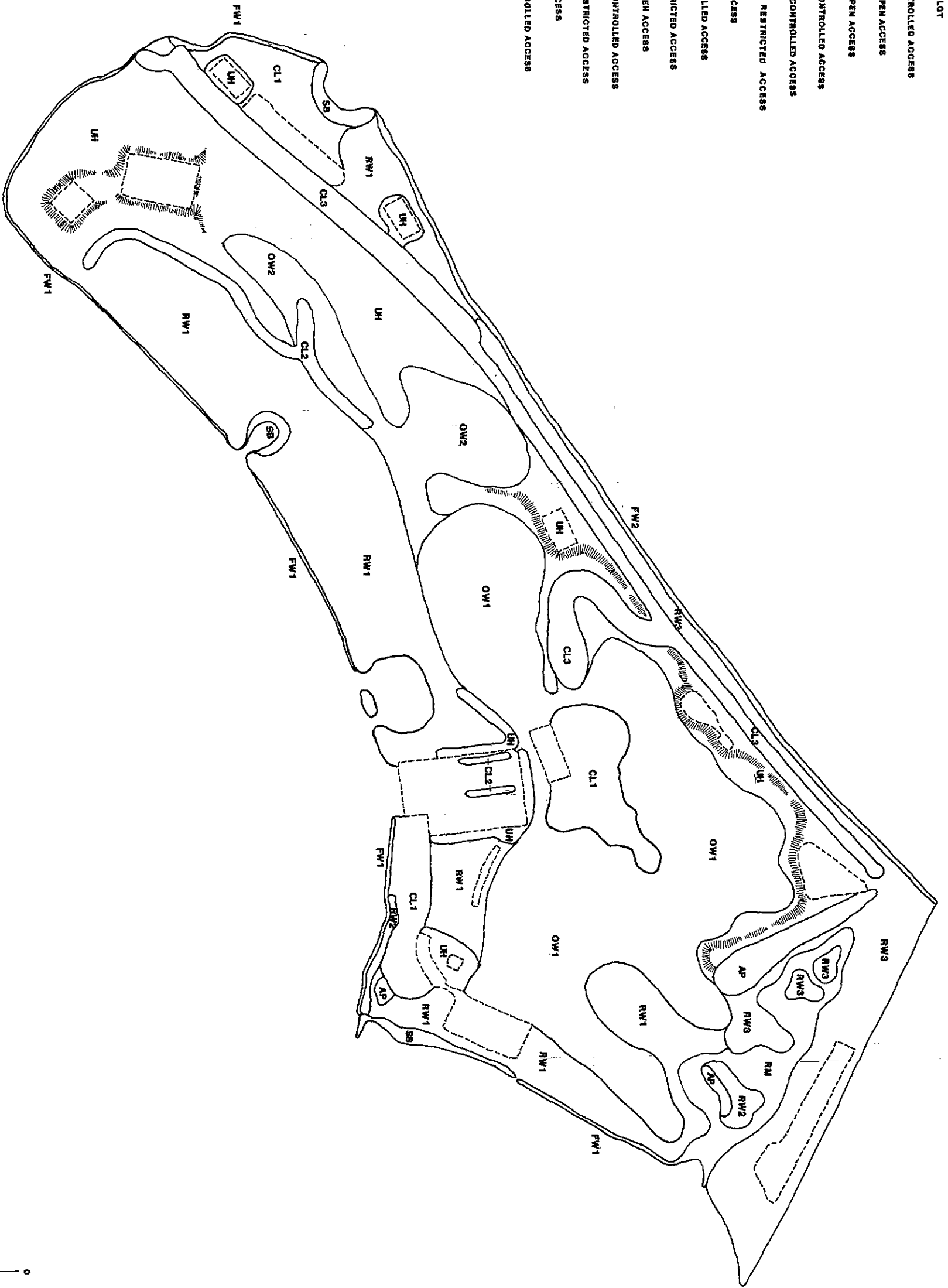
THIS ILLUSTRATIVE PLAN IS INTENDED FOR GENERAL PLANNING PURPOSES ONLY; THE PRECISE LAYOUT AND LOCATION OF FACILITIES IS SUBJECT TO FURTHER MODIFICATION.



DRAWING NO. MAP 5	SHEET NO. OF	BRANNAN ISLAND STATE RECREATION AREA LAND USE AND FACILITIES		RESOURCES AGENCY OF CALIFORNIA DEPARTMENT OF PARKS AND RECREATION		DESIGNED
		APPROVED: _____ DATE _____		REVISIONS	DATE	DRAWN
						CHECKED

LEGEND

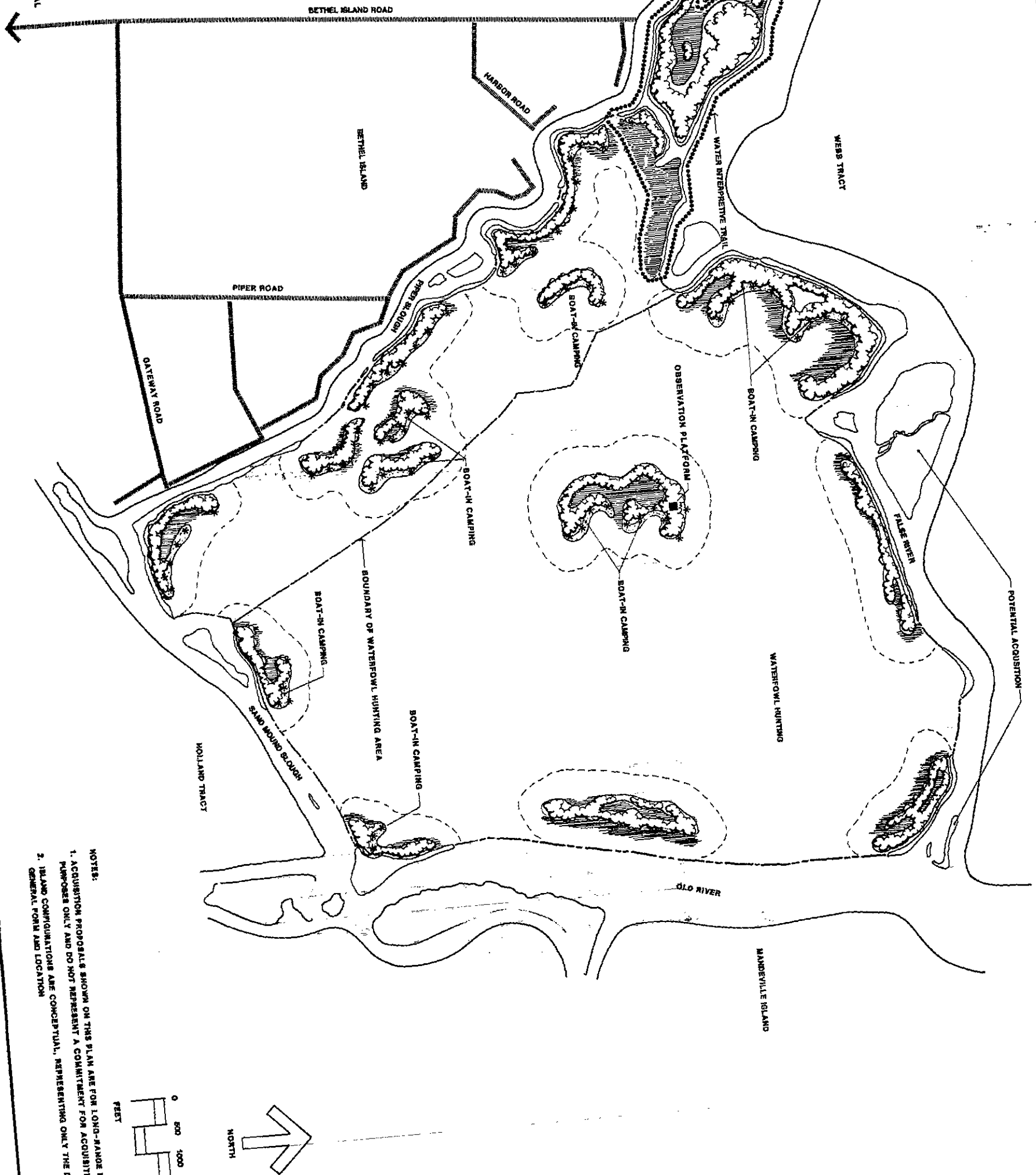
- GAS WELL SITE/PARKING LOT
- AP ANTIOCH PRUNEBLOSS/CONTROLLED ACCESS
- CL1 CULTURAL LANDSCAPE/OPEN ACCESS
- CL2 CULTURAL LANDSCAPE/OPEN ACCESS
- CL3 CULTURAL LANDSCAPE/CONTROLLED ACCESS
- FW1 FRESHWATER WETLAND/CONTROLLED ACCESS
- FW2 FRESHWATER WETLAND / RESTRICTED ACCESS
- OW1 OAK WOODLAND/OPEN ACCESS
- OW2 OAK WOODLAND/CONTROLLED ACCESS
- RM RIPARIAN MEADOW/RESTRICTED ACCESS
- RW1 RIPARIAN WOODLAND/OPEN ACCESS
- RW2 RIPARIAN WOODLAND/CONTROLLED ACCESS
- RW3 RIPARIAN WOODLAND/RESTRICTED ACCESS
- SB SANDY BEACH/OPEN ACCESS
- UH UPLAND HABITAT/CONTROLLED ACCESS
- EM EARTH MOUNDING



BRANNAN ISLAND STATE RECREATION AREA LANDSCAPE AND HABITAT IMPROVEMENT MANAGEMENT PLAN	RESOURCES AGENCY OF CALIFORNIA DEPARTMENT OF PARKS AND RECREATION	REVISIONS	DATE	DESIGNED
	APPROVED _____ DATE _____			DRAWN
				CHECKED

DRAWING NO.
MAP 6
SHEET NO.

- LEGEND**
- RIPARIAN WOODLAND
 - WETLAND MARSH
 - SHALLOW SANDY BEACH
 - EXISTING LEVEL
 - RECREATION FACILITIES
 - APPROXIMATE EDGE OF ISLAND FILL MATERIAL
 - WATER INTERPRETIVE TRAIL AND CHANNEL



NOTES:
 1. ACQUISITION PROPOSALS SHOWN ON THIS PLAN ARE FOR LONG-RANGE PLANNING PURPOSES ONLY AND DO NOT REPRESENT A COMMITMENT FOR ACQUISITION
 2. ISLAND CONFIGURATIONS ARE CONCEPTUAL, REPRESENTING ONLY THE DESIRED GENERAL FORM AND LOCATION

DRAWING NO. MAP 7 SHEET NO. OF	FRANKS TRACT STATE RECREATION AREA LAND USE AND FACILITIES	RESOURCES AGENCY OF CALIFORNIA DEPARTMENT OF PARKS AND RECREATION		DESIGNED
		APPROVED _____ DATE _____	REVISIONS	DATE
				DRAWN
				CHECKED

COMMENTS AND RESPONSES

The preliminary general plan for Brannan Island and Franks Tract SRAs was sent to the State Clearinghouse and to a number of organizations. Comments were received from the following:

Department of Fish and Game

Department of Boating and Waterways

CALTRANS

Sacramento District Corps of Engineers

Responses to the comments received follow the comments.

The general plan and environmental impact report (Environmental Impact Element), combined with the comments and responses to the comments, will constitute the final environmental impact report for the purposes of the California Environmental Quality Act.

OFFICE OF PLANNING AND RESEARCH

1400 TENTH STREET
SACRAMENTO, CA 95814

September 17, 1987

James M. Doyle
CA Dept. of Parks & Recreation
1416 9th Street
Sacramento, CA 95814

Subject: Brannan Island and Franks Tract State Recreation Areas General Plan
SCH# 87041431

Dear Mr. Doyle:

The State Clearinghouse submitted the above named draft Environmental Impact Report (EIR) to selected state agencies for review. The review period is closed and the comments of the individual agency(ies) is(are) enclosed. Also, on the enclosed Notice of Completion, the Clearinghouse has checked which agencies have commented. Please review the Notice of Completion to ensure that your comment package is complete. If the package is not in order, please notify the State Clearinghouse immediately. Your eight-digit State Clearinghouse number should be used so that we may reply promptly.

Please note that recent legislation requires that a responsible agency or other public agency shall only make substantive comments on a project which are within the area of the agency's expertise or which relate to activities which that agency must carry out or approve. (AB 2583, Ch. 1514, Stats. 1984.)

These comments are forwarded for your use in preparing your final EIR. If you need more information or clarification, we suggest you contact the commenting agency at your earliest convenience.

Please contact Keith Lee at 916/445-0613 if you have any questions regarding the environmental review process.

Sincerely,

A handwritten signature in dark ink, appearing to read "David C. Nuhenkamp".

David C. Nuhenkamp
Chief
Office of Permit Assistance

cc: Resources Agency

Enclosures

RECEIVED

SEP 18 1987

RPD

7-5750

Safe B
880

Memorandum

To : 1. Gordon F. Snow, Projects Coordinator -- Date : September 9, 1987
Resources Agency

2. James M. Doyle
California Department of Parks
and Recreation
1416 Ninth Street
Sacramento, CA 95814

From : Department of Fish and Game

Subject: Brannan Island and Franks Tract State Recreation Areas General
Plan, Sacramento and Contra Costa Counties (SCH 87041431)

The California Department of Fish and Game (Department) has reviewed the California State Department of Parks and Recreation's Preliminary General Plan for Brannan Island and Franks Tract State Recreation Areas (SCH 87041431). The project is located in Sacramento (Brannan Island) and Contra Costa (Franks Tract) counties.

The proposed project will guide development, land use, resource management, interpretation, concessions, and operation of both State recreation areas over the next 20 years. In most instances the Preliminary General Plan addresses our concerns and provides ample protection for fish and wildlife resources, particularly within Brannan Island State Recreation Area.

However, in order to off-set the negative impacts associated with an anticipated increase in human recreational use, we recommend that:

Comment A

1. An upper limit threshold (carrying capacity) for recreational use should be established which acknowledges the ecological sensitivity of each area. Recreational use should not be allowed to exceed this threshold level. A lower threshold level should be established for lands within the Franks Tract Recreation Area.

Comment B

2. The proposed new land areas of Little Franks Tract will develop high fish and wildlife values and may support State-listed rare, threatened, or endangered plants or animals. Facilities which encourage disturbance of these areas should be discouraged. Development, such as boating access sites, increase the recreation use and impacts on existing or newly developing wetland areas and may adversely affect wildlife values.

Thank you for the opportunity to review your preliminary General Plan. If the Department can be of further assistance, please contact James D. Messersmith, Regional Manager, Region 2, 1701 Nimbus Road, Suite A, Rancho Cordova, CA 95670, telephone (916) 355-0922.

Pete Bontadelli
Pete Bontadelli
Acting Director

Memorandum

To : (1) Dr. Gordon F. Snow
The Resources Agency

(2) Department of Parks and Recreation
1416 Ninth Street
Sacramento, CA 95814

Date : SEP 8 1987

Subject: SCH#87041431: General Plan
for Brannan Island and
Franks Tract State
Recreation Areas

ATTENTION James M. Doyle

From : Department of Boating and Waterways

The Department of Boating and Waterways has reviewed subject Draft Environmental Impact Report for Brannan Island and Franks Tract State Recreation Areas and would like to offer the following comment:

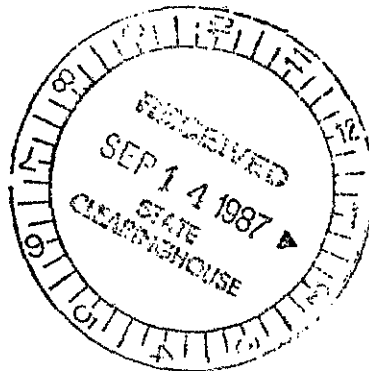
Comment A

The "Interpretive Element" of the General Plan for Brannan Island and Franks Tract State Recreation Areas mentions developing information on boating safety and regulations for recreation users. Our Department presently has a number of boating safety publications that could be used in the proposed interpretive programs (see attached list). Also, for information about adopting special boating regulations, State Park personnel should contact the Department (Jim DeBenedetti at 322-1829).

Thank you for the opportunity to review this document.

William H. Ivers
WILLIAM H. IVERS
Director

Attachment



DEPARTMENT OF TRANSPORTATION

P.O. BOX 2048 (1976 E. CHARTER WAY)
STOCKTON, CA 95201
TDD (209) 948-7853
(209) 948-7906



September 9, 1987

10-Sac 160-8.34
Resources Agency
Parks and Recreation
Brannan Island and
Franks Tract General Plan
Draft EIR
SCH #87041431

Mr. Keith Lee
State Clearinghouse
1400 Tenth Street
Sacramento, CA 95814

Dear Mr. Lee:

Caltrans has reviewed the General Plan and Draft EIR for Brannan Island and Franks Tract development and offers the following comments:

Tripling the size and number of facilities, and doubling the number of visitors at Brannan Island Recreation area will obviously impact traffic on Route 160 between Route 12 to the north and Route 4 on the south.

Comment A

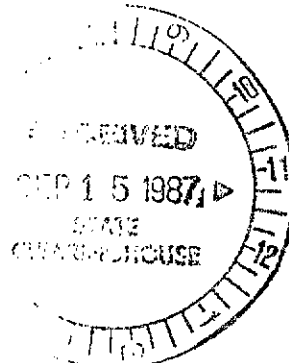
Currently, Route 160 right-of-way in the southern section of the park is 120 feet wide. In the northern portion the right-of-way is prescriptive and space for needed improvements is highly restricted. It would be to the benefit of the park to consider dedication of adequate right-of-way for additional lanes to mitigate the impact of the anticipated increase in traffic.

Comment B

The proposal to build a connection between the portions of the unit separated by Route 160 may or may not be feasible. This would do little to aid traffic problems at the park entrance.

Comment C

It may be more appropriate to consider an interchange or a modified IC W/SB off ramp at that location. This would provide the connection and eliminate the problem for the south bound traffic attempting to turn left into the park. This turn movement will become increasingly difficult as the north bound traffic becomes heavier and gaps for turning are no longer available.

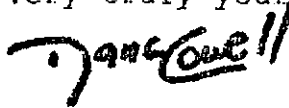


Comment
D
E

Caltrans would prefer that recreational parking not be provided on the shoulders of Route 160 as suggested on Page 130. Also, guard rails and barriers which would prevent emergency parking are not acceptable on the highway.

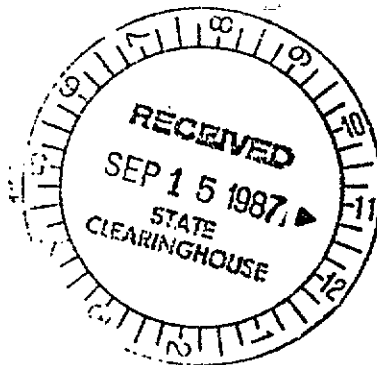
Caltrans appreciates the opportunity to comment on the Draft EIR and requests a copy of the final document. Any questions concerning these comments may be directed to Al Johnson at Caltrans, telephone (209) 948-7838.

Very truly yours,



DANA COWELL
Chief, Transportation
Planning Branch

cc: Sacramento Area Council of Governments



DEPARTMENT OF BOATING AND WATERWAYS

1629 S STREET
SACRAMENTO, CA 95814-7291
(916) 445-6281



MAY 13 1987

Mr. James M. Doyle
California State Department
of Parks and Recreation
1416 Ninth Street
Sacramento, CA 95814

Dear Mr. Doyle:

SCH#87041431: Brannan Island and
Franks Tract State Recreation Areas General Plan

Comment B

The Brannan Island State Recreation Area is a prime boating resource. Any General Plan development study should be conducted in consultation with the Department of Boating and Waterways as required by Section 50, Article 1, Chapter 2, Division 1 of the Harbors and Navigation Code.

Thank you for the opportunity to review this document.

Sincerely,

WILLIAM H. IVERS
Director

A handwritten signature in cursive script, appearing to read "I. Plescov".

By: IVAR PLESCOV, Supervisor
Capital Outlay
(916) 445-2085

RECEIVED

MAY 13 1987

RPD

7-3089

HARBORS AND NAVIGATION CODE

EXCERPTS FROM HARBORS AND NAVIGATION CODE (including Changes to January, 1986)

DIVISION 1. DEPARTMENT OF BOATING AND WATERWAYS AND THE BOATING AND WATERWAYS COMMISSION

CHAPTER 1. GENERAL PROVISIONS AND DEFINITIONS

30. Construction of this division. Unless the context otherwise requires, the general provisions and definitions in this chapter govern the construction of this division.

31. Commission defined. "Commission" means the Boating and Waterways Commission.

32. Department defined. "Department" means the Department of Boating and Waterways.

33. Director defined. "Director" means the Director of Boating and Waterways.

34. Harbor defined. "Harbor" means a portion of the ocean or inland waters within the jurisdiction of this state either naturally or artificially protected so as to be a place of safety for vessels, including the artificially protective works, the public lands ashore and the structures and facilities provided within the enclosed body of water and ashore for the mooring and servicing of vessels and the servicing of their crews and passengers.

35. Channel defined. "Channel" means any waterway now navigable in fact by vessels or artificially improved or created so as to be navigable by vessels, including the structures and facilities created to facilitate navigation.

36. Navigable waters defined. "Navigable waters" means waters which come under the jurisdiction of the United States Corps of Engineers and any other waters within the state with the exception of those privately owned.

38. Changes in rules and regulations. The adoption, repeal, amendment or modification of any rules and regulations pursuant to this division shall be made in accordance with the provisions of Chapter 3.5 (commencing with Section 11340) of Part 1 of Division 3 of Title 2 of the Government Code.

39. State Contract Act. Any construction or development authorized by this division which also constitutes a project within the definition of Section 14254 of the Government Code shall when performed by the state be subject to the provisions of the State Contract Act, except that references therein to Department of Public Works shall mean Department of Water Resources.

40. Facilities. Facilities in harbors and connecting waterways established under the provisions of this division shall be open to all on equal and reasonable terms; provided that the department may authorize construction of separate facilities and reasonable allocations within the same harbor for separate use by commercial and recreational vessels, and project funding may not be denied solely on the basis that such separate facilities and allocations for such separate use within the same harbor is required by a regulatory agency so long as such requirement is determined by the director, after consultation with the affected regulatory agencies, to be reasonable.

CHAPTER 2. DEPARTMENT OF BOATING AND WATERWAYS

Article 1. Administration

50. Departmental authority. The Department of Harbors and Watercraft and its successor, the Department of Navigation and Ocean Development, are continued in existence in the Resources Agency as the Department of Boating and Waterways. The Department of Boating and Waterways is the successor to, and is vested with, the powers, functions, and jurisdiction of the following state departments and agencies as hereinafter specified:

(a) All of the powers, functions, and jurisdiction previously vested in the Division of Small Craft Harbors of the Department of Parks and Recreation.

(b) All of the powers, functions, and jurisdiction of the State Lands Commission with respect to the acquisition, construction, development, improvement, maintenance, and operation of small craft harbors.

(c) All of the powers, functions, and jurisdiction of the Department of Parks and Recreation with respect to boating facility planning, design, and construction, except as specifically provided with respect to boating trails in the California Recreational Trails Act (commencing with Section 5070 of the Public Resources Code) and in Article 2.6 (commencing with Section 68) of this chapter.

(d) All of the powers, functions, and jurisdiction of the Office of Architecture and Construction in the Department of General Services with respect to boating facility planning and design.

(e) All of the powers, functions, and jurisdiction of the Department of Water Resources with respect to beach erosion control.

(f) All of the policymaking and regulatory powers, functions, and jurisdiction of the Harbors and Watercraft Commission as to matters within the jurisdiction of the department.

50.1. Transfer of authorities. Whenever the term "Division of Small Craft Harbors" or the term "Small Craft Harbors Commission" is used in any provision of law, it shall be construed as referring to the Department of Boating and Waterways.

Whenever, by any statute now in force or that may be hereafter enacted, any power, function, or jurisdiction, as specified in Section 50, is imposed or conferred upon the State Lands Commission, the Department of Parks and Recreation, the Office of Architecture and Construction in the Department of General Services, or the Department of Water Resources, such power, function, or jurisdiction shall be deemed to be imposed or conferred upon the Department of Boating and Waterways.

Nothing in this section or in this code shall divest the State Lands Commission of jurisdiction with respect to the leasing of state lands, including state lands used for small craft harbors, swamps and overflowed lands, or tide and submerged lands, for the extraction and removal of oil and gas and other minerals.

50.2. Departmental administration. The department shall be administered by an executive officer known as the Director of Boating and Waterways. The director shall be appointed by and hold office at the pleasure of the Governor and shall receive an annual salary as provided in Section 11557 of the Government Code. The appointment of any director appointed by the Governor shall be subject to confirmation by the Senate.

50.4. Bonding of the director. The director, before entering upon his duties, shall execute and deliver to the state an official bond in the sum of twenty-five thousand dollars (\$25,000) conditioned upon the faithful performance of his duties.

50.6. Power of appointment. The provisions of Chapter 2 (commencing with Section 11150), Part 1, Division 3, Title 2 of the Government Code apply to the director. The director may appoint, in accordance with civil service, such deputies, officers, and other employees as may be necessary.

50.8. Departmental organization. The director, with the approval of the Governor, may arrange and classify the work of the department and consolidate, abolish, or create divisions thereof.

Article 2. General Powers

60. Resources Agency relationship with the Corps of Engineers. The Resources Agency shall represent the State of California and the Governor of California in relationships with the Chief of Engineers, United States Army, and his authorized agents for the purposes set forth in this division.

60.2. Joint project agreements. The department may enter into agreements with the United States and with any county, city, district, or other political subdivision of this state in connection with participation with the United States in any project in which the department may act and may, also, provide such adjustments which, in the judgment of the department, are in the best interest of the State of California.

60.4. Contracts with Department of Army. Contract of agreement with the United States agency or instrumentality of the United States for the erection of breakwaters, piers, or any other

60.6. Departmental contracts with the United States. Any contracts or agreements that may be entered into by this division including agreements to hold the United States liable for damages due to the construction and maintenance of the United States shall undertake.

60.8. Power to act or contract. The department may enter into any contract or agreement desirable in carrying out its duties.

61. Federal aid. The department may take advantage of any act of Congress heretofore or hereafter passed providing for assistance in carrying out the purposes of this division.

61.2. Acceptance of gifts and grants. The department may receive and accept for the state of title to or any interest in real property contributions, or bequests of money to be used for the improvement of small craft harbors and connecting with other personal property for such purposes.

61.4. Acceptance of federal grants. The department may accept on behalf of the department any federal grant which the department is established. Such grants may be deposited in the State Treasury provided for in the Government Code, and may be expended under such conditions as may be determined by the federal government.

61.6. Expenditure of funds. The department may expend any special fund in the State Treasury for the administration of the statutes the administration, or for the use, support, or maintenance of the department, office or officer whose duties are conferred to and conferred upon the department shall be made in accordance with law and the appropriations were made or the special

61.8. Departmental control of assets. The department shall have control of all records, books, papers, or other property of all bodies, offices, and officers whose duties are transferred to and conferred upon the department.

62. Personal property disposal. The department of General Services, may transfer, or dispose of, any personal property under its jurisdiction, and may contract for the purchase of such property.

62.4. Claim for refund, General Fund. The department may deposit any money in the State Treasury in excess of the amount or in error, or whenever it is due any person, firm, or corporation or other lawful reason, payment of such refund by the director with the State Controller for payment of the refund from any ap

62.6. Insurance of departmental vessels. The department of General Services, may insure any vessel owned or operated by the department against the loss or damage occasioned by the existence of a state of

C



DEPARTMENT OF THE ARMY
SACRAMENTO DISTRICT CORPS OF ENGINEERS
650 CAPITOL MALL
SACRAMENTO, CALIFORNIA 95814 4794

REPLY TO
ATTENTION OF

September 4, 1987

Regulatory Section (S-446)

James M. Doyle, Supervisor
Environmental Review Section
State of California
Department of Parks and Recreation
Post Office Box 2390
Sacramento, California 95811

Dear Mr. Doyle:

We have reviewed the copy of the "General Plan for Brannan Island and Frank's Tract State Recreation Areas", which you sent to us by letter dated August 3, 1987.

Comment A

The proposed fill in Frank's Tract and little Frank's Tract will require a Department of the Army permit and may require the preparation of an Environmental Impact Statement. Considering the scope of the proposed project, it is advisable to schedule a pre-application meeting with the Regulatory Section. We normally hold pre-application meetings on the first Thursday of each month; however, our schedule is flexible so the meeting can be scheduled at another time.

If you have any questions, contact Lou Cadwell, Regulatory Section at the letterhead address, or telephone (916) 551-2263.

Sincerely,

Tom Coe
Acting Chief, Regulatory Unit 1

RPD

SEP 9 1987

RECEIVED

7-5561

RESPONSES

The following responses correspond to the comments received from the various agencies.

Department of Fish and Game

Comment A: The Allowable Use Intensity Map (Drawing No. 2) indicates a low allowable use intensity for the majority of Franks Tract State Recreation Area. Approximately one third of the SRA is designated moderate allowable use. Implementing the concepts of the General Plan will be an evolutionary process. As island vegetation and habitat areas develop, their resource values will be monitored relative to recreational use. The Department will not permit its investment in habitat expansion to be threatened.

Comment B: Facilities designed for public use will also be designed to direct that use to appropriate areas and restrict the use of sensitive areas. As facilities are designed, the Department will work with Fish and Game to ensure sensitive design applications. Detail design implications will undergo an additional CEQA review at that time.

Department of Boating and Waterways

Comment A: When the time is appropriate, the Department will contact the appropriate personnel. Thank you for the offer of your services.

Comment B: Comment is noted.

CALTRANS

Comment A: When the need for an increased right-of-way to accommodate additional lanes is identified by CALTRANS, the Department will work with CALTRANS to supply the space requested.

Comment B: The proposed connection between portions of the unit on both sides of Route 160 is intended to reduce traffic conflicts on the route by avoiding a second park entrance while providing full access to the unit. Telephone conversations on June 8, 1987 with the CALTRANS District Traffic Engineer explored the feasibility of this connection in relation to structural requirements and safety lighting. These issues will be further discussed during detail design.

Comment C: By moving the existing entrance it is assumed that the necessary improvements to Highway 160 (identified on page 126) will include left and right turn lanes in addition to standard lane easements and widths. When encroachment permits are requested by the department, specific needs for intersection improvement will be discussed and resolved with CALTRANS.

Comment D: It is the intent of the plan not to have parking on Route 160.

Comment E: There is a need to restrict roadside parking in areas along the west side where river bank erosion is a severe threat. State parks will work with CALTRANS to provide emergency parking, yet restrict unnecessary non-emergency parking.

Sacramento District Corps of Engineers

Comment A: When the Department is in the process of developing specific development plans, the corps will be contacted and the appropriate permits requested. The Department will meet all governing Federal laws at the time of application.

The following comments from the County of Sacramento, Department of Parks and Recreation; Phillip Isenberg; East Bay Regional Park District; and the Contra Costa County Community Development Department were received after the final filing date of September 18, 1987

Community
Development
Department

County Administration Building
651 Pine Street
4th Floor, North Wing
Martinez, California 94553-0095

Phone: 372-2031

Contra
Costa
County



Harvey E. Bragdon
Director of Community Development

October 8, 1987

Alan Kolster
Department of Parks and Recreation
Box 942896
Sacramento, CA 94296

Dear Mr. Kolster:

Thank you for the opportunity to comment on the Parks and Recreation Department's Brannon Island/Frank's Tract General Plan. We generally agree with the proposal's policies but feel that this project can simultaneously address a series of statewide issues such as recreational use, levee protection and water quality through restoring Little Frank's Tract to its pre-1981 condition and the siting of islands in key locations at Frank's Tract.

We feel that levee protection within the Delta, while constituting a secondary interest to the Department of Parks and Recreation, is nonetheless a critical statewide concern that should be actively included as a benefit of the project. We concur with the statement that the project should be designed and located to achieve maximum recreational and wildlife benefits as well as the secondary benefit of blocking wind generated waves emanating from Frank's Tract that currently affect Bethel Island (P. 103). This policy could decrease the potential for future State expenditures on Bethel Island due to a levee failure.

Although we support the proposed rehabilitation of Little Frank's Tract, we would prefer that Little Frank's Tract be fully restored to its pre-1981 condition. A fully restored Little Frank's Tract would in addition to providing levee protection for northwestern Bethel Island, benefit the State's effort to upgrade Delta water quality for both in-Delta and export purposes by means of strengthening the western Delta's island buffer relative to salt water intrusion from San Francisco Bay. Furthermore, as the General Plan noted (P. 99), Little Frank's Tract annually received between 5,000 and 10,000 visitors who participated in various interpretive programs.

We hope our comments will assist the State in addressing the concerns that presently affect the Delta. Thank you for your time and consideration.

Sincerely yours,

Charles A. Zahn,
Principal Planner

CAZ/jn
39:kolster2.mm



Phillip Isenberg

ASSEMBLYMAN TENTH DISTRICT

ASSISTANT SPEAKER PRO TEM

CALIFORNIA LEGISLATURE, STATE CAPITOL, SACRAMENTO, CA 95834 (916) 445-1671

COMMITTEES
HEALTH
JUDICIARY
RULES
WATER PARKS & WILDLIFE
WAYS & MEANS

September 29, 1987

Mr. Al Kolster
Senior Landscape Architect
Department of Parks and Recreation
P.O. Box 2390
Sacramento, CA 95814

Dear Mr. Kolster:

I understand that the State Park and Recreation Commission will be considering the Brannon Island/Franks Tract General Plan for adoption at its meeting November 13. Because the plan proposes to build recreational islands within Franks Tract and restore Little Franks Tract, I support it.

I would like to make the following additional comments about the draft plan.

- 1) The plan needs a firm schedule for the development of the two test islands, rather than "over a period of time." As you know, the situation at Franks Tract has been festering for several years, and local patience is thin.
- 2) The restoration of Little Franks Tract should proceed immediately. This project should not wait until the island project is complete.
- 3) Funds intended for the development of recreational islands and the restoration of Little Franks Tract must not be diverted for the acquisition of existing islands in False River.

As you know, \$4 million in the citizens' bond initiative has been set aside for islands development and the restoration of Little Franks Tract. I am confident that the initiative will qualify and be passed next June, and I would like to see the Department prepared to move ahead at that time.

Sincerely,

PLI/hh

DISTRICT OFFICE
625 W FOURTH ST, ROOM 4
ANTIOCH, CA 94509
(415) 778-4510

DISTRICT OFFICE
1200 W TOKAY ST., STE D
LODI, CA 95240
(209) 334-4945

DISTRICT OFFICE
1215 15TH ST, STE 11
SACRAMENTO, CA 95811
(916) 324-4676



East Bay
Regional Park District

11500 SKYLINE BOULEVARD, OAKLAND, CA 94619-2443 TELEPHONE (415) 531-9300

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DAVID E. PESONEN
General Manager

October 2, 1987

Alan Kolster
Senior Landscape Architect
State of California
Department of Parks and Recreation
P. O. Box 2390
Sacramento, CA 95811

Dear Mr. Kolster

Subject: Review of the General Plan for Brannan Island
and Frank's Tract State Recreation Areas

The Regional Park District has reviewed the General Plan for Brannan Island and Frank's Tract. The District chose not to respond with a letter of comment during the review because the EIR provided an adequate statement. The District also has no comments on the plan proposals.

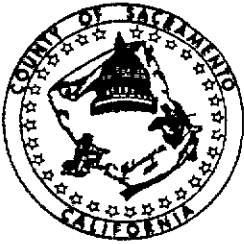
Thank you for the opportunity to review this project.

Yours truly,

T. L. Mikkelsen
AGM, Planning, Acquisition,
Design and Stewardship

TLM/KP:kw

LEO-8710-05



COUNTY OF SACRAMENTO
DEPARTMENT OF PARKS AND RECREATION

3711 BRANCH CENTER ROAD
SACRAMENTO, CALIFORNIA 95827
TELEPHONE: 366-2061

GENE W. ANDAL
Director

September 24, 1987

Al Kolster
State Department of Parks and Recreation
P.O. Box 942896
Sacramento, CA 94296-0001

Re: Brannan Island and Franks Tract Recreation Area
General Plans

Dear Mr. Kolster:

The Sacramento County Department of Parks and Recreation has reviewed the draft general plans for Brannan Island and Franks Tract recreation areas.

We would like to commend the state parks planners who developed these plans for doing a fine job. In our review of these plans, we noted that the development proposed at these sites is reasonable and needed to provide adequate facilities for the public.

Sincerely,

Arlan Nickel, Chief
Park Planning and Development

AN:db:92387

G400.450

This plan was prepared by:

Kerry J. Dawson	Associate Professor, Landscape Architecture University of California, Davis
Judith L. deReus	Landscape Architect, EDAW
Robyn S. Menigoz	Post-Graduate Research Assistant University of California, Davis
Patrick T. Miller.....	Landscape Architect, 2M Associates
Roger Helm	Biological Ecologist University of California, Davis
Scott Martens.....	Plant Ecologist University of California, Davis
Georgie Waugh.....	Anthropologist University of California, Davis

With the assistance of the following Department of Parks and Recreation personnel:

Alan K. Kolster.....	Senior Landscape Architect
John Knott.....	Superintendent, Delta District
Kenneth L. Gray.....	Associate State Park Resource Ecologist
Joann Weiler.....	Assistant Landscape Architect
Larry Martz.....	Supervisor, Technical Reports Section
Bruce Kennedy.....	Manager, Statewide Planning Section
Rob Ueltzen.....	Park and Recreation Specialist
James M. Doyle.....	Supervisor of the Environmental Review Section
Bruce Kranz.....	Manager, General Plan and Policy Development
Clark H. Muldavin.....	Civil Engineer