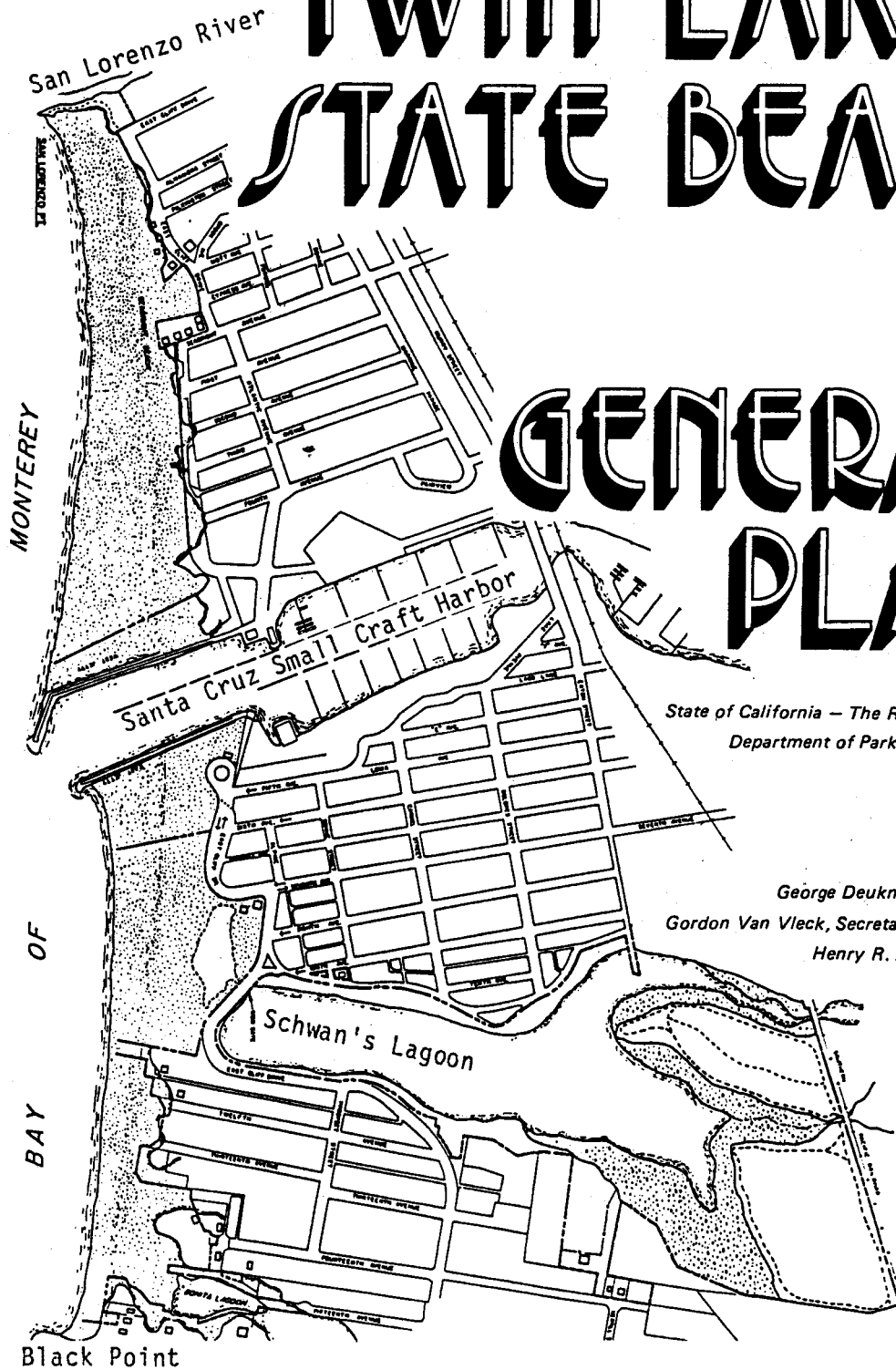


# TWIN LAKES STATE BEACH

# GENERAL PLAN



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



George Deukmejian, Governor  
Gordon Van Vleck, Secretary for Resources  
Henry R. Agonia, Director

DEPARTMENT OF PARKS AND RECREATION

## STATE PARK AND RECREATION COMMISSION

Box 942896, SACRAMENTO, CA 94296-0001



Resolution 36-88  
adopted by the  
CALIFORNIA STATE PARK AND RECREATION COMMISSION  
at its regular meeting in Santa Cruz on  
October 7, 1988

WHEREAS, the Director of the Department of Parks and Recreation has presented to this Commission for approval the proposed General Plan for Twin Lakes State Beach; and

WHEREAS, this reflects long-range development plans to provide for optimum use and enjoyment of the unit as well as the protection of its quality. In addition, the Department should encourage sensitivity to disabled access and should also seek title from the County of Santa Cruz for the unused and blighted area of the abandoned Merrill Street extension.

NOW, THEREFORE, BE IT RESOLVED that the State Park and Recreation Commission approves the Department of Parks and Recreation's Twin Lakes State Beach Preliminary General Plan, dated June 1988, subject to such environmental changes as the Director of Parks and Recreation shall determine advisable and necessary to implement the provisions of said plan.

TWIN LAKES STATE BEACH

GENERAL PLAN

March 1992

Pete Wilson  
Governor

Douglas P. Wheeler  
Secretary for Resources

Donald W. Murphy  
Director  
Department of Parks and Recreation



State of California - The Resources Agency  
DEPARTMENT OF PARKS AND RECREATION  
P. O. Box 942896  
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# SUMMARY

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TWIN LAKES  
STATE BEACH

GENERAL  
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## SUMMARY

Twin Lakes State Beach, located on the eastern edge of the City of Santa Cruz, features 6,000 lineal feet of ocean frontage at three separate beaches. The Santa Cruz Small Craft Harbor separates the unit's Seabright Beach from East Beach and Fourteenth Avenue Beach (see Location Map). The Santa Cruz Municipal Pier and Boardwalk are within a mile west of the unit.

Besides the beach, distinctive features of this 91.6-acre unit include San Lorenzo Point, Schwan's Lagoon (a 23.5-acre freshwater lake), and smaller Bonita Lagoon (about 1.5 acres).

Over the past 40 years, the beach width at Twin Lakes State Beach has varied dramatically. The small craft harbor, constructed in the early 1960s, drastically changed the Woods Lagoon wetland and marsh, and the beach and coastline configuration. Seabright Beach has become a wide sandy beach between San Lorenzo Point and the harbor's west jetty. In contrast, the beaches downcoast from the harbor narrowed as their supply of littoral sand was cut off or diminished, reducing the recreation resource. Before the natural landscape of the Santa Cruz area was extensively modified, Schwan's Lagoon was a tidal estuary.

The coastal area of Santa Cruz County is one of the major recreation destinations in California. Twin Lakes State Beach has a visitor attendance of more than a million day-users a year. The summer accounted for 51% of this use, fall 17%, winter 9%, and spring 23%.

To help satisfy recreational needs and to manage the unit's resource values, various actions are proposed for the following areas of Twin Lakes State Beach:

### Seabright Beach

Upcoast of the harbor jetty, it is one of the best sand beaches in the area, attracting very heavy use. Beach parking demands cannot be met within current unit boundaries. Current parking space at the harbor, along East Cliff Drive, and on residential streets will continue to serve beach users. The department will coordinate efforts with the City of Santa Cruz and the Santa Cruz Port District to promote the planning, development, and management of public parking and the expansion of the public transit system serving Santa Cruz area beaches.

Bluff fencing and signing will be maintained and improved to ensure safe public access along the existing trail to the overlook at San Lorenzo Point. Interpretive panels are also proposed at this location.

Beach access will continue from the harbor, Third Avenue stairway, and Cypress Avenue. Bicycle racks should be provided at each access point. The grade-level beach access at Cypress Avenue should be improved for better esthetics and visitor access. A new comfort station is proposed between the Third Avenue stairs and the harbor's west jetty.

Beach width upcoast from the harbor jetty has substantially increased. Heavy beach use will require the expansion of lifeguard and aquatic safety programs and the installation of additional portable lifeguard

towers. A year-round lifeguard facility is proposed for beach observation, first aid, and public control, and as a communications command post.

#### East Beach (Seventh Avenue)

This sandy beach will continue to be managed and operated for recreational activities. The department will investigate the feasibility of sand replenishment at East Beach and Fourteenth Avenue Beach along with the deposition of dredged material from the small craft harbor. The existing combination restroom and shower building will be rehabilitated at its present location. Lifeguard towers, fire rings, and bicycle parking will be provided.

Parking should be eliminated along East Cliff Drive from Seventh Avenue to Schwan's Lagoon to enable safer pedestrian and vehicle movements; the intersection of Ninth and Eighth avenues at East Cliff Drive should be redesigned to provide a better pedestrian crossing; and a regional bus stop should be considered. The department will coordinate with Santa Cruz County and local community interests in future planning and development efforts toward improving roadside parking, bicycle trails, and pedestrian access.

#### Schwan's Lagoon

Schwan's Lagoon will continue to be managed as a freshwater lake as long as that appears to provide the best combination of natural, esthetic, and recreational benefits to the public. Public access and day-use facilities are proposed for the upland portion of this lagoon, and a lagoon management and operations plan will be developed.

The upland portion, or lagoon "peninsula" as it is often referred to, is recognized for its natural characteristics and open space quality. The natural resources are of local significance and serve as a valuable recreation and scenic resource for the regional population and area visitors. The department will implement a vegetation management program to promote the growth of a coastal live oak woodland and control exotic plants. This area will be managed and developed for low-intensity recreation by providing nature trails and informal picnic tables. Support facilities, such as parking and restrooms, will be located near the railroad tracks adjacent to or on county-owned property zoned for park use.

Public access on the peninsula should be developed to the edge of the lagoon for nature observation and carry-in boat use where appropriate. This access may include a small boat dock, observation decks, or boardwalks at water's edge.

Existing trails will be maintained and improved to provide easy access for nature walks. New trails may be considered to connect the peninsula with future county parks and local trails.

An open-air interpretive structure, with panels for interpretation of the area's natural values, will be provided. Benches should be included to provide gathering places for guided tours.

#### Fourteenth Avenue - Beach Access

Beach access will continue at Fourteenth Avenue. Improved restrooms, picnic sites, a beach ramp, and stairway will be provided. No public parking will be developed. A vehicle turnaround will be constructed to better accommodate vehicles at this location. This area will continue to be gated to control after-hours use.

Portable lifeguard towers will be used at this beach for public contact and visitor safety. The employee residence will remain.

#### Fourteenth Avenue - Bonita Lagoon (Cove)

Historically, Bonita Lagoon (also referred to as Bonita Cove) was a small brackish water lagoon. Urban development has altered the drainage into the lagoon and substantially changed its esthetic and natural resource values. Recent storms have filled the lagoon with sand.

A management plan for Bonita Lagoon will be developed and its implementation will require little or no operational obligation. An interim maintenance program is proposed, which will include a topographic survey, debris clean-up in the lagoon, and movement of sand to enhance the lagoon environment as a place for passive recreational activities such as nature study. The rate of beach erosion and/or sand replenishment shall be recorded, and testing and monitoring of the quality and quantity of water entering the lagoon shall be done to assist the development of a management plan.

The impacts of changing conditions on Bonita Lagoon are unknown and will require further study. Goals may include restoration of a brackish water lagoon and stabilized sand dune, or seasonal recurrence of a coastal wetlands. No structural measures will be taken to reestablish or maintain Bonita Lagoon.

#### Fourteenth Avenue - Maintenance Area

This site is not a desirable location for Schwan's Lagoon access or development of other day-use facilities to serve Schwan's Lagoon. The existing maintenance office, shop, and storage facility will continue to serve as the unit's operational center and district lifeguard headquarters. If additional lands outside the present state ownership are made available for maintenance facilities, then future land use considerations of this area may include beach shuttle parking in conjunction with county transportation studies.

#### Concessions

Food service at Twin Lakes State Beach has been seasonal (approximately April through October). Mobile food service units have been located seasonally, predominantly at Seabright Cove and occasionally at Seventh Avenue. It is recommended that this type of concession service continue.

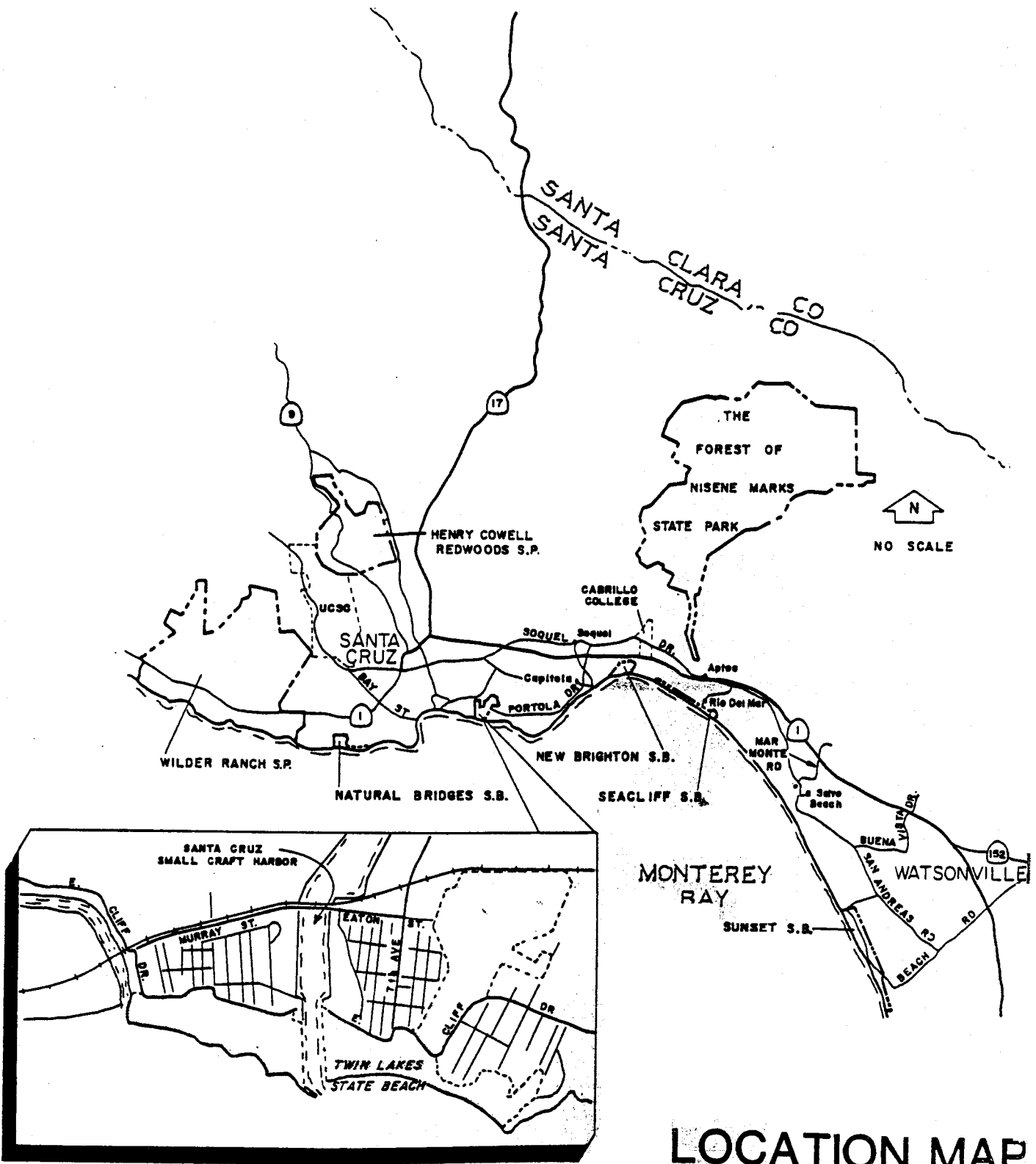


# INTRODUCTION

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TWIN LAKES  
STATE BEACH

GENERAL  
PLAN



**LOCATION MAP**

## INTRODUCTION

### Unit Description

Twin Lakes State Beach is located on the Santa Cruz County coast, one of the major recreation destination areas of California. More than one million visitors a year come to this State Park System unit to enjoy the unit's three beaches and other natural features. Major recreation activities include swimming, surfing, sunbathing, and other beach use.

### Purpose of Plan

The general plan is the first step in a comprehensive resource evaluation and is intended to guide future land use, development, acquisition, and operation of this unit. The precise design and configuration of facilities and use areas, and the nature of interpretive and concession programs, will be further refined when specific aspects of the general plan are funded by the State Legislature for implementation.

This plan includes the following elements:

The Resource Element is a summary of the natural, cultural, esthetic, and recreational resources of the unit. It sets management policies for protection and use of these resources.

The Land Use and Facilities Element describes current and proposed land uses and proposed facilities.

The Interpretive Element includes proposals for public information and interpretation.

The Concessions Element recommends the use of concessions in the unit.

The Operations Element provides guidelines for the operation of the unit.

The general plan as a whole serves as the draft environmental impact report required by the California Environmental Quality Act. Environmental impact information is presented in the Environmental Impact Element. Further environmental assessment will be performed when specific construction or management programs are proposed, and if significant environmental impacts differing from those specified in this general plan are found, further environmental documents will be filed.

In preparing this plan, several initial goals and objectives have served as a general guide:

1. Identify the unit's cultural and natural resources.
2. Identify existing and potential problems and provide solutions.
3. Determine land use, development, and visitor activities that are compatible with the purpose of the unit and the surrounding area.
4. Determine the potential environmental impacts of the land uses and visitor activities.

5. Establish policies for resource protection, preservation, and interpretation, maintenance and operation, and development.
6. Provide an information document for the public, the Legislature, department personnel, and other government agencies.

#### Planning Process

The process used in developing this general plan included a comprehensive resource inventory and evaluation of the opportunities and physical constraints of this unit. This resource information was summarized and is contained in the Resource Element of this general plan. Full documentation of the resource data is on file in the department's Resource Protection Division.

The resources were evaluated to determine the management policies needed to protect, enhance, and preserve sensitive and important natural and cultural resources. Existing land uses and facilities also were evaluated for their effectiveness in serving the recreational and operational needs of this unit. The recreation demand projections for Santa Cruz County and the Pajaro Coast District were derived from the department's Park and Recreation Information System (PARIS). The City and County of Santa Cruz Local Coastal Plans and City General Plan were also reviewed to determine applicable policies and surrounding future development that may affect long-range development considerations for this unit.

After hearing comments from the public and other government agencies, and following a comprehensive site analysis, the department proposed a single plan, including discussions of parking, access, and management alternatives. A graphic land use and facilities plan was finalized and included with the various development and management proposals presented in this general plan.

#### Public Involvement

The public expressed their interests and concerns at various stages in the planning process. The draft Resource Element was prepared in 1986 as part of an earlier planning schedule for 10 units along Monterey Bay. The resource findings and draft management policies were circulated for government and public review at that time. The first general plan public meeting was held in Santa Cruz on October 14, 1987 to introduce the project, explain the resource findings and draft policies, and identify major issues and public concerns. This meeting, attended by approximately 40 individuals and government agency representatives, also included discussion of Natural Bridges State Beach. A second meeting was held at the same location on May 12, 1988 to present a draft land use and facilities plan for public review and comment. In addition, a newsletter was mailed to 425 interested persons on our mailing list, summarizing issues and concerns and the draft plan proposals being made for Natural Bridges and Twin Lakes state beaches.

# RESOURCE ELEMENT

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TWIN LAKES  
STATE BEACH

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## RESOURCE ELEMENT

In compliance with the Public Resources Code, this element sets forth long-range management objectives for the natural and cultural resources of Twin Lakes State Beach. Specific actions or limitations required to achieve these objectives are also set forth in this element. Details of resource management are left for inclusion in specific resource management programs that will be prepared at a later date.

Discussions about lands not now owned by the Department of Parks and Recreation, which represent potential acquisition opportunities based on available data, are intended for planning purposes and do not represent an intention or commitment for acquisition.

This element was prepared to meet requirements set forth in Section 5002.2, Subsection (b) of Division 5, Chapter 1 of the Public Resources Code and Chapter 1, Section 4332 of Title 14 of the California Administrative Code.

### Resource Summary

#### Natural Resources

##### Topography

Elevations at Twin Lakes State Beach range from mean sea level to 40 feet. Slopes vary from level at the beach to nearly vertical at the edge of an inland coastal terrace. The distinctive feature of this unit is Schwan's Lagoon, a freshwater lake, which extends from East Cliff Drive to a coastal terrace in the northern portion of this unit. The surface area of Schwan's Lagoon is 23.5 acres. A smaller lagoon, Bonita Lagoon, about 1.5 acres, is located southeast of Schwan's Lagoon. Total ocean frontage of the unit is about 6,000 linear feet; Schwan's Lagoon frontage is 11,200 linear feet.

##### Meteorology

Northern California experiences a Mediterranean climate with cool, wet winters and warm, dry summers. The waters of the Pacific Ocean have a profound moderating effect on temperatures along the coast, producing a maritime temperature regime with mild temperatures year-round. Mean daily maximum temperatures for the months of May through November at Twin Lakes State Beach are in the low to mid 60s F and mean daily minimums are in the high 40s. For December through April, mean daily maximums are in the high 50s and mean daily minimums are in the middle 40s. Mean annual precipitation is estimated at 25 inches. Most of this precipitation (83%) occurs during the months of November through March.

Windy conditions are the norm around Monterey Bay; the weather station in the City of Monterey reports wind speeds of 4 to 15 miles per hour about 75% of the time, and strong winds, 16 to 31 miles per hour, 5% of the time. Calm winds, less than 4 miles per hour, are recorded about 20% of the time.

Fog, or fog-generated low clouds, occurs during all seasons, but is most common on summer mornings and evenings. The Monterey Bay area has fog 12% of the time during July through September. As a consequence of the foggy summers and frequent winter storms, this area only receives about 3,000 hours of sunshine annually, or about 70% of what is possible.

Microclimatic zones (areas that depart from the general climatic factors) are generated at Twin Lakes by the ocean, the prevailing breeze, the coastal fog, the sandy beach, and the lagoons.

Water reflects only half as much solar insolation as land; hence, the ocean stores more energy during the day and releases more energy at night. However, because of its lower specific heat, the land warms up and cools down two to three times as fast as the ocean. These energy storage and temperature differences, together with the prevailing onshore breeze, moderate high and low temperatures near the coast. When the coastal fog moves inland, it enhances this moderating effect. At first, it produces a sudden chill that chases visitors from the beach; thereafter, it acts as a thermal blanket, keeping air and soil temperatures almost constant.

White beach sand and the surf reflect about half the solar radiation. This extra half-dose of sunshine accounts for the unexpected sunburns of many inexperienced beach users.

Schwan's Lagoon, like the ocean, is a heat sink, which moderates the high and low temperatures.

#### Hydrology

Twin Lakes State Beach is located within the San Lorenzo Hydrologic Sub-Area in the Central Coastal Hydrologic Basin. The principal hydrologic feature is Schwan's Lagoon, a 23.5-acre freshwater lake that was once a tidal lagoon. It was created by construction of East Cliff Drive and a weir gate. 75% of this unit is within the larger Schwan's Lagoon watershed, which totals 523 acres. Land use in the Schwan's Lagoon watershed outside the unit is mostly residential. Roadway flooding is possible during storm surges and in the event of a tsunami. The weir gate keeps lagoon elevation above sea level and prevents nearly all tidal exchange.

Water quality in Schwan's Lagoon is poor. Coliform levels seasonally exceed drinking/water contact standards. Poor water quality is also indicated by high phosphate levels, high concentrations of total dissolved solids, and low levels of total dissolved oxygen.

Soils adjacent to Schwan's Lagoon are underlain by a high water table. Seawater intrusion into the groundwater has not been reported in this unit; groundwater quality is poor.

Bonita Lagoon (also known as Bonita Cove) is a semi-freshwater lake adjacent to the ocean beach. The freshwater nature of this lake is not natural. Before a berm was constructed across its mouth about 50 years ago (prior to state acquisition), this was probably a brackish wetland area supporting native vegetation and animal life. The berm reduced the amount and frequency

of seawater from reaching the lagoon and flushing it. Without this occasional flushing action by ocean water, pollutants carried by storm drains concentrate in the lagoon. Sand carried by winds and storm waves, which occasionally overtop the berm, also is accumulating and will eventually completely fill the lake.

Changes in the adjacent coastline have had significant consequences on beach dynamics and sediment transport along this section of the coast that may also be affecting the status of Bonita Lagoon. These changes include, but are not limited to, the channelization of the San Lorenzo River, the conversion of Woods Lagoon to the Santa Cruz Small Craft Harbor, including installation of a jetty at the mouth, the construction of East Cliff Drive across Schwan's Lagoon, the reduction of the benefit of tidal action to Schwan's Lagoon, and the urbanization of a great deal of the watershed draining into the unit. Bonita Lagoon is increasingly being polluted and is decreasing in size as a result of these changes.

### Geology

Twin Lakes State Beach is within the Salinian block of the southern Coast Ranges geomorphic province. The Salinian block is a wedge of continental material bounded on the northeast by the San Andreas fault zone and on the southwest by the Sur-Nacimiento fault zone. The coastal bluffs are made up of Pliocene-aged Purisima Formation, overlain by a thin mantle of unconsolidated terrace deposits. The Purisima Formation is composed of siltstones and sandstones that are cut by near-vertical joints and fractures, as well as faults. The faults juxtapose materials of different resistance to erosion, resulting in embayments, like Schwan's Lagoon. The joints, according to their orientation, serve as conduits for groundwater and become zones of weakness. They also contribute to block falls and seacliff retreat, as the seacliffs become undercut and collapse along the joint planes parallel and perpendicular to the shore.

Beach width at Twin Lakes State Beach has varied dramatically over the last 40 years. Seabright Beach, the area west of the small craft harbor, used to be an area of high erosion and little sand. In 1948, the Master Plan of Shoreline Development for Santa Cruz County was revised to "bring it in consonance with those statutes so that the County of Santa Cruz may benefit in State and Federal aid in the problems of cliff and beach erosion, and the development of its beaches." The master plan includes the following description for Twin Lakes State Beach: "The realignment of East Cliff Drive at the Easterly boundary of the City has provided considerable more parking space than heretofore has been available. The cliff line at the Southeasterly end of this section along what is known as the Darling Subdivision has experienced a constant and continued erosion. The map of this subdivision, which was filed in 1909, shows East Cliff Drive between the Southern end and Bay of Monterey, thereby indicating that the cliff was at least 130 feet further southward at that time."

The Santa Cruz Small Craft Harbor, constructed in the early 1960s, dramatically changed the beach and coastline configurations. Seabright Beach, which had been narrow with cliffs actively eroding prior to construction of the harbor, became a wide sandy beach between San Lorenzo Point and the west jetty. Sand



moving downcoast from the San Lorenzo River mouth became trapped by the rock jetty and dammed up behind it, until the area behind the jetty filled up. Sand began to plug the harbor mouth, making periodic dredging necessary.

In contrast, the beaches downcoast from the harbor began to narrow as their supply of littoral sand was cut off or diminished. Increased erosion of the beach between Woods Lagoon and Schwan's Lagoon and the beach between Schwan's Lagoon and Black Point led to seacliff retreat and the undermining and damage of private properties. Riprap has been placed at the base of the cliffs to protect private property above; however, the recreational beach has all but disappeared.

### Soils

Soils at Twin Lakes State Beach are represented by six soil phases or land types: coastal beaches, Aptos loam, the Elkhorn-Pfeiffer complex, Pinto loam 0-2% slope and 2-9% slope, Watsonville loam 2-15% slope, and thick-surface Watsonville loam 2-15% slope. The characteristic soil type in this unit is loam, primarily Watsonville.

The coastal beaches land type occurs on narrow sandy beaches and consists of sand, gravel, cobbles, or boulders, or a mixture of these. Portions of the coastal beaches are exposed only during low tides and inundated at high tide. Drainage is very poor to excessive. When vegetation is not present, erodibility is high.

Aptos loam, which derives from sandstone, siltstone, shale, or mudstone, is moderately deep and well drained. The surface layer is usually dark grayish brown and grayish brown, approximately 18 inches thick, and with a medium acid to slightly acid reaction. The subsoil is grayish brown and about 6 inches thick. This soil phase occurs on 50 to 75% slopes within Twin Lakes State Beach. Aptos loam has moderate permeability and runoff is rapid. Erosion hazard is very high. Shrink-swell potential is moderate. Aptos loam is found on the northwestern side of the coastal terrace in the northern part of Schwan's Lagoon.

The Elkhorn-Pfeiffer complex occurs at Twin Lakes State Beach on 30 to 50% slopes. This complex is approximately 45% Elkhorn sandy loam and 25% Pfeiffer gravelly sandy loam and derives from marine terraces and hills and alluvial fans. These soils have a very dark grayish brown to brown, slightly acid (to medium acid) surface layer 21-24 inches thick. The subsoil is pale brown to brown or variegated, neutral to slightly acid, and varies in thickness. Elkhorn sandy loam and Pfeiffer gravelly sandy loam are very deep, well-drained soils. Permeability of Elkhorn sandy loam is moderately slow; that of Pfeiffer gravelly loam is moderately rapid. Shrink-swell potential is low. Erosion hazard is high. Soils in this complex occur along the western shore of Schwan's Lagoon.

Pinto loam is a deep, moderately well-drained soil and forms in old alluvium and marine terraces. A small area of Pinto loam occurs along the northern boundary of this unit. The soil surface is grayish brown, medium acid loam about 14 inches thick. The subsurface layer is lightest brownish gray, medium

acid loam about 7 inches thick. This soil occurs on 0 to 15% slopes. Permeability is slow, and the hazard of erosion slight. Shrink-swell potential is low.

Watsonville soils are the principal soils of Twin Lakes State Beach. They occur on the shoreline of Schwan's Lagoon and adjacent to Bonita Lagoon and form the major part of the coastal terrace north of Schwan's Lagoon.

Watsonville loam is formed in alluvium on coastal terraces. It occurs at Twin Lakes State Beach on slopes of 2 to 15%. The surface layer is very dark grayish brown and slightly acid in reaction. It is about 12 inches thick. The subsurface layer is light gray, slightly acid, and about 6 inches thick. A related soil phase, thick-surface Watsonville loam, has a surface layer of about 20 inches. These loams are deep and poorly drained. Erosion can be hazardous on steep slopes where permeability and runoff are very slow to slow. Shrink-swell potential is low.

### Plant Life

The vegetation at Twin Lakes State Beach has largely been altered by human impact. Areas of native vegetation are limited in extent, and exotic species have been widely introduced. Native vegetation, consisting of elements of northern coastal scrub, coastal and valley freshwater marsh, central coastal riparian forest, and coast live oak woodland plant communities, occur at scattered locations around Schwan's Lagoon.

Dense stands of coyote brush (Baccharis pilularis var. consanguinea) occur in the field to the north of Schwan's Lagoon. French broom (Cytisus monspessulanus) and Scotch broom (Cytisus scoparis), both exotics, are also invading this area.

The vegetation along the shoreline of Schwan's Lagoon is characteristic of freshwater marsh ecosystems. Freshwater marsh vegetation consists primarily of bog rush (Juncus effusus var. brunneus), three-square (Scirpus americanus), California tule (Scripus californicus), cattail (Typha latifolia), and Pacific silverweed (Potentilla egedei var. grandis). Extensive stands of California tule occur in the inland arms of Schwan's Lagoon.

Riparian areas form a ribbon around the shoreline of the northern portion of Schwan's Lagoon where there is seral to freshwater marsh vegetation. Black cottonwood (Populus trichocarpa) and arroyo willow (Salix lasiolepis) are the overstory species, with poison oak (Toxicodendron diversiloba) and blackberry (Rubus ursinus) in the understory. Several small, wind-pruned arroyo willow thickets are emergent at the southern end of the lagoon.

An important native plant community at Twin Lakes State Beach is the coast live oak (Quercus agrifolia) forest. Once more extensive in coastal California, this community now occurs only in scattered locations. An oak forest forms a band along the northern edge of Schwan's Lagoon. The oak forest is probably the climax community, with oak reproduction occurring north of the lagoon. However, unless checked, continued invasion by eucalyptus, broom, and other nonnative species may eventually eliminate this community within Twin Lakes State Beach.

No rare or endangered species are reported at this unit. There is potential habitat for the state-listed (endangered) Santa Cruz tarweed (Holocarpha macradenia) on the terrace summit north of Schwan's Lagoon.

#### Animal Life

Most wildlife habitat areas at Twin Lakes State Beach are associated with Schwan's Lagoon and include five biotic communities: freshwater lake, riparian woodland, freshwater marsh, coast live oak woodland, and coastal scrub. Other habitats within the unit are ocean and coastal strand.

Marine mammals and pelagic birds forage offshore of Twin Lakes State Beach. For example, the California brown pelican, an endangered species, is often seen. Other species are the black scoter and surf scoter. Marine mammals reported in the vicinity of Twin Lakes State Beach include the harbor seal and California sea lion.

Gulls and shorebirds commonly rest on the beach between periods of foraging in the intertidal zone. Shorebirds can also be observed foraging in the outflow from Schwan's Lagoon. The western gull, California gull, killdeer, willet, and spotted sandpiper are resident species. Winter visitors include herring and Bonaparte's gulls and common snipe.

Schwan's Lagoon is an artificial freshwater lake. Freshwater marsh habitat occurs in the northern arms of Schwan's Lagoon where principal vegetation consists of California tule and three-square. The red-winged blackbird, long-billed marsh wren, and American coot occur in this habitat. A black-crowned night heron rookery is present in this unit as well. Reptiles and amphibians include the tiger salamander, rough-skinned newt, Pacific gopher snake, and western aquatic garter snake. The open water of Schwan's Lagoon supports gulls, domestic ducks and geese, and double-crested cormorants. Forster's and Caspian terns and several species of native waterfowl are also present at Schwan's Lagoon.

Schwan's Lagoon contains seven freshwater fish species: goldfish, golden shiner, largemouth bass, bluegill, brown bullhead, mosquitofish, and prickly sculpin. All these species, except the prickly sculpin, are exotic. Bass, bluegill, and bullhead are sport fish that can be taken from the lagoon.

Where riparian areas form a ribbon around the northern shoreline of Schwan's Lagoon, black cottonwood and arroyo willow are principal overstory species; the understory is dense. The shaded understory and stratified canopy layers provide habitat for several species of birds, mammals, reptiles, and amphibians. The California slender salamander, Pacific tree frog, western harvest mouse, and Wilson's warbler are representative species.

Oak woodland forms a band along the northern portion of Schwan's Lagoon and also occurs on its west-facing bank. Vertical stratification into different canopy layers results in many potential wildlife niches. Birds that utilize the lowermost layers include California quail and the rufous-sided towhee. The orange-crowned warbler, yellow-rumped warbler, and hooded oriole are present in the upper canopy layers. Mammals include the Virginia opossum,

brush rabbit, and California mouse. The ensatina, western toad, northern alligator lizard, and northwestern fence lizard are representative of amphibian and reptile species of the oak woodland.

The northern coastal scrub community at Schwan's Lagoon is composed of coyote brush with an herbaceous understory. Grassy clearings are found adjacent to the scrub community. French and Scotch broom are colonizing the grassy areas. The diversity of vegetation, abundant seed, and dense cover in this portion of the unit provide a habitat for many animals. Amphibians and reptiles found in coastal scrub are the tiger salamander, northwestern fence lizard, and Pacific gopher snake. Mammals include the brush rabbit, California pocket mouse, and raccoon. Typical birds are white-crowned sparrows, rufous-sided towhee, and western kingbird.

The double-crested cormorant, a state "species of special concern," has been seen roosting on a snag in Schwan's Lagoon.

Bonita Lagoon provides little aquatic habitat for fish, amphibians, or birds.

### Marine Life

Located in Monterey Bay, the marine environment off Twin Lakes State Beach is within the Central California Seascape Province, a region of characteristic geological and biological features extending south from San Francisco Bay to Point Conception.

The marine ecosystem consists of two principal environments, benthic and pelagic. The pelagic habitat is the open water from the surface to the sea floor. Benthic habitats are on the ocean floor and are defined on the basis of depth, substrate, and tidal influences. There are two significant benthic habitats at Twin Lakes, intertidal and subtidal.

Intertidal benthic habitat is the sandy beach area between high and low tides. This zone is limited in biological productivity due to the daily exposure to the atmosphere and the constantly shifting sand. Nevertheless, some species, primarily burrowing animals, occur here. The most common burrowing animals are blood worms and the mole crab. Scavengers are also present, primarily beach hoppers. When the tide is in, several fish including surf perch, diamond turbot, and round stingray utilize this habitat. When the tide is out, the major vertebrates are foraging shorebirds such as willets and sanderlings.

Subtidal benthic habitat extends from the lowest tide line to a depth of 30 feet and is primarily composed of unconsolidated sand. The dominant species dwelling within the substrate are polychaete tube worms. Species dwelling on the substrate include dungeness crab and short-spined sea star. Fish that commonly occur in this zone are sanddabs, California halibut, and starry flounder.

The pelagic community is composed of floating and swimming organisms. Floating organisms include phytoplankton, zooplankton, crustaceans, jellyfish, and copepods. Fish in this zone include surf perch, rockfish, and night smelt. Marine mammals occurring occasionally in this zone include harbor seals and California sea lions. A number of inshore seabirds such as western grebe, surf scoter, Caspian tern, and gulls also utilize this habitat.

The state-listed (threatened) Guadalupe fur seal may occasionally forage near Twin Lakes State Beach (a small male was found beached in Monterey Bay in 1977). Federally-listed (threatened) southern sea otters occur in Monterey Bay and may occasionally be seen as they migrate between kelp beds, their preferred habitat.

### Ecology

Many small ecosystems occur within the coastal and marine environments of Monterey Bay. These small systems are interrelated by the physical and biological elements such as air, soil, water, nutrients, and animals.

Streams, bluffs, and cliffs contribute sediments to marine ecosystems, which are then redistributed by littoral oceanic currents. As a result of the current pattern in Monterey Bay, the benthic marine environment at Twin Lakes is sandy. Nutrients associated with these sediments are important to marine life in the nearshore zone. Upwelling of cold bottom waters, however, provides the greatest source of nutrients. These nutrients greatly enhance the biological productivity in nearshore marine ecosystems. Because of the upwelling, Monterey Bay is one of the richest marine basins in California.

Terrestrial ecosystems are generally thought to include wetlands, but wholly aquatic elements are most often considered separately as aquatic ecosystems. In actuality, these two types of ecosystems are interrelated. Despite urban encroachments, significant complexity exists among the terrestrial ecosystems at Schwan's Lagoon. Terrestrial ecosystems there have maintained a high degree of integration and stratification of both floral and faunal components.

With extensive urban encroachment in areas surrounding the unit, the ecosystems at Schwan's Lagoon are important as vestiges of the natural condition and as significant habitat for specific plants and animals. Schwan's Lagoon itself has been identified as an important natural area by the California Natural Areas Coordination Council. Despite its unnatural condition, this freshwater lagoon continues to provide valuable wildlife habitat for herons, soras, and migratory water birds.

### Cultural Resources

#### Archeology

One small Native American archeological site at Twin Lakes State Beach, recorded as SCR-89, is located along East Cliff Drive above the mouth of the San Lorenzo River. The shallow black sandy deposit is visible in the cliff profile. This site includes only minor amounts of shell, bone, and chipping debris from the manufacture of stone tools. A small excavation on the adjacent lot prior to housing construction in 1982 found that portion of the site to be of very limited scientific value. What remains at the site is not threatened by erosion or disturbance.

## Ethnography

The Indians who lived along the coast from San Francisco Bay to Monterey Bay are generally referred to as Costanoan, though the name Ohlone has become more popular in recent years among native descendants. The terms are an abstraction for a linguistic family of eight distinct languages. Three different languages were spoken on Monterey Bay: Awaswas from Aptos upcoast to Davenport, Mutsun in the Pajaro and lower Salinas River valleys, and Rumsen from about Marina downcoast to the Sur River.

Political organization was limited to a tribelet level consisting of one or more villages, served by a chief and council of elders. Each of the approximately 50 tribelets was like an autonomous nation. Tribelet territories were apparently well defined and defended, with warfare commonly mentioned in historical accounts. Marine resources provided items for trade to inland neighbors, primarily mussels, abalone shells, salt, and dried abalone. Pinon pine nuts and obsidian were obtained as imports.

Prayers, offerings, dreams, dances, and shamanism were important in Ohlone religious life. Musical instruments included whistles, flutes, rattles, and a musical bow. Several types of games and gambling were popular. Most houses were dome-shaped, using thatch to cover a pole framework, and large enough for 10 to 15 persons. Animal skins were used for robes, blankets, and bedding, along with tule mats. Baskets were used for storing household items, and especially for collecting, processing, and storing food.

Acorns provided the bulk of the diet, supplemented by a variety of other nuts, seeds, berries, roots, and shoots. Animals were hunted, trapped, and fished, including most of the mammals and reptiles in the area, waterfowl and other birds, and insects. Extensive burning of brush and grasslands helped to improve the hunting and gathering potential of the lands while reducing the danger of wildfires. Beached whales, sea otters, and sea lions were roasted and eaten. Mussels and abalone were gathered, though this resource was probably never abundant along the sandy bay from Aptos to Monterey.

## History

Gaspar de Portola's 1769 expedition, and the Rivera-Palou and Hezeta and Palou expeditions of 1774 and 1775, initiated Spanish occupation and missionization of the Monterey Bay area. The seven Spanish missions in Ohlone territory had cataclysmic effects on the native population and traditional culture. The Indians living around Monterey Bay were drawn into missions at Santa Cruz, San Juan Bautista, and San Carlos.

Mexican secularization of the mission system in 1834 dispersed the remaining Costanoan peoples. Simultaneously with orders for mission secularization came requests for Mexican land grants. Within a few years, the present-day state beach units in Santa Cruz County were almost entirely taken up in a series of these grants.

The land encompassing present-day Twin Lakes State Beach proved an exception to this rule, however. Following statehood, the land in the north half of T11S, R1W MDM, which includes the present beach unit, was surveyed as public domain.

On May 1, 1867, Jacob Schwan, Manuel Rodriguez, Thomas Pilkington, and Henry Johans acquired 108, 160, 140, and 145-acre preemption grants, respectively, on land encompassing the present state beach. Three years later, on October 14, 1870, John Woods bought 159 acres at public sale. Manuel Rodriguez subsequently sold part of his holdings between Woods Lagoon and Schwan Lake to J. C. Kimball of Oakland.

Twin Lakes was not long in developing. Prior to 1889, the Southern Pacific Railroad ran its line on trestle bridges across the northeastern tip of both Woods and Schwan's lagoons, and the Ely horsecar line served the beach side. Bridges built on substantial pilings allowed horses and buggies -- and later autos -- to pass over the lagoons along the edge of the bay.

By the late 1880s, Thomas Pilkington had developed his property on the northwest edge of present-day Twin Lakes State Beach as Seabright Park, and J. C. Kimball's Twin Lakes property was developed as a Baptist summer resort, called Twin Lakes Resort. Kimball donated 10 acres to the cause; Jacob Schwan another seven. Schwan subsequently sold 12 more acres to the Baptist venture. A rustic church was built in 1890 and, throughout the 1890s, lots 40 feet by 80 feet were sold. The Surf Hotel was constructed, while tents were pitched in open fields and campers took up summer-long residence.

The Twin Lakes area became increasingly residential over the first half of the 20th century. In 1955, Grace E. Hillburn sold a 33.75-acre parcel to the State of California to establish the state beach. Arnold Merritt Baldwin in 1956 granted over 15 acres to the State Park System in memory of his parents, Fred and Mary Baldwin. Numerous smaller parcels have been added to these original acquisitions to bring total present acreage to 91.6. The unit was classified as Twin Lakes State Beach in November 1962.

#### Historic Structures

There are no historic resources in this unit. The house at 120 Ninth Avenue, which served as the unit's first office, has been totally remodeled. No physical evidence remains of its original appearance and no information was discovered that would verify its estimated construction date of 1935.

#### Esthetic Resources

Positive scenic resources at Twin Lakes State Beach include the panorama of Monterey Bay and the quiet waters, ducks, and gulls in Schwan's Lagoon.

The primary negative scenic resource is the chaotic admixture of residential and recreation elements, especially a large residence adjacent to the beach that is fortified with large blocks of riprap which jut onto the sandy beach. Other negative features include the stark comfort station on the sandy beach and the plethora of automobiles crowded into every conceivable parking space.

The main auditory feature of Twin Lakes State Beach is the noise of the constant stream of automobiles, motorcycles, trucks, and buses passing through the unit on East Cliff Drive. Other negative auditory features are typical urban sounds, including radios, televisions, and barking dogs.

## Recreation Resources

The coastal area of Santa Cruz and Monterey counties is one of the major recreation destinations in California. This area is estimated to be the destination for roughly one out of 20 recreation trips (4.6%) within the state by Californians. These trips bring about 5.7 million recreation visitors to the two counties, not including visitors from out of state. In addition to these "destination" visitors, this area is very popular with persons touring through or enroute to another destination.

Twin Lakes has a day-use attendance of more than one million a year. Summer accounts for 51% of this use, fall for 17%, winter, 9%, and spring, 23%.

Twenty major recreation activities currently occur at Twin Lakes; of these, 12 are strongly dependent on the ocean or beach and six depend on other natural resources of the unit. Recreation activities that are primarily dependent on the ocean or sandy beach -- scuba and skin diving, board and body surfing, wind surfing, swimming, sunbathing, beachcombing, surf fishing, beachball, volleyball, and sand sculpture -- are of high statewide significance. Painting, photography, birdwatching, other nature study, esthetic appreciation, and kite flying also occur at this unit and are of statewide significance.

## Resource Policy Formulation

### Classification

Twin Lakes State Beach has been a unit of the State Park System since 1955. The unit was classified as a state beach by the State Park and Recreation Commission in November 1962. The Public Resources Code (Section 5019.56) defines a state beach as a type of state recreation unit as follows:

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: . . .

(d) State beaches, consisting of areas with frontage on the ocean, or bays designed to provide swimming, boating, fishing, and other beach-oriented recreational activities. Coastal areas containing ecological, geological, scenic, or cultural resources of significant value shall be preserved within state wildernesses, state reserves, state parks, or natural or cultural preserves.



### Declaration of Purpose

The purpose of Twin Lakes State Beach is to make available to the people, for their benefit and enjoyment forever, the scenic, natural, cultural, and recreational resources of the ocean beach and of Schwan's Lagoon.

The function of the California Department of Parks and Recreation at Twin Lakes State Beach shall be to preserve and protect public opportunities for recreation in a high-quality natural environment. Schwan's Lagoon shall be managed for its perpetuation as part of a natural ecosystem.

### Zone of Primary Interest

The zone of primary interest is that area outside the unit in which land use changes could adversely impact the resources of Twin Lakes State Beach. This zone includes the Schwan's Lagoon watershed, the residential areas surrounding the unit, the Santa Cruz Small Craft Harbor, East Cliff Drive, Lake Avenue, and the Southern Pacific Railroad right of way.

In addition, the department is interested in all lands, no matter how far away, that through their use and development could adversely affect the unit's resources and features. Air pollution and acid rain are regional problems that affect the unit and may be increased by uses of distant lands. The damming of rivers and the construction of breakwaters along the coast, which disrupt the natural littoral sand movement, is another regional problem affecting the unit.

### Resource Management Policies

Resource management in the State Park System is governed by laws contained in the Public Resources Code and the California Administrative Code, and is further guided 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's classification and its Declaration of Purpose have been addressed in previous sections.

Specific departmental Resource Management Directives amplify the legal codes and provide clearer management guidelines. Directives that are especially pertinent to existing or potential problems related to the management of resources at Twin Lakes State Beach are:

- #15 State Recreation Units; protection of resources
- #18 State Beaches; avoid using sandy beaches for secondary uses
- #19 State Beaches; protection of resources
- #33 Exotic Plant Species
- #35 Wildlife Protection
- #46 Environmental Quality
- #58 Cultural Resource Protection
- #70 Archeological Sites

Directives #18 and #19 are particularly relevant to planning issues for the state beaches along Monterey Bay:

(18) Insofar as is possible in state beaches, the entire area of the sandy littorals will be available for recreation use and visual enjoyment. It is an objective of the department to avoid use of natural sandy beaches for parking or for other supportive or secondary uses.

(19) The scenic, natural, and cultural values of state beaches, including the ecological relationships of the littoral, tidal, and nearshore areas will be identified, evaluated, and protected so the total quality of the recreation experience may be perpetuated and enhanced.

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. The policy is as follows:

The Department of Parks and Recreation shall avoid construction of new structures and coastal facilities in areas subject to ocean wave erosion, seacliff retreat, and unstable cliffs, 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 California's actively eroding coastline, new structures and facilities located in areas known to be subject to ocean wave erosion, seacliff retreat, or unstable bluffs 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 negatively affect the beach or the near-shore environment.

In addition to policies, directives, and laws that apply statewide, the following specific resource policies have been developed for Twin Lakes State Beach:

#### Paleontological Resources

The fossil record contained in the ocean-facing cliffs near Santa Cruz is a valuable, irreplaceable natural resource. Past climatic conditions and plant and animal assemblages can provide us with clues about how present-day ecosystems evolved.

Policy: Permits for collection of paleontological resources within Twin Lakes State Beach shall be carefully controlled to ensure proper management and protection of these nonrenewable resources. Collection of fossil resources shall be approved only when the collection will result in direct benefit to the State Park System.

### Bluff Setbacks

Seacliff retreat is an ongoing process that should be taken into consideration when designing and placing facilities near cliff edges. To protect investments in facilities and assure public safety, it is a sound principle to establish setback zones -- both "zones of exclusion," where facility development is precluded, and "zones of demonstration," where facility development is allowable if stability and geologic suitability can be demonstrated.

Policy: A zone of exclusion shall be established to include the base, face, and top of all bluffs and cliffs extending inland to a plane formed by a 45-degree angle from the horizontal at the base of the cliff or bluff. No new structures shall be constructed within this zone unless they are either movable or expendable. Existing facilities, including buildings and campsites, may remain in use subject to regular inspections by field personnel in coordination with the department's geologist. A zone of demonstration shall be established in the unit to extend inland from the zone of exclusion to the intersection of the ground surface with a plane inclined 20 degrees from the horizontal from the toe of the cliff (see Figure 1).

### Shoreline Protection Devices

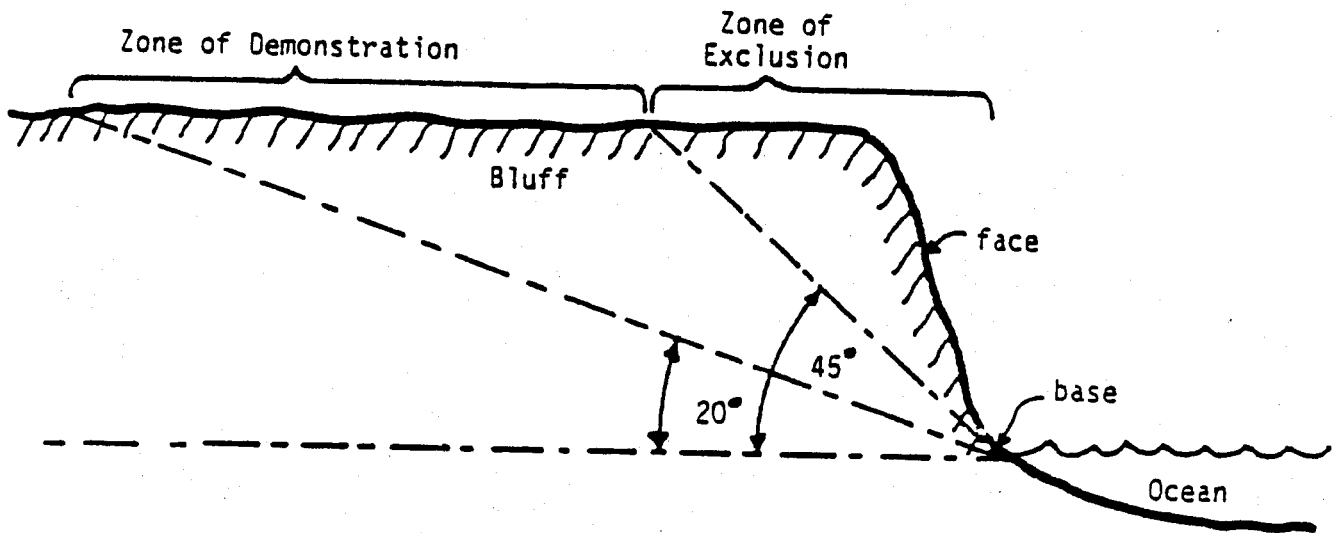
Structural shoreline protection measures are not consistent with the general objectives for resource management within the State Park System. In certain circumstances, however, when the public facility is of greater necessity and importance than the natural resources that may be negatively affected, structural protective measures may be appropriate.

Policy: Structural protection measures shall be undertaken only if nonstructural measures (i.e., relocation of facility, setback, redesign, or beach replenishment) are not feasible. If a protective structure is constructed (i.e., riprap at the base of the seawall or construction of a new seawall), the structure shall not:

- 1) Significantly reduce or restrict beach access;
- 2) Adversely affect shoreline processes and sand supply;
- 3) Significantly increase erosion on adjacent properties;
- 4) Cause harmful impacts on plant, wildlife, or fish habitats;
- 5) Be placed further than necessary from the development requiring protection; or
- 6) Create a significant visual intrusion.

figure 1

Zones of Demonstration and Exclusion



## Monitoring Erosion and Sand Loss

Both the seacliff and beach configuration at Twin Lakes State Beach have changed dramatically over the last 40 years, due to both human and natural processes.

Policy: A photographic and physical survey monitoring program should be instituted at Twin Lakes State Beach to document beach width and elevation changes, seacliff retreat, and block falls. Monitoring points shall be established, in consultation with the departmental geologist, and support shall be sought from other public agencies initiating baseline data collection programs (California Department of Boating and Waterways, U.S. Geological Survey, U.S. Army Corps of Engineers).

## Disposal of Dredged Materials

The Santa Cruz Small Craft Harbor has experienced chronic effects of shoaling sand buildup due to the interruption of littoral drift caused by the harbor jetties. Hundreds of thousands of cubic yards of material have been dredged from the harbor, while the downcoast beaches have become sand-depleted and the low seacliffs have retreated. Although past dredge spoils have been deposited on the pocket beach at Schwan's Lagoon, the beach remains in a depleted condition.

Policy: The department shall investigate the feasibility of beach replenishment at Twin Lakes State Beach in concert with deposition of the dredge materials from the small craft harbor. Early consultation with the county, Harbor District, Army Corps of Engineers, California Department of Boating and Waterways, California Coastal Commission, and State Lands Commission will be necessary to assure a successful project.

## Preservation of Coast Live Oak Woodland Habitat

Remnants of a coast live oak woodland occur along the banks of Schwan's Lagoon and form a band between riparian vegetation and coastal scrub north of the lagoon. Coast live oak seedlings are becoming established in open, grassy areas to the north of Schwan's Lagoon. Because coast live oak woodland has been reduced as a result of human impact, the maintenance of this type of natural community within Twin Lakes State Beach is important.

Policy: The department shall implement a vegetation management program at Schwan's Lagoon. One specific goal of this project shall be the removal of exotic species that are encroaching upon the coast live oak woodland and restricting oak seedling establishment.

## Exotic Plant Species

When invasive nonnative species become established, it is often to the detriment of native species and natural communities. At Twin Lakes State Beach, exotic species of concern include Scotch broom, French broom, cotoneaster, eucalyptus, English ivy, and annual European grasses. Eucalyptus trees are established on the periphery of Schwan's Lagoon; broom and cotoneaster have invaded the coastal terrace to the north of the lagoon. English ivy has engulfed several trees and their understory in the northern part of the unit.

Policy: Exotic species capable of naturalizing shall not be used for landscaping at Twin Lakes State Beach. Management plans to control and/or eradicate broom, eucalyptus, English ivy, and cotoneaster shall be developed and implemented. Exotic species shall be replaced by native plant species from local population sources. When reproduction of eucalyptus occurs, the young trees shall be removed. All exotic tree species shall be removed from undeveloped areas of the unit.

### Schwan's Lagoon

Prior to extensive human modifications of the natural landscape in the Santa Cruz area, Schwan's Lagoon was a tidal estuary. Although accurate information is not available, it is believed that before about 1900 the lagoon was a naturally functioning tidal system with a barrier beach across its mouth. Typically, such barrier beaches are intermittently breached by ocean waves and/or overtopped and eroded by freshwater flowing over the sand. Once the beach is breached, the lagoon remains open to tidal exchange until littoral sand movement reestablishes the beach. When the beach is in place, some exchange of water takes place through the sand. The nature of the lagoon remains brackish, a mixture of salt and freshwater. Such naturally functioning lagoons are highly productive biological systems supporting a diverse assemblage of native plants, fish, birds, and other organisms.

When East Cliff Drive was first constructed, a bridge was built across the mouth of Schwan's Lagoon to allow tidal exchange to continue. The bridge pilings probably restricted the breaching of the barrier beach, so that tidal exchange was reduced. In the 1930s, the bridge was replaced with the present ground-level roadway, with a culvert installed under the road to allow runoff to flow from the lagoon to the ocean, but still restricting tidal exchange. This roadway significantly changed the nature of the lagoon, making it more like a freshwater lake.

In 1962, the Santa Cruz Small Craft Harbor was constructed. The breakwaters associated with the harbor altered the normal movement of littoral sand along the beaches in the area. The breakwaters caused the width of the beach fronting Schwan's Lagoon to greatly increase in size, virtually eliminating the chance of any seawater being introduced into Schwan's Lagoon.

Between the time the breakwaters were constructed and 1977, Schwan's Lagoon dried up each summer, revealing assorted debris imbedded in the lagoon bottom, including tires, cans, bottles, and related material that tends to collect in an urban body of water. The drying lake bottom occasionally emitted strong, offensive odors that were an irritation to local residents and beach visitors. In 1977, after years of discussion between local officials and residents, and the department, the department installed a weir gate at the south end of the lagoon adjacent to East Cliff Drive. Since then, the weir has maintained the water at a nearly constant level throughout the year.

In California, the total pristine coastal wetland acreage has been reduced by approximately 70%, largely due to human impact. Because such a large proportion of wetland habitat has been lost, the California Coastal Act (1976) requires that the "Biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes . . . be maintained and where

feasible, restored . . ." (Article 4, Section 30231). The technology now exists to restore many degraded coastal wetland areas to a more pristine condition. Unfortunately, the changes to the environment that have taken place in the vicinity of Schwan's Lagoon preclude any simple method of restoring it to a natural tidal estuary. Restoration of the natural processes that maintained Schwan's Lagoon as it was prior to 1900 would require relocation of East Cliff Drive and removal of the harbor breakwaters. Neither of these actions appears to be feasible or desirable.

Water quality of Schwan's Lagoon is poor and there is an overpopulation of exotic ducks and geese. The lagoon does, however, provide significant natural, esthetic, and recreational benefits. Over 100 species of birds have been reported in the area, including nesting black-crowned night herons. The lagoon provides a pleasant scenic backdrop for nearby residents, travelers on East Cliff Drive, and state beach users. The lake is used by the public for canoeing, kayaking, sailing, and fishing.

Policy: Schwan's Lagoon shall be managed to provide natural, esthetic, and recreational benefits for the public. The present management of the lagoon as a freshwater lake shall continue as long as it appears to provide the best available combination of public benefits. If a strategy can be developed to restore the lagoon as a functional tidal estuary and prevent the problems that existed prior to the installation of the weir gate, it shall be seriously considered for implementation.

#### Bonita Lagoon

Bonita Lagoon, historically a coastal lagoon, is a small semi-freshwater lake adjacent to the ocean beach, formed by construction of a berm across its mouth. The berm limits tidal flushing, and windblown sand has accumulated in the lake. Without flushing, urban pollutants from storm drains have also concentrated in the lake.

Local residents have expressed an interest in having the department restore this lagoon to the larger and deeper body of water that existed in the recent past. Dredging the lagoon without removing the berm would temporarily result in the reestablishment of a larger artificial lake. Removing the berm in conjunction with dredging could result in the reestablishment of a natural coastal lagoon.

Policy: The department shall develop and implement a management plan for Bonita Lagoon that restores the area to its natural condition as a coastal wetland and will require little or no ongoing operational management obligation.

#### 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 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 or 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 and protection objectives, resource constraints, and resource sensitivities 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 factors that 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 archeological and historical resources; vegetation characteristics such as durability, fragility, and regeneration rates; and wildlife considerations such as population levels, stability, and tolerance to human activity. 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 Twin Lakes State Beach were determined and are shown on the Allowable Use Intensity Map. Three use intensity categories have been developed: low, moderate, and high. The low intensity zone includes the open water and adjacent wetland and riparian habitats of Schwan's Lagoon. The moderate intensity zone is the sandy beach where the environment can withstand heavy visitor use but is subject to ocean wave attack. The high intensity zone is relatively level land without important resource values.



# LAND USE AND FACILITIES ELEMENT

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TWIN LAKES  
STATE BEACH

GENERAL  
PLAN

## LAND USE AND FACILITIES ELEMENT

This element of the general plan addresses existing and proposed land uses and development at Twin Lakes State Beach. The recommendations and guidelines for future development are based on an evaluation of the resource sensitivities and constraints, operational and visitor needs, and consideration for the expressed interest and concerns of the public and other agencies.

### Visitation and Use Patterns

Annual visitation at Twin Lakes State Beach has dramatically increased over the years. Attendance during fiscal year 1986-87 reached approximately one million. Twin Lakes State Beach is seasonally used. During winter stormy weather, much of the beach is covered with water and is scarcely visited. From the first hot weekend in spring through the last hot weekend around Thanksgiving, the beach is extensively used. The main activities include sunbathing and beach-type games, partying, and swimming and surfing. Surveys indicate the following visitor use patterns:

Sunbathing and sand sports	57%
Partying	25%
Swimming and water sports	10%
Group use	5%
Picnicking and other uses	3%

The majority of visitors come from outside Santa Cruz County for day-use activities. Visitor origin and percentages of total visitation are:

Santa Clara Valley	40%
San Joaquin Valley	25%
Santa Cruz County	20%
San Francisco and other areas	15%

### Existing Conditions

Twin Lakes State Beach consists of five geographical areas: Seabright Beach, East Beach (Seventh Avenue), Schwan's Lagoon and upland (peninsula), Fourteenth Avenue Beach and Bonita Lagoon, and the Fourteenth Avenue Maintenance Area. Each area is described below.

#### Seabright Beach

This portion of the beach, 300 to 500 feet wide and backed by 30-foot sandstone cliffs, is located between the San Lorenzo River on the west and the Santa Cruz Small Craft Harbor on the east. It is considered one of the best sand beaches in the area and receives heavy use. It is entirely within the Santa Cruz city limits.

The Santa Cruz boardwalk and amusement park is directly across the river, with a contiguous beach accessible during low tides and minimum river flows. Private residences are located on the bluff. Public access is provided at Cypress Avenue, Third Avenue, and at the harbor west jetty. Parking is limited to residential streets, the harbor, and a few small parking lots on East Cliff Drive. There are no parking lots on state-owned land.

An existing 11-stall restroom facility with outdoor showers is located on the beach near the Cypress Avenue access. Four portable lifeguard towers are evenly placed on the beach for public contact and visitor safety.

#### East Beach (Seventh Avenue)

This is a narrower sand beach than Seabright, bordered by the Santa Cruz Small Craft Harbor on the west, county streets and residences on the north, Setzer Point on the east, and the Pacific Ocean on the south. It is entirely within Santa Cruz County.

An existing restroom is located on the beach near Seventh Avenue and East Cliff Drive. Also at this location is a sewer pump station maintained and operated by Santa Cruz County. Parking now occurs along the shoulders of East Cliff Drive between the harbor entrance and Schwan's Lagoon. A state-owned parking lot once existed on the beach at the mouth of the lagoon, but was destroyed by flooding and storm wave action. No other parking has been developed on state-owned property. A portable lifeguard tower is also on this beach.

#### Schwan's Lagoon and Upland (Peninsula)

This freshwater lake has 11,200 lineal feet of water frontage and about 14 acres of upland (peninsula) property. The upland portion is relatively flat with grassy meadow areas, mature native oaks, pine, and eucalyptus trees, and is bordered by the Southern Pacific Railroad tracks on the north and county-owned property and a residential neighborhood on the east. The entire lagoon is in the county.

No legal access is currently provided to the upland portion of this state property. Random trails and dirt roads enter the site from Seventeenth Avenue through the county parcel or across the railroad right-of-way.

Pedestrian access to Schwan's Lagoon is from the upland portion and at the end of county streets. The shoreline property on the western side of the lake is steep and heavily vegetated, making access difficult. The narrow strip of state property between the shoreline and private residences on the east side of the lake is relatively flat and varies in appearance and use. Some residences have trespassed onto this shoreline, creating extended backyard lawn areas and boat docks. Eucalyptus trees and exotic shrubs dominate most areas. There are random footpaths through this area, as well as a county sewer line easement.

#### Fourteenth Avenue Beach and Bonita Lagoon

Located at the end of Fourteenth Avenue, a two-acre parcel includes 1,000 lineal feet of narrow beach and Bonita Lagoon. Fifteen-foot cliffs topped by residences are to the north. Setzer Point is the western boundary and Black Point is the eastern demarcation. The county sewer line extends through this site. This beach lies entirely within the Live Oak area in Santa Cruz County.

State beach property begins near the end of Fourteenth Avenue at a locked pedestrian gate, restricting unauthorized vehicle entry to the beach. The roadway continues beyond the gate, providing access to an employee residence and private property. Beach patrol vehicles can enter the beach at this gate.

Existing facilities are limited to portable toilets, trash cans, and fire rings. No off-street parking is provided. Santa Cruz County has initiated a parking permit program for managing on-street parking in the Live Oak area, allowing visitors to park in available spaces on the street and walk to the beach without affecting residential parking.

### Bonita Lagoon

Bonita Lagoon, an undeveloped area, has undergone significant environmental change over time. Bonita Lagoon was once a larger brackish water lagoon that has been managed and regulated for the last 50 years through controlled drainage and the stabilization of its sand berm. The lagoon basin and the immediate surrounding area are within both public and private land ownership.

Coastline development and ocean dynamics have had significant impacts on the lagoon and the berm. Both channelization of the San Lorenzo River and construction of the harbor jetties upcoast have affected its littoral sand movement and beach replenishment. Continued urban development of the watershed inland of this lagoon also affects the lagoon's water quality and inflow.

Wave action during recent storms has reduced the size of the berm and filled a large portion of the lagoon basin with sand and debris. This substantially changes the esthetic value of the cove and has increased community interest in restoring the lagoon to conditions similar to those that existed over the last 50 years.

At present, visitors use this area for limited recreation, such as birdwatching and volleyball.

### Fourteenth Avenue Maintenance Area

This service area is located immediately east of Schwan's Lagoon on Fourteenth Avenue, one quarter mile north of the beach. Existing facilities include a lifeguard headquarters building, maintenance storage yard, and two employee residences on adjacent parcels. There is a third, undeveloped, parcel next to the residences. Surrounding land use is mostly multifamily residential. This area lies entirely within Santa Cruz County.

### Proposed Land Use and Facilities

#### Seabright Beach

Existing parking lots developed by the city along East Cliff Drive and parking on nearby streets and at the harbor will continue to serve beach visitors. The department should continue to coordinate efforts with the City of Santa Cruz, the Santa Cruz Port District, and local recreation providers to promote the planning, development, and management of public parking and expansion of public transit systems to Santa Cruz area beaches.

Beach access will continue from existing locations at the harbor west jetty, the Third Avenue stairway, and Cypress Avenue, which will continue to serve as the main access point to Seabright Beach. The department should continue to coordinate with local community efforts to enhance the streetscape and improve vehicle and pedestrian accessways. A landscape improvement plan should be prepared for this area that includes locations and design standards for outdoor furniture, signing, lighting, gates, bicycle racks, landscaping, and accessways.

The department should continue to monitor the erosion process occurring on San Lorenzo Point to ensure safe public access along the existing trail and overlook. Bluff fencing and signing shall be maintained. The land overlooking the San Lorenzo River should include appropriate landscaping, benches, and interpretive panels.

A second comfort station is proposed on the beach between Fourth Avenue and the west jetty to serve beach users. The rate of sand replenishment has substantially increased the beach width outwards to the end of the west jetty, which will provide greater protection from the action of storm waves on the bluff and these facilities.

In addition to the existing portable lifeguard towers, this plan proposes to construct a year-round lifeguard facility for beach observation, first aid, and public contact, and a communications command post. The preferred location for this facility is between the harbor and Fourth Avenue near the base of the bluff. The tower should be located and constructed with sufficient height so as to provide for beach surveillance from San Lorenzo Point to Setzer Point. This location should not obstruct coastal views.

#### East Beach (Seventh Avenue)

The sandy beach will be managed and operated for continued beach activities.

The department shall investigate the feasibility of sand replenishment at Twin Lakes State Beach in concert with the appropriate deposition of dredged material from the small craft harbor.

The existing combination restroom and shower building will be rehabilitated. Portable lifeguard towers, fire rings, and bicycle parking will be provided for public safety and convenience.

Beach access from East Cliff Drive will be improved for visitors and maintenance, lifeguard, and emergency vehicles. Visitor parking should be eliminated along East Cliff Drive from Seventh Avenue to Schwan's Lagoon to facilitate safer pedestrian and vehicle traffic movements. County parking and traffic studies should include appropriate long-range plans for this immediate area.

The department should coordinate with Santa Cruz County in planning and development efforts to improve roadside parking and bicycle and pedestrian traffic-ways along East Cliff Drive between the Santa Cruz Small Craft Harbor and Seventh Avenue. Parking and bike lanes could be developed by reclaiming the original road right-of-way. A new concrete retaining wall, sidewalk, and steps to the beach shall be constructed. Project feasibility will require further engineering cost analysis and right-of-way investigations.

Additional measures to improve vehicle circulation may include removing the traffic islands and related signs at the intersections of Ninth and Eighth avenues with East Cliff Drive. These intersections should be redesigned to better serve pedestrians and to include a regional bus stop.

### Schwan's Lagoon and Upland (Peninsula)

The management of Schwan's Lagoon as a freshwater lake will continue to provide natural, esthetic, and recreational benefits for the public. A lagoon management and operations plan will be developed. This plan will effectively guide the appropriate use of shoreline properties and establish priorities for natural resource management and protection.

Because the upland (peninsula) is recognized for its natural characteristics and quality open space, it will be managed and developed for low-intensity recreation by providing nature trails and informal picnic tables.

New support facilities, such as parking and restrooms, should be located near the railroad tracks, adjacent to or on county-owned property zoned for park use. The Santa Cruz County General Plan designated county property adjacent to the Schwan's Lagoon peninsula for future neighborhood/community park development. The department should coordinate with the county for future park access and facility development to serve increasing visitor use and local recreational needs in this area.

The following guidelines are established for development and use of the area surrounding Schwan's Lagoon:

- Public access on the upland should be developed to the edge of the lagoon for nature observation and boat use and fishing where appropriate. This may include boardwalks, a dock or observation deck, and nature trails.
- Existing trails should be maintained and improved to provide easy access through the upland for nature walks.
- New trails may be considered for connecting the upland with future county parks, local trails, and the beach.
- An open air interpretive structure will be provided, with panels for interpretation of the area's natural values. Benches should be included to provide gathering places for guided tours. (See Interpretive Element.)
- Existing private docks on the periphery of the lagoon shall meet state park safety standards and should continue to provide community access to the lagoon, or be removed.

### Fourteenth Avenue Beach

Beach access will continue at Fourteenth Avenue, and improved restrooms, picnic sites, a beach ramp, and stairway will be provided. No public parking will be developed.

Design improvements will enhance the appearance of the entrance and improve circulation for maintenance and emergency vehicles and vehicles at private residences. Landscaping should better define public use areas and pedestrian circulation to the beach, picnic area, and Bonita Lagoon.

A combination restroom and shower building is proposed near the employee residence to serve the beach and the picnic sites. The design and location should provide easy beach access, bicycle parking, partial screening by existing vegetation, and easy sewer hookups.

Beach access will be provided by wooden steps from the restroom and by a concrete ramp designed to accommodate beach patrol vehicles.

The area near the entrance will be landscaped to provide for up to 15 family picnic sites, including tables, barbecues, trash containers, and provisions for disabled persons. A natural buffer will be established between the day-use facilities and Bonita Lagoon. The buffer will be planted with native coastal dune vegetation to control erosion and enhance plant and wildlife habitats.

#### Bonita Lagoon

A management plan for Bonita Lagoon shall be developed that will require little or no operational obligation to implement. Goals may include the restoration of a brackish-water lagoon and stabilized sand dune, or seasonal recurrence of a coastal wetlands. The impacts of changing conditions are unknown and will require further study. No structural measures will be taken to establish or maintain Bonita Lagoon.

An interim management program is proposed, which will include a topographic survey, debris clean-up in the lagoon, and movement of sand to enhance the lagoon environment for passive recreational use. The rate of beach erosion and/or sand replenishment shall be recorded, and testing and monitoring of the quality and quantity of water entering the lagoon shall be done to assist the development of a management plan.

Off-site influences that could have negative environmental impacts on Bonita Lagoon will be closely monitored, such as water runoff from roads and parking lots and other surrounding land uses. Appropriate activities within the lagoon area include birdwatching, photography, and nature observation. Unit boundary and interpretive signing will be provided.

#### Fourteenth Avenue Maintenance Area

This area is not considered to be a desirable location for Schwan's Lagoon access or development of other day-use facilities to serve Schwan's Lagoon. The existing maintenance office, shop, and storage facility will continue to serve as the unit's operational center and district lifeguard headquarters. Adjacent to this area are an undeveloped parcel and two state-owned residences, which may continue to provide needed employee housing.

This area is easily accessible from Seventeenth Avenue and offers some potential for public parking facilities. If additional lands were made available for maintenance facilities, then future land use considerations of this area may include beach shuttle parking in conjunction with county transportation studies.

# INTERPRETIVE ELEMENT

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TWIN LAKES  
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## INTERPRETIVE ELEMENT

### Interpretive Considerations

Twin Lakes State Beach is primarily a recreation beach. Very little, if any, interpretation occurs there at this time. The unit's primary interpretive opportunity is Schwan's Lagoon. The wide variety of aquatic birds that use the lagoon as a temporary or permanent residence makes it a popular birdwatching area.

An interpretive opportunity is also available at San Lorenzo Point, on the western end of Seabright Beach. This point has a fenced trail along the top, offering excellent views up and down the coast from the tip of the point.

### Interpretive Period

The department will interpret the flow of history at Twin Lakes State Beach from geologic times to the present.

### Interpretive Themes

Several themes are appropriate for interpretation at Twin Lakes State Beach. These themes cover both the natural and cultural history of the beach and its present condition. The themes are as follows:

- Waves of change, streams of destruction
- A bill for every purpose
- Staying safe at the beach
- The quiet life of a fishbowl
- A stopping place for winged tourists
- A home for displaced birds
- Twin Lakes Resort, then and now
- A plentiful buffet
- Once major oaks: where did they go?

### Expanded Themes

Waves of change, streams of destruction: The sand of Twin Lakes State Beach comes from erosion of the cliffs and from the San Lorenzo River. The sediments washed downstream by rivers are transported north and south by ocean waves and currents to build up the beach in the spring and summer. The same currents and waves also erode the sand during winter storms and heavy surf, making the beach narrower and steeper. The jetties at the entrance to the Santa Cruz Small Craft Harbor adjacent to Twin Lakes State Beach block the downcoast movement of sand, causing the beach to build up on the upcoast jetty and feed sand into the harbor entrance. This interference with the natural sand transport system makes constant dredging necessary to keep the harbor entrance open.

A bill for every purpose: The shorebirds that visit Twin Lakes State Beach come to feed, rest, and breed. A greater understanding of the kinds of foods these birds eat can be gained by observing their bills and where these birds are feeding. Those with long bills probe deep into the sand for the small

creatures who live there. Those with short bills peck through the windrows of kelp and along the edges of the waves for crustaceans and marine worms. The birds also follow their food as it moves up and down the shore with the tides.

Staying safe at the beach: Twin Lakes State Beach is a popular recreation beach. Wind surfing, swimming, and other ocean-oriented sports occur here. But the seemingly quiet waters of the ocean off Twin Lakes State Beach hide rip currents and undertows that can turn a day at the beach into a tragedy.

The quiet life of a fishbowl: Schwan's Lagoon is a freshwater lake, separated from the saltwater of the ocean by a road, a weir, and several yards of beach. The lack of salinity enables seven freshwater fish species to thrive in the lagoon, including goldfish, brown bullhead, golden shiner, largemouth bass, mosquitofish, bluegill, and prickly sculpin. All these fish, except the prickly sculpin, are introduced species and would not normally live in the lagoon if it were not separated from the sea. Anglers, who are often seen on the shores of the lagoon, should be made aware that the fish they catch may be contaminated with urban runoff containing chemicals like cadmium, chromium, and oil.

A stopping place for winged tourists: The freshwater expanse of Schwan's Lagoon is a stopping place for several migrating birds, such as herring and Bonaparte's gulls, common snipe, and double-crested cormorants. These birds move north in the late winter and early spring to nest and raise their young. Each fall they return to the Santa Cruz area to rest in a warmer climate.

A home for displaced birds: Visitors to Schwan's Lagoon can see large numbers of domesticated ducks and geese. These birds have been abandoned at the lagoon, or have found their way there on their own. Some of the birds are cross-breeds of different species of ducks and geese. The birds are somewhat adapted to life in the wild, but are frequently seen begging for handouts from soft-hearted tourists. The birds can become quite aggressive if the visitors feeding them run out of food, and visitors are advised not to get too close to them. Domestic waterfowl can transmit diseases such as avian cholera to wild birds.

Twin Lakes Resort, then and now: Twin Lakes Resort was established in the late 1800s by the Baptist Church. The property for the resort was donated by Jacob Schwan and J. C. Kimble. Reaching Twin Lakes from Santa Cruz by the East Santa Cruz Street Railroad, beach-goers could find the Surf Hotel and other businesses at the beach. Lots could be purchased in 40 by 80-foot dimensions, and were developed with both tents and cottages. During the summer, families would travel here to get away from the heat of inland valleys. The beaches were dotted with people enjoying the surf and the sun, much as they are today.

A plentiful buffet: Before settlers came to California, the Ohlone people lived in this part of the state. No major villages were located at Twin Lakes, but the area was used for gathering food. The stand of oaks at the northern end of Schwan's Lagoon is a remnant of a once extensive live oak forest. The acorns of the coast live oak were a staple food of the Ohlone. Another important food found at Twin Lakes was mussels. The unit's only Native American archeological site, above the mouth of the San Lorenzo River, contains mussel shells as well as bone and chipping fragments from stone tools. Apparently, Twin Lakes was a gathering and processing site.

Once major oaks: where did they go?: On the northern end and the west-facing bank of Schwan's Lagoon is a remnant of a coast live oak forest. This native plant community was once much more prevalent on the central California coast, but has given way to urban and rural development. The oaks at Schwan's Lagoon are surrounded by urban development and are threatened by nonnative plants such as eucalyptus and broom. The department's policy is to protect native plants.

### Proposed Interpretation

#### Facilities and Media

The relatively natural appearance of Schwan's Lagoon and its supporting role for the avian population make it the primary interpretive opportunity at Twin Lakes State Beach. The upland (peninsula) at the northern end of the lagoon is a popular nature observation area. A nature trail on the peninsula is proposed as the best way to bring visitors closer to nature. A birdwatching platform is also proposed there. If feasible, the platform should be designed to be partially over the water to give birdwatchers a better view.

An open-air interpretive facility is also proposed for the peninsula. This would be a grouping of exhibit shelters (1-, 2, or 4-sided) with panels interpreting the themes relevant to this part of the unit. Benches will give visitors a place to rest and enjoy the scenery, and will provide a gathering place for nature talks and walks.

Interpretive panels are proposed for San Lorenzo Point. The view from this point encompasses the themes concerning shorebirds, beach safety, sand transport, and the historic use of Twin Lakes beach. Interpretation of erosion and the formation of natural bridges would also be appropriate because of the wave action on the sides of the point.

#### Visitor Activities

A Junior Lifeguard program should be established at Twin Lakes State Beach. Nature walks along the beach and around Schwan's Lagoon are also proposed.

#### Interpretive Concessions

No interpretive concessions are present at Twin Lakes State Beach (see Concessions Element).

#### Interpretive Associations

The Monterey Bay Natural Historical Association should expand its membership and services to include Twin Lakes State Beach. The services of these docents would be most applicable to nature walks along the beach and in the Schwan's Lagoon area.

#### Interpretive Collections

There are no interpretive collections associated with this unit at this time, nor are any proposed.

### Research Needs

Further research is needed into the condition of the oak forest at the northern end of Schwan's Lagoon.

### Future Acquisitions

No future acquisitions of an interpretive nature are proposed.

### Interpretive Priorities

1. Establish a Junior Lifeguard program.
2. Expand the Monterey Bay Natural Historical Association to include docents wanting to work at Twin Lakes State Beach.
3. Conduct nature walks along the beach and in the area of Schwan's Lagoon.
4. Install interpretive panels at San Lorenzo Point.
5. Install open-air interpretive facility at the northern end of Schwan's Lagoon.
6. Install nature trail on the Schwan's Lagoon peninsula.

# CONCESSIONS ELEMENT

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## CONCESSIONS ELEMENT

The purpose of a Concessions Element is to evaluate existing and potential concessions in accordance with the Public Resources Code, Section 5080.03 et seq., and unit classification.

The Public Resources Code, Section 5080.03(c), states:

"With respect to any unit of the State Park System for which a general development plan has been approved by the commission, any proposed concession at that unit shall be compatible with that plan."

### Objectives

The objectives of a Concessions Element are:

- To examine previous or existing concessions within a unit.
- To examine current and future visitor needs for concession services.
- To examine unit needs for any development, services, and the like that may be included in a concession contract.
- To recommend appropriate concessions for a unit in accordance with the Public Resources Code, Park and Recreation Commission policy, and findings presented in other elements of the general plan.
- To examine a concession's relationship with cooperating associations, docent groups, and any other nonprofit organizations affiliated with the unit.

The Concessions Element is a guide to assist in the development of concessions within State Park System units. The Concessions Element should provide direction on the appropriateness of a concession within a specified unit and assure consistent management practices.

The intent of a concession is to provide the public with goods, services, or facilities, for a specified period of time, that the department cannot provide as conveniently or efficiently. Concessions should not create an added financial burden and, whenever possible, should reduce costs and/or generate revenues to aid in the maintenance of the State Park System. Concessions shall not be entered into solely for their revenue-producing potential.

### Analysis

A Concessions Element is divided into the following parts: Concession History, describing previous concessions at the unit; Current Concession Services and Facilities, describing terms and services provided under existing contracts; and Concession Recommendations, both short- and long-term.

### Concession History

Food service has been provided at Twin Lakes State Beach since 1982. Service has been seasonal (approximately April through October), using mobile food units located at Seabright Cove and occasionally at Seventh Avenue.

### Current Concession Services and Facilities

A concession contract has been let for five years, beginning April 1, 1988. The contract requires a mobile food unit at Seabright Cove and/or Seventh Avenue, Palm Sunday through the second weekend in October. The concessionaire will provide food, sundries, and beach equipment.

### Concession Recommendations

It is recommended that services stipulated by the existing concession contract continue to be provided. At this time the services adequately fulfill the needs of unit visitors.

It is not possible at this time to predict all potential concession activities suitable for Twin Lakes State Beach. Specific concession proposals will be studied on a case-by-case basis for feasibility and appropriateness.

# OPERATIONS ELEMENT

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## OPERATIONS ELEMENT

### Existing Operations Summary

Twin Lakes State Beach is operated as part of the Pajaro Coast District and managed by the district superintendent, the chief ranger, and the maintenance chief. Administrative services are provided from the district office located in Aptos. Visitor, aquatic, and maintenance services are provided daily by assigned district staff.

#### Maintenance

The unit is currently maintained by the Pajaro Coast District maintenance staff. The staff functions districtwide and is coordinated under two divisions: housekeeping and maintenance.

Shop: Until recently, seasonal and permanent staff used the Fourteenth Avenue yard as a shop and equipment storage area. The shop has been converted to a lifeguard headquarters; however, the yard area is still used for equipment and materials storage.

Sand Sifting: In past years, the Twin Lakes beaches were sifted by heavy equipment many times during the year. Recently this has been reduced to once before school is out in the spring (to get rid of winter debris) and once in the fall (to get rid of visitor refuse).

Restrooms: Seabright Beach has a very modern 11-stall unisex restroom (10 regular and one disabled-access) with outside, cold water showers. This restroom is often used beyond its capacity throughout the summer season.

Twin Lakes East Beach has a conventional men/women restroom with outside, cold water showers. Fourteenth Avenue Beach has two chemical toilets, and Schwan's Lagoon has no restroom facilities. Due to vandalism and after-hours activity, the restrooms are closed each night until the next day's opening by ranger staff.

Restroom cleanup is handled by seasonal staff, while permanent staff maintains and repairs the buildings.

Trash Collection: Seasonal maintenance staff aided by county work release and sheriff rehab persons provide garbage collection and beach cleanup. These activities are conducted in the early morning before beach crowds make it impossible.

Garbage cans are removed from the beach each winter to avoid losing them to high tides and storm waves. Few garbage cans are in place when the first hot weather arrives, which is a major reason why trash is left on the beach.

Fire Rings: In recent years, very few functional fire rings were in place on the unit's beaches. As a result, many fires were built directly on the sand, leaving hot coals to burn visitors' feet. This last year a concentrated effort by the entire district staff has resulted in the replacement of numerous fire rings. Without frequent cleaning, the rings will fill up and be unusable, and visitors would again build fires on the sand.

Schwan's Lagoon: A dirt road access in the upland, along the Southern Pacific Railroad tracks to a perimeter fire trail, requires annual clearing. The road and trail become overgrown with vines, poison oak, and brush, which makes access difficult. During the winter months, water from the local community runs off, causing channels to form across the road and making it impassable until heavy equipment can correct the situation.

### Law Enforcement

Twin Lakes State Beach has serious law enforcement problems. It is an extremely popular unit during the summer months and any other good weather periods, drawing more than one million visitors a year. It is considered by many youthful visitors as "the spot" for spring break parties (a period of up to three weeks). Up to and including 1987, this unit was the scene of many riots as well as several deaths. Following the 1987 spring break, the district issued an alcohol ban on the Seabright Beach portion within the city limits. In 1988, these problems were minimized; however, past offenders are using new techniques to circumvent the alcohol ban.

Fourteenth Avenue Beach had long been used by underage drinkers and for overnight parties until the department took over its management. It still draws a large group that violates the alcohol and camping restrictions. Trespassing on private property creates additional law enforcement problems in the area.

Some visitors to Schwan's Lagoon have been subject to assault, robbery, and indecent exposure. The area has also developed a reputation as a transient sleeping area.

Illegal camping creates trash and sanitation violations, as well as increased fire danger from illegal ground fires. Many of these campers also have been involved in illegal drug transactions and even cultivation.

Another major problem for all area beach units is loose dogs, which create a variety of problems including biting visitors and disturbing wildlife. Park rangers and lifeguards capture hundreds of stray dogs each year and issue many citations to owners.

### Visitor and Aquatic Safety

The beach is the main visitor attraction, with aquatic activities including swimming, surfing, wind surfing, body boarding, kayaking, skin/scuba diving, fishing, and boating. Many of these activities have become much more popular in recent years.

Sections of ocean beach upcoast and downcoast from the Santa Cruz Small Craft Harbor have surf that breaks close to shore in shallow water, which routinely produces flash (short) rip currents. In addition, continuous rip currents can be found at the San Lorenzo River outflow, the upcoast side of the harbor jetty, and south at Black's Point. Black's Point has long been a surfing take-off point. Occasionally surfers enter the water by jumping off the point into shallow water, causing injuries.

Lifeguard and ranger staff contact many visitors about safety concerns and respond to general information requests. Even then, water safety incidents at the beach continue to be numerous. The district's lifeguard staff conducts hundreds of rescues each year and responds to many water sports injuries. However, most safety-related problems at Twin Lakes State Beach are alcohol-related.

The placement of additional fire rings has helped to reduce burns. A ban on glass containers, introduced in 1987 and heavily enforced, has reduced the number of cut feet dramatically.

The fenced cliff area above Seabright Beach, from the beach entrance to San Lorenzo Point, attracts climbing. Visitors easily hop the fence and find it a challenge to climb up or down the bluff. In addition, both visitors and unit staff on the beach have had bottles and rocks thrown down on them from the cliffs above. In the middle of Seabright Beach is a sandstone rock known as "The Pinnacle," which is also a natural attraction for climbers. Unit staff find it difficult to restrict climbing.

Visitors at the downcoast section of beach are affected by heavy, year-round boat traffic in and out of the Santa Cruz Small Craft Harbor. The harbor entrance configuration requires vessels to parallel the swimming beach when entering or exiting the harbor. Any miscalculation or vessel failure presents an immediate threat to all visitors in the water.

The annual harbor dredging operation has also been an ongoing safety concern. Black sludge has been pumped from the harbor mouth through a pipe onto East Beach. This deposit is noxious-smelling and causes a large area of extremely fine slurry sand, much like quicksand. The pipe occasionally limits four-wheel driving in the area and blocks emergency vehicles.

### Lifeguard Service

Lifeguard service at this unit is seasonal and part time. Staff are assigned on a districtwide schedule. Currently, five lifeguard towers and one lifeguard vehicle are staffed primarily in summer months with reduced staff coverage during the middle of the week.

Emergency vehicle response time from one section of beach to the other can be delayed due to traffic, especially on weekends and holidays.

Lifeguard response to Schwan's Lagoon is on an on-call basis. If future developments at Schwan's Lagoon include aquatic activity, an increase in aquatic staff will be necessary to provide proper public safety measures.

### Special Considerations

Jurisdictions: Twin Lakes State Beach lies within two political jurisdictions. The Seabright Beach portion of the unit lies entirely within the City of Santa Cruz. The remaining areas of the unit are within the jurisdiction of the County of Santa Cruz. Planning of activities, projects, development, and law enforcement should be carefully coordinated with appropriate city or county departments to assure that their concerns are addressed to avoid potential misunderstandings and conflicts.

The unit lies within a heavily visited seaside resort community. This unit serves the local community as well as the San Jose metropolitan area. Traffic patterns around the unit are notoriously gridlocked on all summer days and warm winter weekends. This mechanical isolation of the unit has caused delayed responses by emergency personnel.

Adjacent Amusement Park: The Santa Cruz Beach Boardwalk Amusement Park is on the upcoast side of San Lorenzo Point and River from Seabright Beach. An arch through the point permits the free flow of persons back and forth from the city beach boardwalk to the state beach. Special coordination with the city will be needed to assure proper enforcement of state regulations.

Parking: This unit has no state-operated parking areas and visitors park on adjacent city or county streets. On busy days, parking is unavailable except at long distances from the beaches. The parking situation has a negative impact on the local communities. At East Beach, a county parking permit process, started in 1986, has improved this situation but has not totally resolved the parking problem. The harbor also affects beach visitation and the parking situation.

Schwan's Lagoon: Although surrounded by busy community activities, this remote, quiet area provides an escape from the stresses of daily life for visitors. This area, with its law enforcement problems and potential safety hazards, requires special operational considerations.

The Sandy Beach: The yearly ebb and flow of beach sand and the powerful winter surf covers roadways, damages facilities, and occasionally litters the beach with thousands of driftwood logs, creating visitor safety hazards.

Junior Lifeguard Program: In 1987, a Junior Lifeguard program was established at Twin Lakes State Beach. The program is a joint operation of the district's lifeguard staff and the Monterey Bay Natural Historical Association. The lifeguards provide trained staff to plan and implement the program, while the association provides funds for staff time and equipment. The program generates funds by charging participants a set fee, which has recouped initial start-up costs. The program has had a positive public relations effect.

#### Operational Goals and Implementation

It is the declared purpose of the department to provide the protection that is appropriate and necessary to maintain visitor safety and perpetuate features and resource values at Twin Lakes State Beach. Unit staff may encourage present day-use activities as long as they do not compromise natural resources and visitor safety.

As long as special programs and events also do not compromise the unit's resources and visitor safety, they should be encouraged by the district. Recreational activities sponsored by individuals, groups, or organizations may be considered by special-event permit. The unit's sensitive natural resource areas will receive special care and consideration when any activity is conducted within them. Proposed activities and development within these areas will be described in writing, reviewed by the district superintendent, and forwarded for reviews if required by the California Environmental Quality Act.

## Maintenance

Facility maintenance and housekeeping practices will meet standards for public health and safety, maintain public and departmental expectations for cleanliness and appearances, and meet security requirements.

Additional staff and equipment will be needed to increase beach cleaning (sand-sifting) in order to maintain a clean, hazard-free environment for visitors. Additional fire rings and their frequent cleaning will be given high priority by the district. Debris deposited by winter storms will require removal as soon as possible.

Trail and road maintenance should be performed on a regular schedule in the Schwan's Lagoon upland area to provide safe and convenient access to this portion of the unit.

## Law Enforcement

State park peace officers receive law enforcement assistance from the Santa Cruz Police Department and the Santa Cruz County Sheriff's Office, in turn providing assistance to the police department and sheriff's office in apprehending suspects and in cliff and surf rescues.

The serious law enforcement problem at this unit (including drug and alcohol-related crimes, thefts, vandalism, aggravated assaults, sexual assaults, disturbing the peace, riots, and assaults on peace officers) indicate that a high-profile law enforcement presence is currently the appropriate level of response. If present patterns continue, increased law enforcement staffing and associated equipment will be needed to provide adequate levels of public and resource protection. Should visitor use patterns change decidedly, the level of response may need to be reviewed by the district superintendent and modified. Regular patrols will be performed to establish a law enforcement presence, prevent crime, and apprehend violators.

A crime prevention program may be required to reduce alcohol and drug use, fights, vandalism, assaults, and other adverse activities affecting visitor security and the integrity of unit resources and facilities. This program could be fashioned on the current department program or modified to meet specific unit needs. These modifications could include the continuance and possible expansion of the newly imposed alcohol ban and the continuance of the no glass container ordinances. Such a program should be pro-active and include the anticipation, recognition, and appraisal of crime risks with the initiation of action to prevent or reduce them. Citizen education and participation will be essential to this crime prevention program. The objective will be to educate and guide the citizen toward preventive action.

Specialized training and equipment will be considered to ensure officer safety.

## Visitor and Aquatic Safety

The unit's geographical makeup, combined with increased use and visitation, makes increased aquatic safety coverage necessary.

Lifeguard service could be increased and extended year-round. At least two additional lifeguard towers, one each at Seabright and East beaches, will be necessary.

A lifeguard headquarters is proposed for coordinating the aquatic program. It will improve communications, provide a first aid station, and house equipment, as well as provide coverage during early and late hours and in the off-season.

Current visitation and rescue operations require a rescue boat for this unit, as well as for other units in this district. The rescue boat could be moored in the Santa Cruz Small Craft Harbor for quick and immediate response.

#### Additional Staffing and Equipment Needs

Lifeguard Vehicles: Two emergency vehicles are needed to minimize response time for this unit due to its geographical makeup and traffic congestion. Each lifeguard vehicle would require staffing by two employees to ensure safe vehicle operation as well as proper coverage and backup. A typical period of operation may be eight hours per day, weekends and holidays, March through May and September and October.

Permanent Staff: A full-time Lifeguard Supervisor I along with a permanent lifeguard will be needed for this unit to maintain year-round coverage.

Seasonal Staff: The lifeguard headquarters will require lifeguard staffing weekends and holidays, March through May and September and October. June through Labor Day staffing will typically be seven days per week. Each portable lifeguard tower will be staffed daily on weekends and holidays, March through May and September and October. June through Labor Day staffing will be provided seven days per week.

As public visitation and aquatic recreation increases at this unit, proportionate aquatic staffing and equipment changes can be implemented to ensure public safety at the beach.

#### Resource Management

Vegetation: The operations staff will be responsible for removing nonnative plants and for revegetation with native plants. Tree hazard control will also be necessary.

Schwan's Lagoon: This area will be managed to ensure the protection of its unique features. Visitor impact in terms of the number of visitors and use patterns will be monitored and controlled by the unit's staff. A fire management program could be established to reduce the risk of wildfire. The maintenance of trails and roads will be part of the program.

The fishery at Schwan's Lagoon has very limited potential for public recreation. A fishing program may be considered to improve this urban fishery.

Vector Control: Unit staff will remove and control cats and dogs and feral ducks and geese that endanger native wildlife and visitors. Native animal populations that endanger the unit's resources or visitors will also be controlled, using established wildlife management practices.

## Volunteerism

A docent program under the management of the Monterey Bay Natural Historical Association will be considered and initiated if appropriate. Volunteers could conduct guided walks and give presentations to various user groups. Interpretive displays could be maintained by volunteers. The Monterey Bay Natural Historical Association should be encouraged to maintain its involvement with the district's Junior Lifeguard program and any other appropriate program.

Many other volunteer projects could be accomplished by this organization, such as native plant revegetation, fishery management, trail clearing and maintenance, and fence building.

**ENVIRONMENTAL  
IMPACT  
ELEMENT**

---

**TWIN LAKES  
STATE BEACH**

**GENERAL  
PLAN**



## ENVIRONMENTAL IMPACT ELEMENT

The Twin Lakes State Beach General Plan, with all its elements, constitutes an environmental impact report (EIR) as required by state law (Public Resources Code Sections 5002.2 and 21000 et seq.). This Environmental Impact Element discusses the topics usually discussed in an EIR.

When a point has been adequately discussed in another element of the general plan, it is covered in this element by a reference to that discussion to avoid redundancy.

### Summary

Following are the major environmental effects that will result from implementation of this project, and the major mitigation measures that will reduce or eliminate those environmental effects.

In general, the proposed project will benefit the unit's environment and improve facilities for the public.

### Project Description

The Resource Element, the Land Use and Facilities Element, the Interpretive Element, and the Operations Element propose how the unit will be used, how resources will be protected, and what facilities will be constructed.

### Description of the Environmental Setting

Please refer to the Resource Element for a description of the natural and cultural environment of this state beach. The Land Use and Facilities Element and other elements also describe the existing natural environment and human influences on the environment.

In addition to those descriptions of the local environmental setting, the following have been added.

#### Air Quality

Air quality along the Monterey Bay coast is generally good because of the influx of clean air off the Pacific Ocean. The Salinas II Monitoring Station records in 1985 indicate that gaseous and particulate pollutants were below state and national standards. Records at other Central Coast monitoring stations substantiated these findings, but their records were less complete. However, the Monterey Bay Unified Air Pollution District is currently not attaining the standard for ozone.

#### Circulation

Road access to various sections of Twin Lakes State Beach is by East Cliff Drive and several other streets in the County and City of Santa Cruz (see the Land Use and Facilities Element). Schwan's Lagoon and Bonita Lagoon and much of the beach are in the county. The Seabright Beach area is within the City of Santa Cruz. Parking is in city lots and on residential streets. Access to the beach is by staircases down cliffs.

## Public Services

Water, sewer, telephone, and electric service are provided to this unit. Restrooms are connected to the city and county sewer system. Portable restrooms are also used.

(See the Operations Element for existing safety, law enforcement, and aquatic safety procedures, and personnel responsibilities and capabilities.)

## Significant Environmental Effects of the Proposed Project

Most of the proposals described in the Land Use and Facilities Element and the Resource Element will ameliorate existing adverse conditions at the state beach. The following discusses several possible significant effects to the environment that may be caused by the project.

Soils and Geology: There could be disturbances to soils in the Schwan's Lagoon and Bonita Lagoon areas. Proposed improvements for parking and buildings, and construction of other facilities and trails, could disturb or denude soil.

Along the cliffs and beach, soils and geological and paleontological resources have been disturbed by past visitation and natural processes. Wave action and harbor development have affected the state beach (see Resource Element). Proposed developments along the beach could affect soils and sand, especially during construction.

Energy: Construction equipment used for the project will use energy; this will be a short-term effect. Long-term energy use will involve maintenance work, emergency and patrol vehicles, and the use of motor vehicles by the public.

Vegetation and Wildlife: The area is rich in wildlife. The state-listed (threatened) Guadalupe fur seal may venture near the beach, and the federally listed (threatened) southern sea otter has been seen offshore. Some native vegetation and wildlife could be minimally affected by proposed project construction and, intentionally or unintentionally, by the public. No rare or endangered plants are present at this unit. The proposed general plan will protect and enhance both Schwan's and Bonita lagoons.

Esthetics: The beach and the two lagoons are scenic but many of the beach structures and nearby development are not. The proposed project will improve esthetics as well as other conditions. (See further discussion under Mitigation Measures, below.)

Traffic Circulation: The streets in the vicinity of the state beach are congested. By eliminating some street parking along East Cliff Drive at Seventh Avenue, traffic flow should improve. Parking for the beach will continue to be a problem.

Visitor Safety: New visitors may not be aware of certain hazards that exist for the unwary recreationist, including ocean and surf hazards (riptides, high tides, and unexpected high waves) and conditions at the lagoons. Winter storms and rare tsunami (seismic sea wave) conditions are especially dangerous. There are also hazards on the cliffs and rocks (see the Operations Element). The jetties and breakwater around the harbor can be hazardous for swimmers and boaters.

## Mitigation Measures

Please refer to the Resource Element for the resource management policies to protect the natural and cultural resources at this unit. Several mitigation measures are specified here.

Soils and Geology: Proposed development of stairs and trails to the beach and of trails through the Schwan's Lagoon upland will be designed so that water runoff will not erode soils. Design features such as water bars, boardwalks, and landscaping with native vegetation will help prevent soil erosion.

Signs will be posted to warn people to stay off cliffs and other fragile sites.

Beach erosion is a regional and statewide problem. The department will work with the U.S. Army Corps of Engineers and other agencies to find long-range solutions (see Resource Element policies).

Energy: Use of construction machinery will be minimized to conserve energy.

Vegetation and Wildlife: Resource Element policies for plants and animals will be followed. Site-specific plant surveys will be made prior to developing trails and facilities. Based on these surveys, facilities and trails will be sited so that all sensitive resources are avoided.

The marked trails near Schwan's Lagoon will help protect vegetation and wildlife. Interpretive displays will also educate the public and make them more aware of the biota of this state beach and its abundant wildlife.

Esthetics: The general plan will improve esthetics. This would include cleanup at Bonita Lagoon. New facilities will be designed so as not to block neighbors' views. Landscaping, with an emphasis on native vegetation and rehabilitation of landscape scars in heavy-use areas, will improve existing scenery.

Traffic Circulation: Improved circulation will result from proposed measures in the Land Use and Facilities Element. Further traffic studies and coordination with the City and County of Santa Cruz should help solve some current traffic and parking problems.

Visitor Safety: Unit personnel, with backup from the city, will help visitors needing emergency assistance. Additional lifeguard towers will be placed on the beach for surveillance, public information, first aid, and rescue. Signs warning visitors about surf conditions and if there is no lifeguard on duty will be prominently displayed.

Interpretive displays and unit personnel will assist the public with safety-related information.

### Any Significant Environmental Effects That Cannot Be Avoided if the Proposal is Implemented

Most environmental problems can be effectively mitigated, as described in this plan. Existing traffic on peak days will be one problem that will require further attention at the local level. However, the proposals in the general plan would not significantly increase unit attendance and traffic.

### Alternatives to Proposed Project

The preferred alternative is described in this plan. The "No Project" alternative was also assessed. All the existing problems described in this plan would probably be worsened by this alternative.

Other alternatives were studied that differ from the proposed alternative and the "No Project" alternative. For example, the proposed permanent lifeguard tower may be scaled down or put at various locations along the beach. Another possible alternative would be to reestablish Schwan's Lagoon and Bonita Lagoon as brackish coastal lagoons. There are also several variations to proposed project plans. The present plan has some flexibility. Specific items within each proposal vary in design, construction, and management.

### The Relationship Between Local Short-Term Uses of the Environment and the Maintenance and Enhancement of Long-Term Productivity

The proposed short-term uses of the area will be similar to the present uses. The proposed project should be a long-term solution to the needs of the public for trails, beach access, improved maintenance, and visitor protection. In addition, the natural resources will be better protected.

### Any Significant Irreversible Environmental Changes if the Proposed Project Is Implemented

There would be the commitment of nonrenewable resources, such as oil and gasoline, to construct roads, parking areas, and other facilities.

### Growth-Inducing Impacts of the Proposed Project

Implementing the proposed plan would provide the needed maintenance and management of valuable natural resources and will satisfy existing recreation demand. Improvements will not have a significant effect on attracting new visitors and will not increase human population in the area. Therefore, none of the improvements proposed for Twin Lakes State Beach are considered growth-inducing.

COMMENTS AND RESPONSES

General Plans and Draft Environmental Elements

Twin Lakes State Beach

Natural Bridges State Beach

SCH #86011401

Review copies were provided to the following on June 29, 1988. The review period ended on August 12, 1988.

State Clearinghouse (10 copies)

The Honorable Sam Farr  
The Honorable Henry J. Mello  
U.S. Army Corps of Engineers  
U.S. Fish and Wildlife Service  
California Coastal Commission  
California State Lands Commission  
Association of Monterey Bay Area Governments  
Santa Cruz County Planning Department  
Santa Cruz County Parks Department  
Santa Cruz Port District  
City of Santa Cruz  
Santa Cruz City Museum  
Santa Cruz Transportation  
Santa Cruz Historical Society  
Santa Cruz County Hostel Society  
Seabright Homeowners' Association  
Sierra Club  
Point Reyes Bird Observatory  
California Native Plant Society  
Mr. Robert Lincoln  
Mr. Alan B. Simpkins  
Mr. Jim Thoits  
Mr. David Brockman  
Mr. R. Pat Smith

A notice announcing location of copies of documents for public review was published in the following newspaper:

Santa Cruz Sentinel

Documents were available at the following locations for public review:

Santa Cruz Public Library System  
Central Library  
224 Church Street  
Santa Cruz, CA 95060

Santa Cruz Public Library System  
Garfield Park Branch  
705 Woodrow Avenue  
Santa Cruz, CA 95060

Santa Cruz Public Library System  
Branciforte Library  
230 Gault Street  
Santa Cruz, CA 95060

Department of Parks and Recreation  
Central Coast Region Headquarters  
2211 Garden Road  
Monterey, CA 93940

Department of Parks and Recreation  
Pajaro Coast District Office  
7500 Soquel Drive  
Aptos, CA 95003

Comments were received from the following agencies, organizations, and individuals:

California Coastal Commission, Central Coast District  
County of Santa Cruz, Planning Department  
Sierra Club, Ventana Chapter, Santa Cruz Regional Group  
Mr. Alan B. Simpkins  
Mr. Harry J. Resoner

## RESPONSES TO COMMENTS

The responses below correspond to the numbers in the right margins of the five (5) letters of comments that were received for the two General Plans. In order to avoid confusion, the responses to comments are done separately for Twin Lakes and Natural Bridges State Beaches. The abbreviations T.L. or N.B. are used for Twin Lakes State Beach or Natural Bridges State Beach, respectively.

### NATURAL BRIDGES STATE BEACH

#### California Coastal Commission

1. N.B. - "The eucalyptus trees that are used for overwintering sites for the Monarch butterfly shall be preserved."

This policy statement is for all eucalyptus that are shown to serve the butterflies in the State Beach and not just those found within the Monarch Butterfly Natural Preserve. The Department will initiate a study to evaluate these trees that are used by the butterflies.

2. N.B. - Milkweed, the host plant for Monarch butterfly larvae does not exist here. Monarch butterflies use this area mainly for wintering. Revegetation with desirable native plants and selected flowering plant species that provide a nectar source or otherwise enhance the butterfly habitat will not be limited to the preserve.

3. N.B. - The Department is developing procedures to improve and coordinate the multitudes of permits, etc., required for various projects.

The Department will do a detailed environmental assessment prior to constructing new facilities in the unit. Resource ecologists in the Department will help assess the environmental impacts and will use guidelines such as "Guidelines for the Protection of Monarch Butterfly Overwintering Sites in California" by the Monarch Project, June 1988.

4. N.B. - The plan does not propose to continue the circulation of the bicycle route on the current road near the existing visitor center. The intent is to restrict the area in front of the visitor center to pedestrians only. This will be designed in conjunction with the visitor center to act as a tour assembly area once the total plan is implemented. The details of the exact bike route will be refined as a part of future area development plans.

The present city bicycle route along Swanton Avenue should continue as an alternate to the internal route when the unit is closed or for those not wishing to leisurely use the park.

5. N.B. - Unit interpretation will always have the opportunity to include or expand interpretation beyond that in the unit if adequate staffing or docent levels make this a possibility.

Parking proposed in this plan may at some point complement the trails outside the unit. However, that will require coordination with this park unit, specific visitor use, and seasonal needs. It would not be desirable to increase parking beyond the present proposal.

### Sierra Club

6. N.B. - The proposed plan as discussed in the resource element and land use and facilities element are in basic agreement with the principles suggested in this comment. The Department will restore damaged areas.

Attention to these details will be a part of any future site specific plans.

7. N.B. - Erosion control is part of the plan. The multi-visitor use and resulting conflict of parking and circulation has been collectively discussed in various sections of the land use element.

The 400,000 a year visitor use pattern varies depending on the overlap of weather, tides, special events, and seasonal nature interests. However, continual observation of public use and related parking and circulation has demonstrated that "status quo" is detrimental to the public's safe and quality enjoyment of and protection of key resources.

It would be very desirable for everyone to individually experience nature free of man-made structures and controls. However, planning has to consider the established use patterns in an older existing unit in close proximity to a dense population. The design layout has attempted to organize the circulation of individuals, school groups, elderly, handicapped, tour groups, and those interested in general beach access. Where possible, it has taken advantage of existing facilities which are appropriate for continued use, allowing for earlier phasing of the various goals of the plan.

8. N.B. - The plan attempts to provide for some of the anticipated parking requirements on site. It recognizes that the street parking will be heavily used by beach users and that future community developments served by Delaware Street may reduce the present capacity.

This is a long-range plan that reflects the potential maximum on-site parking. Actual parking development will be phased with corresponding existing conditions.

Native plantings will be included in any future detailed plans to screen outside development or for internal rehabilitation requirements. Please see response 7 N.B.

9. N.B. - Internal vehicular access from Delaware Street was moved away from the upper edge of the Monarch Butterfly Preserve to insure air quality and sound control in the preserve.

It is felt that the plan should include convenient circulation and parking for buses within the park property. The street parking is not guaranteed in future years.



10. N.B. - These thoughts will be considered in future detailed restoration of the area. The Department plans to restore the area in the picnic area that shows signs of soil erosion.
11. N.B. - Future management plans for this area will include the evaluation of this pond and careful protection of its relationship to the Monarch butterfly.
12. N.B. - Future designs that are beyond the detail of this General Plan will evaluate appropriate drainage control to protect the unit's resources.
13. N.B. - Future development plans will provide screen planting to enhance views and soften impact and development. Random picnic tables can be included.
14. N.B. - All unused or inappropriate roadways will be obliterated and the disturbed areas restored to a more natural condition.

Harry J. Resoner

15. N.B.- Please see response 7 N.B.
16. N.B. - The redesign, within the existing visitor center site, will include a better organization for arrival, sightseeing, and exiting. Please see response 7 N.B.
17. N.B. - The parking lot will be reduced to improve picnic sites away from the bluffs and the archeological site. The restroom will be relocated. It will be relocated away from the fragile bluffs. New plantings in the area will be made with native plants.
18. N.B. - The known archeological site will be protected. See pages 16 and 26 in Preliminary General Plan. No reestablishment of an Indian village is proposed.
19. N.B. - The plan identifies specific areas of the park for full preservation status adjacent to the meadow. Well-designed use of this open space will make it possible to redirect the visitors and provide improved protection of those specific unit resources. Please see response 7 N.B.
20. N.B. - This area is definitely in need of esthetic improvement. However, with or without provision of parking on state property, this area adjacent to a city population will receive heavy beach access use. We feel it is better to recognize the demand and design for it. Please see response 8 N.B.

21. N.B. - This plan discusses sand dune restoration and protection, visitor needs including beach access, and the need for more parking. It also discusses exotic and native species. Removal of any exotic plant would be replaced with a native plant.
22. N.B. - The project does not propose any type of camping in this unit due to its day-use demands and limited land base for appropriate separation (size of area).

TWIN LAKES STATE BEACH

California Coastal Commission

1. T.L. - The remains of the railroad trestle do have historical value and should be a part of the interpretive program. The remains could also be a hazard to swimmers and signs should be posted.
2. T.L. - The seawall discussed in the plan assumes that such construction could happen within the county road right-of-way along with improved road alignments where necessary.
3. T.L. - This pertinent material will be appropriately referenced in the final text.
4. T.L. - The "Guidelines for the Protection of Monarch Butterflies Overwintering Sites in California" will be referenced in the final General Plan. The Department's field staff and resource ecologists have not rated a significant number of Monarch butterflies overwintering in the eucalyptus trees in Twin Lakes State Beach. Trees that are being used by the butterfly would not be removed.
5. T.L. - The algal blooms present in drought years is unfortunate. Unfortunately, vandals released freshwater earlier this year (1988) which has compounded the problem. Most years would not have this severe and abnormal a problem. The Department will continue to seek a solution to this problem.

The history of how Schwan's Lagoon has evolved from a natural tidal estuary to a freshwater lake is discussed on pages 23 and 24. It would be difficult to revert Schwan's Lagoon back to a natural estuary. There is also a value and a need for freshwater lagoon as well as brackish estuaries.

The Department is studying the non-native waterfowl problem. The city is also facing this problem on its ponds. Hopefully, a solution such as relocating the waterfowl can be reached. This is primarily an operational problem.

6. T.L. - This material will be recommended for inclusion in the final plan and for future reference with direction for continued coordination with the port district.
7. T.L. - The Department agrees that as part of the interpretive space on the interpretive panel on San Lorenzo Point, the City of Santa Cruz and the city's Natural History Museum should be consulted. Their input would make an important contribution.
8. T.L. - The Operations Division has and will continue to coordinate common interests.
9. T.L. - The Department's General Plan proposals are only for land it owns, unless the Department is in the active process of acquiring additional land.

Santa Cruz County

10. T.L. - Our Department has commented on the county's park designations (13, 14, 15) through the Local Coastal Plan Amendment process.

Site 14 located on state property, is considered as open space to complement the community park development proposed on county-owned property (Site 15).

Our Department will continue to coordinate with future county plans.

11. T.L. - The Department recognizes the need to coordinate with city and county planners regarding parking spaces for beach users. The General Plan does not make recommendations on land it does not own.
12. T.L. - Please see response 5 T.L.

Sierra Club

13. T.L. - please see response 5 T.L.
14. T.L. - The intent of the plan is not only to maintain a quiet peninsula, but to recognize that indiscriminate use will increase without development of some improvements and education of the visitors. We agree that interpretation should be unobtrusive and placed only as needed for visitor awareness. Interpretation need not be done on a multitude of interpretive panels.
15. T.L. - Please refer to the policy in the Preliminary General Plan on page 23.

A management plan for the lagoon will take into consideration wildlife needs and capabilities to adapt to the more desired native growth.

Harry J. Resoner

16. T.L. - There is only one state-owned residence on the Fourteenth Avenue beach access property. The adjacent houses are private, and the plan does not discuss property that is outside of state ownership unless offered by a willing seller.

The presence of the existing park residence offers a late-hours surveillance for this open beach access point. Your comments may refer to the two houses in the Fourteenth Avenue maintenance area. In that case, the plan calls for them to remain unless their land base can provide parking to serve potential future county beach shuttle programs.

The stairs are felt necessary to organize and direct the flow of people from the upper land base to the beach, and the emergency ramp can be installed when it becomes necessary to reduce erosion on the bluffs and still allow quick, easy access for emergency vehicles.

17. T.L. - The private residences fronting on Bonita Lagoon are not on state property and cannot be proposed for removal.

18. T.L. - The management plan discussed on page 32 of the General Plan will take these options into consideration.
19. T.L. - The access you discuss is not on state property. However, various access points to the beach will have interpretive panels to discuss appropriate safe use of the beach.
20. T.L. - Such a bridge would be under the jurisdiction of Santa Cruz County.
21. T.L. - The plan allows for connection of trails to future community trails; however, it is not felt that the topography or need justifies proposing trails around the total lake.
22. T.L. - Through the Department's General Plan process, we have identified the natural, cultural, and recreation resources, including the existing use patterns of the units. The plans have recognized those values by identifying specific areas of the units for preservation status and specific protection. It recognizes that there is a need to interpret those values to the public, and it also recognizes that the continuing demand for public access to the beaches must be planned for.

Alan Simpkins

23. T.L. - Control of water level - Schwan's Lagoon  
Our Department shares your concern regarding vandalism and possible negative impacts that could result from a dramatic change in the lake water level. Improved methods are being considered, to secure the weir gate control. Please see response to 5 T.L.
24. T.L. - Reduction in the Number of Geese  
Our Department is currently investigating appropriate methods to reduce the geese population in this area. Please see response to 5 T.L.
25. T.L. - Law Enforcement - Secured Trails  
Our Department is not considering initiating development of new trails at this time. Future proposals must consider potential resource impacts and visitor needs. Adjacent property owners will also be contacted and given an opportunity to comment on any future development proposals. The Department patrols the inland portion of Twin Lakes State Beach. The county patrols the streets and inland portion of the unit also.

A-2585R

CALIFORNIA COASTAL COMMISSION

## CENTRAL COAST DISTRICT

701 OCEAN STREET, ROOM 310

SANTA CRUZ, CA 95060

(408) 426-7390



August 10, 1988

James Doyle, Supervisor  
 Environmental Review Section  
 Department of Parks and Recreation  
 P.O. Box 942896  
 Sacramento, CA 94296-0001

Dear Mr. Doyle:

Coastal Commission staff has reviewed the Preliminary General Plan for Natural Bridges State Beach. We are supportive of the proposed policies and improvements. We would be happy to work with you and the City of Santa Cruz in having these proposals integrated into the City's Local Coastal Program.

We do have some concerns regarding measures to preserve Monarch butterfly and other habitats and maintain adequate buffers. For example, the draft plan recognizes that eucalyptus serve as habitat for the Monarchs on page 26. It provides protection for those trees that are used as overwintering sites. This policy should also be referenced in the policies on page 25 calling for exotic species removal and be broadened to cover overwintering habitat.

1 N

The plan also briefly discusses the role of milkweed as a food source for the butterflies. There is no discussion of whether it exists or could exist in the meadow area proposed for parking. The plan's brief discussion about planting a nectar source within the preserve boundaries (p. 37) should be expanded to examine other existing or potential areas for protecting or planting nectar sources.

2 N

Finally, the plan proposes strict limitations on development in the butterfly and wetland/riparian habitat areas, and requires consultation with the Department's resource ecologist. However, the environmental impact section notes that some damage could occur as a result of the proposed projects. There have been concerns raised about recent projects proposed for or constructed in these areas, both procedurally (e.g. lack of public notification and proper permits) and substantively (e.g., destroying the resources).

3 NB

Thus, the plan should more strongly emphasize resource protection through such means as detailed environmental review of all projects within or adjacent to the habitats by qualified biologists, securing all necessary permits before commencing work, and modifying or eliminating projects with potential adverse impacts. Incorporation of more detailed construction and management

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AUG 15 1988

James Doyle, Supervisor  
Department of Parks and Recreation  
August 10, 1988  
Page 2

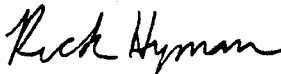
guidelines should also be considered (e.g., "Guidelines for the Protection of Monarch Butterfly Overwintering Site in California" by the Monarch Project, June 1988).

We also have interest in some of the broader access issues only briefly alluded to in the Plan. In the vicinity of the Park are Antonelli's Pond, the UCSC Marine Lab/Younger Lagoon, Wilder Ranch State Park and Lighthouse Field State Beach. The proposal to continue the bikepath (which runs from Lighthouse Field) through the park and to improve the entrance area by West Cliff Drive is welcome. The Plan should more explicitly indicate that the bikepath should be continued into the park as a separate facility rather than end into the narrow entry road (fifth and sixth dashes on p. 33 and map). The map should reflect the Plan text on page 34 allowing bicycles to continue through on the current road by the butterfly preserve instead of on the proposed route through the new parking lot. Beyond the park we would envision a bike/pedestrian route linking up to Wilder Ranch, as is called for in the Santa Cruz City and Santa Cruz County Local Coastal Programs. It would be helpful for the Plan to include a commitment by the Department to assist in this linkage, even though outside the current park boundaries. Additionally, some consideration should be given to shared parking and interpretive facilities with Antonelli's Pond and Younger Lagoon/Marine Lab museum, both of which have limited parking and sensitive resources requiring low intensity, managed use. The park would also be a logical and necessary trail head as indicated in the City's "Moore Creek Corridor Access and Management Plan." Hopefully, the Department will participate in such coordinating efforts.

Thank you for the opportunity to comment on the Plan and attend your workshops. We are available to answer questions and further assist you.

Sincerely,

DAVID LOOMIS  
Assistant District Director



RICK HYMAN  
Coastal Planner

DL/RH/cm

cc: City of Santa Cruz Planning Department  
OPR Clearinghouse  
AMBAG Clearinghouse  
John Lane, City Museum  
Monarch Project

2723A

CENTRAL COAST DISTRICT

701 OCEAN STREET, ROOM 310  
SANTA CRUZ, CA 95060  
(408) 426-7390



August 10, 1988

James Doyle, Supervisor  
Environmental Review Section  
Department of Parks and Recreation  
P.O. Box 942896  
Sacramento, CA 94296-0001

Dear Mr. Doyle:

Coastal Commission staff has reviewed the Preliminary General Plan for Twin Lakes State Beach. We are supportive of the proposed policies and improvements. We would be happy to work with you and the affected local governments in having these proposals integrated into the relevant Local Coastal Programs. Attached are some detailed comments on specific portions of the document.

Sincerely,

DAVE LOOMIS  
Assistant District Director

A handwritten signature in cursive script that reads "Rick Hyman".

RICK HYMAN  
Coastal Planner

DL/RH/cm

cc: City of Santa Cruz  
County of Santa Cruz  
OPR Clearinghouse  
AMBAG Clearinghouse  
Brian Foss, Port District

2720A



SPECIFIC COMMENTS ON TWIN LAKES  
STATE BEACH PRELIMINARY GENERAL PLAN  
BY CALIFORNIA COASTAL COMMISSION STAFF

pp. 16,34, 44 The remains of the railroad trestle periodically exposed opposite Schwan's Lagoon would appear to be historical structures, or a subject for interpretation (they do arouse curiosity), and possibly a subject for a hazard warning to swimmers. 1 T

pp. 20,30 Given the Department's shoreline protective devices policy, the Plan should be more explicit as to whether it would support a new retaining wall, especially were it to be placed on the beach. Shoulder parking obviously contributes to bluff erosion. Thus, consideration should be given to extending the proposed shoreline parking removal to the Harbor. Purchasing additional right of way inland and/or continuing East Cliff Drive one-way between the Harbor and Seventh Avenue could provide some compensating spaces. In any event careful consideration should be afforded to alternatives and to potential adverse environmental impacts before the Department commits its support to a seawall. 2 T

pp. 22,30 The Plan may wish to acknowledge the following condition imposed on the Port District's coastal permit for beach disposal of dredge spoils:

5. The Port District shall submit for Executive Director [of the Coastal Commission] review and approval at least once every three years a report outlining compliance with the operational manual provisions, success of beach nourishment, and any necessary corrective measures. (Underlining added for emphasis.)

According to Brian Foss, Harbor Manager, UCSC researchers have been periodically measuring the extent of beach. Under the permit, all disposal is to be on the Port's portion of the beach (i.e., west of Sixth Avenue) because the Department was not interested in receiving the sand. Thus, the second proposed policy on page 22 might be broadened to state: 3 T

"... If replenishment is found feasible, the Department, after this consultation, will develop criteria for acceptance of dredge materials and from participation in the Harbor District's program. After obtaining necessary regulatory approvals, the Department will then initiate participation in the program."

SPECIFIC COMMENTS ON TWIN LAKES STATE BEACH PRELIMINARY  
GENERAL PLAN BY CALIFORNIA COASTAL COMMISSION STAFF  
Page 2

- p. 23 As acknowledged in the Natural Bridges General Plan, eucalyptus can serve as habitat for the Monarch butterfly, and those that do should thus be exempt from this removal policy. The Plan should commit the Department to following the "Guidelines for the Protection of Monarch Butterfly Overwintering Sites in California," by incorporating or referencing them.
- pp. 23,31  
44 The description on the bottom of page 23 needs to be modified to account for low water levels and associated algal blooms present in drought years such as this one.
- This proposed management plan would need to include measures to address the current unaesthetic situation. It should be noted, however, that the current situation and proposal are not "natural." The Department should consider removing the weir and non-native waterfowl as a more natural solution.
- pp. 27,42 The Plan may wish to acknowledge the following policy in the Santa Cruz City's Local Coastal Program (p. 3.60):
- (A-1) Surplus parking spaces in the upper harbor, 31 spaces in the west lowe harbor, and 21-26 spaces in the east lower harbor should be clearly signed and located appropriately for beach and harbor-visitor use.
- (A-2) Since few off-street parking opportunities for the Seabright-West Jetty portion of Twin Lakes State Beach appear to be available, the Port District should explore potential lease of the west parking lot by the State Parks Department and closing or reconfiguration of lower Atlantic Avenue to provide more beach parking.
- pp. 33-35 Since San Lorenzo Point overlooks the City of Santa Cruz beach area and beyond, the Department may wish to offer some interpretive panel space on the Point to agencies or organizations interested in portraying the history of the beach area. Also, since the City's natural history museum is opposite the Seabright Beach entrance, some coordinated interpretation might be considered.

SPECIFIC COMMENTS ON TWIN LAKES STATE BEACH PRELIMINARY  
GENERAL PLAN BY CALIFORNIA COASTAL COMMISSION STAFF  
Page 3

pp. 41&43

Coordination with the Harbor District and U.S. Army Corps of Engineers who own the intervening beach on either side of the harbor entrance would be useful, especially for developing and enforcing common use regulations.

8 TL

The Plan does not provide any indication as to whether the Department is interested in acquiring any additional property bordering its holdings and other sites for remote parking.

9 TL

# Slime lagoon



**SANTA CRUZ** — A preening swan rids itself of feathers that collect the slimy algae choking Schwann Lagoon over the past several weeks. State Park Rangers say there isn't enough water because of the drought to adequately flush out the lagoon. The algae has been able to beach between Schwann Lake Drive and East City.

Dan Coyro/Sentinel

PLANNING DEPARTMENT

GOVERNMENTAL CENTER



COUNTY OF SANTA CRUZ

701 OCEAN STREET SANTA CRUZ, CALIFORNIA 95060

August 11, 1988

Mr. Bob Acrea  
Senior Landscape Architect  
Department of Parks and Recreation  
P.O. Box 942896  
Sacramento, California 94296

Dear Bob:

The Community Development section of the County Planning Department has reviewed the preliminary draft of the Twin Lakes General Plan and offers the following comments.

We do not find anything in the State's plan which is inconsistent with the County's Local Coastal Plan, General Plan, or Parks Master Plan. However, the Twin Lakes Plan should provide more discussion of coordinative planning efforts between the State and County regarding Park Sites 14 and 15 as listed on the County's Parks Master Plan and also discussed in the LCP Land Use Plan (see attached map).

10 T

The Plan also recommends the elimination of on-street parking along a segment of East Cliff Drive in order to improve pedestrian and vehicular safety. This is consistent with recommendations that will be forthcoming from a Plan Line study the County has commissioned. Our apprehension is, however, that continued reduction of parking will only transfer the problem to the adjacent neighborhood. Therefore, more discussion is needed in the Plan about future off-street parking options, possibly in concert with County plans.

11 T

As a final comment, you may have noticed on recent field trips to Schwan's Lagoon that a major algal bloom has created an unsightly lake appearance. When die-off occurs, this problem will be compounded with resultant odors. Therefore, we recommend that the resource management component of the Plan address methods to inhibit this recurrent process.

12 T

Thank you for the opportunity to comment on this Plan. We look forward to working with you during the revision process and also on other plans scheduled for preparation within the County's jurisdiction.

Sincerely,

*John H. Warren*  
John H. Warren  
Program Manager, Community Development

Attachment:

cc: Board of Supervisors

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85

AUG 16 1988

# LIVE OAK AREA

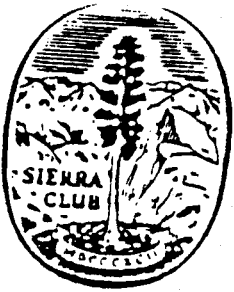
CITY OF SANTA CRUZ

CITY OF CAPITOLA

## URBAN SERVICE EVALUATION CRITERIA PARKS



Park Name	Area (Acres)	Population Served	Distance to City Center (Miles)
1	0.2	100	0.5
2	0.3	150	0.6
3	0.4	200	0.7
4	0.5	250	0.8
5	0.6	300	0.9
6	0.7	350	1.0
7	0.8	400	1.1
8	0.9	450	1.2
9	1.0	500	1.3
10	1.1	550	1.4
11	1.2	600	1.5
12	1.3	650	1.6
13	1.4	700	1.7
14	1.5	750	1.8



# SIERRA CLUB Ventana Chapter

Santa Cruz Regional Group • P.O. Box 604, Santa Cruz, CA 95061

AUGUST 10, 1988

JAMES M DOYLE, SUPERVISOR  
ENVIRONMENTAL REVIEW SECTION  
Department of Parks and Recreation  
P.O. 942896  
Sacramento, Ca 94296 0001

Dear Mr. Doyle,

The Santa Cruz Regional Group of the Sierra Club has participated in the public involvement of the planning process for Natural Bridges State Beach General Plan. The public meetings on October 14, 1987 and on May 12, 1988 were well organized and provided an opportunity for public information and comment.

The Executive Committee of the Regional Group has reviewed the draft plan and has the following comments. Although draft plan proposal has many excellent features, the guiding principles for the plan need to be clearly stated. A more detailed list of existing problems and use patterns are needed.

Specific concern is centered in the need for and use of parking space. While it is desirable to limit vehicle entrance from the West Cliff area to the center of the park, it seems that the additional entrance and extensive parking from Delaware are not needed.

Detailed comments prepared by Peter and Celia Scott are attached.

Sincerely,

Joan Stoker Rost  
State Park Chair,  
SC Regional Group, Sierra Club

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AUG 17 1988

COMMENTS ON THE NATURAL BRIDGES STATE BEACH GENERAL PLAN  
(version of June 1988)

A. The Plan lacks a list of guiding principles.

The plan should be amended to include a list of guiding principles. Among such principles should be the following:

- ✦ High priority should be given to the restoration of plant and animal habitat.
- ✦ Damaged areas, such as eroding ad hoc paths and eroding dunes, should be restored and allowed to recover.
- ✦ Unnecessary or unused paved areas should be removed, and those areas should be restored and allowed to recover.
- ✦ Highest value should be placed on space for peace and quiet, enchantment, magic.
- ✦ Paved areas and parking areas should be avoided wherever possible, choosing pedestrian traffic over automobile and bus traffic.
- ✦ Special attention should be given to the design details of new roads, parking lots and structures so as to make them aesthetically pleasing and socially integrating.

B. The Plan lacks a detailed list of existing problems.

Although the plan contains useful descriptive information in its Resource Element, it lacks a detailed catalog of existing problems and use patterns. Among those problems for which detailed descriptions should exist are the following:

- ✦ Eroding areas, such as around the picnic tables north of the beach, ad hoc paths, and dune areas.
- ✦ How well does the Visitor Center work (or not work)?
- ✦ What problems exist with the current circulation pattern? How could it be improved so as to function better socially? To what extent and in what ways is the use of the road connecting the existing entrance to the main parking and picnic area detrimental?
- ✦ What is the current usage of the existing parking facilities? There is a conspicuous lack of real data on this point.

C. Specific comments.

The following comments relate to specific proposals contained in the plan:

1. The plan specifies that the area for auto parking within the park boundaries be more than doubled. This is a mistake.



In particular, the proposal to add a new 100-car parking lot in the northern meadow area should be eliminated from the plan. This meadow should be retained and enhanced, particularly since it is the only large meadow area lying within the park boundaries. Currently, as one enters from Delaware Avenue, one is struck by the sense of peace and quiet upon entering this meadow. This contrast will become increasingly valuable as the overall population grows. While most parks (Golden Gate Park and Yosemite Park are prime examples) are working to eliminate automobile traffic, this plan would increase it, with consequent erosion of park values.

8 NB  
contd.

Consider adding trees and native shrubs to shield this quiet meadow from Delaware Avenue, and consider restoration of damaged paths crossing the meadow.

Ample space for on-street parking along Delaware and Natural Bridges Streets currently exists, and is particularly suitable for busses. Furthermore, in the absence of quantitative data on the current use of the existing 104-space parking lot, additional parking lot construction is not justified.

We also question the current placement of the "service area" in this northern meadow, particularly since it would require the addition of an otherwise unused paved road.

If there is to be vehicular access from Delaware Avenue, it should follow the existing road alignment, with an inviting, aesthetically appealing entrance to the park.

9 NB

2. The plan specifies the construction of a "bus loading and tour staging area" just to the north of the visitor center. This is also a mistake. Busses should be encouraged to stop and unload outside the park, perhaps with a special bus parking area along Delaware Avenue. This wide street is currently used by adjacent industries for long-term parking of very large trucks and semis. These uses should not drive the public school busses and bus tour busses to the park's interior. It is a short walk from the street to the Visitor Center, by no means difficult, even for handicapped and for senior citizens. Pedestrian access is more appropriate for this small park.

3. The new raised walkway leading to the Monarch Preserve appears well thought out, a good way to provide handicapped access, and also serving to prevent further erosion of the soil, perhaps even allowing current eroded areas to recover. Similarly, the thoughtfully designed steps over the dune area near the West Cliff Drive entrance serve to prevent the erosion of the dunes. This technique could be used in other areas of the park to good advantage.

10 NB

For example, The slopes dropping from the current most-used picnic tables toward the beach are badly eroded and not maintained. This area could be redesigned so as to make it more attractive, perhaps channeling pedestrian access to the beach in a more controlled manner.

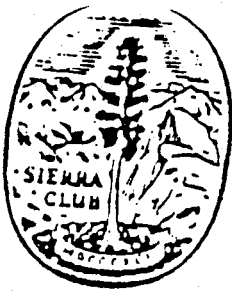
4. Attention should be given to the existing pond/marsh area just south of

11 NB

the Monarch Preserve. This pond is currently covered with algae. Is this a natural situation, or is it a result of development? The causes of such eutrophication should be researched, and corrected, if necessary.

5. Additional parking areas will cause increased (contaminated) run-off, potentially damaging to wetland areas and lagoons. Such potential for increased contaminated run-off should be avoided.
6. Any additional parking in the area parallel to Swanton Blvd by the West Cliff Drive Entrance should be very carefully planned, with appropriate screening from the street and planting within the parking area. It could be appropriate to add a few picnic tables on the flat land just to the west of this parking area.
7. An old concrete road adjacent to the east side of the park currently leads to a bluff-top and encourages pedestrian traffic down a badly eroded ad hoc path. This concrete should be removed, and the area should be allowed to recover.

Prepared by Peter and Celia Scott,  
August 5, 1988



# SIERRA CLUB *as* Ventana Chapter

Santa Cruz Regional Group • P.O. Box 004, Santa Cruz, CA 95061

AUGUST 10, 1988

JAMES M DOYLE, SUPERVISOR  
ENVIRONMENTAL REVIEW SECTION  
Department of Parks and Recreation  
P.O. 942896  
Sacramento, Ca 94296 0001

Dear Mr. Doyle,

The Santa Cruz Regional Group of the Sierra Club has participated in the public involvement of the planning process for Twin Lakes State Beach General Plan. The public meetings on October 14, 1987 and on May 12, 1988 were well organized and provided an opportunity for public information and comment.

The Executive Committee of the Regional Group has reviewed the draft plan and has the following comments. Twin Lakes State Beach does consist of different geographic areas. Beach areas, the Lagoon areas, and the Maintenance areas are properly considered separately.

Plans for Schwan Lagoon are of major concern. Concerns are that the general principals for the lagoon are stated and include the following:

1. Consideration of the feasibility of returning Schwan Lagoon to a tidal estuary should be included. Water quality of the fresh water lake at this time is poor. Algae is a problem. 13

2. Schwan lagoon is an area of quiet and peaceful walking and contemplation. Preservation of the of upland peninsula as a quiet undeveloped area is important. Proposed interpretive elements seem intrusive. The natural appearance of the lagoon is not enhanced by interpretive panels on San Lorenzo Point. Trail development, platforms, and benches should be minimal so as not to interfere with the esthetic enjoyment of the area. 14 T

It is not essential that each park have an interpretative component that is of equal magnitude. If interpretative aspects were included in general principles for the development of the park, the park priorities would be clearer.

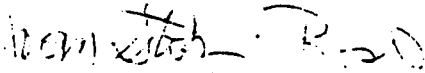
3. Exotic plant species need to be considered in relation to the animal life. Eucalyptus trees are used by the bird population. The plant species need to be considered in relation to water type and quality for the lagoon. 15 T

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AUG 17 1988

8 5112

The importance of the beaches and beach usage is recognized.  
Public safety at the beach must be an important part of the  
plan for this park.

Sincerely,



Joan Stoker Rost  
State Park Chair,  
SC Regional Group, Sierra Club

August 11, 1988

Mr. James M. Doyle, Supervisor  
Environmental Review Section  
Calif. Department of Parks and Recreation  
P. O. Box 942896  
Sacramento, CA 942896-0001

Dear Mr. Doyle:

I have loved Twin Lakes and Natural Bridges State beaches since 1938.

I am completely out-raged at the ongoing destruction at Natural Bridges, the sacred water hole and grove you call Monarch Nature Preserve.

15 NB

There should not be one single visible man made object in that area now desecrated and spring covered over with cement, steel, wood. Natural Bridges access by dark colored asphalt or cement, without fences, boardwalk, o.k.

2. Visitor Center and Residence fenced complex - remove to far edge of park. Screen behind bushes. Make more inviting with tables, chairs, refreshments, a sense of welcome.

16 NB

3. Parking Lot, bathroom overlooking Moore Creek - remove. Restore to nature.

17 NB

4. Indian Village - restore to functioning on site. Allow archeologic proof.

18 NB

2. Preserve open meadowland, Delaware - Visitor Center.

19 NB

3. Remove car access, West cliff, including Toll plaza and car overlook. Restore to nature. Make inviting for walkers ie - benches, drinking faucet.

20 NB

Remove stairs to beach. Allow sand flow naturally. Prevent any tree cutting in area, any new parking lot, any man-made visible object.

Emergency vehicle access only.

21 NB

Natural Bridges

4. Parking: Use the 20-30' off-road land on Swanton, include a sidewalk and native plants to screen cars; use parking meters; relocate fence for more room; cut no or almost no trees.

Do the same on Delaware. Not 1 vehicle within the fences except emergency.

(The original letter was eight pages, hand written. It has been typed for easier reading. No editing was attempted).

5. Camping: limited to tent only, no vehicles, one full time chaperone 2 dozen sites screened.

Twin Lakes - 14th Street

1. Remove 14th St. residences, all 3.
2. Locate bathroom and showers on North Edge by entrance.
3. Delete plans for stairs and cement emergency vehicle access. Retain natural access.
4. Remove all private residences fronting on Bonita Lagoon and Ocean and restore to native plants, restore lagoon, restore natural water flow.

EXOTIC PLANT WAR - END IT. IT IS GOING TO STIR UP HORNETS NESTS AMONG PUBLIC.

Twin Lakes - Seabright, Harbor Entrance: UNSAFE slippery ting walkway. Please fix water faucet and benches bicycle rack, instructions for heatstroke, sunburn.

Schwann Lake Beach

Install bridge for East Cliff Traffic. Free flow from ocean into Schwan Lake.

Twin Lakes - Schwan Lake

Install foot path around Schwann Lake suitable for disabled but not for bicycles, skateboards. Add benches and drinking water.

Summary

Remove all man made objects from Natural Bridges and Twin Lakes but the bare mininum - drinking water, bathrooms, wheelchair access. Restore to nature. Prohibit motor vehicles, skateboards, bicycles.

What are the consequences from development of Natural Bridges and Twin Lakes? Simple. By denying the public nature while being in charge of protecting our priceless parklands from development, Parks and Rec. Dept. sets up rage in the public.

Where else can we go to restore ourselves when Natural Bridges is destroyed? And is the Monarch Grove and Pond not destroyed?

Sincerely,

Harry J. Resoner  
Box 3407  
Santa Cruz, 95063-3407

ALAN B. SIMPKINS  
350 SCHWAN LAKE DRIVE  
SANTA CRUZ, CALIFORNIA 95062

July 13, 1988

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

Attention: James M. Doyle, Supervisor  
Environmental Review Section

Ref: General Plan for Twin Lakes  
State Beach. SCH#86011401

Dear Mr. Doyle:

I am in receipt of a copy of the Preliminary General Plan for the Twin Lakes State Beach. This letter is written for your consideration regarding certain elements of your proposed plan.

CONTROL OF WATER LEVEL

On Page 2, Schwan's Lagoon, it is stated that Schwan's Lagoon will continue to be managed as a freshwater lake. The local residents are in full support of this position, as we were instrumental in convincing the Department of Parks and Recreation to establish the fresh water lake many years ago.

Normally, there is sufficient water to keep the lake full throughout the entire year; however, there is a problem which we would like to call to your attention.

The design of the weir located at East Cliff Drive incorporates a gate which is coupled to a large hand wheel for control. Although the State keeps the wheel locked by means of a chain and padlock, it appears that the wheel is entirely too attractive to the young vandals in the area. It seems that they receive their "kicks" by breaking or cutting the chain and draining the lake of water. This vandalism has happened twice this year, the last time occurring on this past May 13th. The result is that the lake is now at an extremely low level and purpose of the weir has been defeated.

It would seem that in the management of the lake, and recognizing the temptation to let the lake out, that some sort of solution to secure the gate is in order. It is suggested that the control of the gate be studied and perhaps the wheel can be removed during the summer months.

23 TL

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JUL 15 1988

## Water Level (con't)

It would appear that the only possible use of the wheel would be during the winter months and only in the event of an extremely large runoff which could not be accommodated by the weir itself.

REDUCTION IN THE NUMBER OF GEESE

Page 24, (Under Schwan's Lagoon) lists water quality and refers to "an overpopulation of exotic ducks and geese." These geese can be quite obnoxious at times and in some instances can be threatening to people, especially the young and elderly.

Although this overpopulation of geese has been discussed for years and the problem continues to grow, positive steps have not been taken to relocate some of the geese. One of the principal problems is that people feed them huge quantities of bread and scraps, using 9th Avenue as a feeding ground. This not only blocks the street for vehicle and pedestrian traffic, but causes problems in the off-season when the geese take out, seeking food from the neighborhood. In plain language, they are dirty, undesirable birds, particularly when they wander into the local residents gardens.

Priority should be given to the reduction of the numbers of these geese in the Schwan Lake area.

LAW ENFORCEMENT-SECLUDED TRAILS

Pages 40 and 43 (Law Enforcement) and Page 42 (Schwan's Lagoon)

The sections listed above clearly delineate the law enforcement problems associated with Twin Lakes Beach and Schwan Lagoon area. Under Law Enforcement, Page 43, the paragraph references possible assistance from the Santa Cruz County Sheriff's Office. It should be pointed out that only one deputy is available to patrol the entire Live Oak area of Santa Cruz County, which covers from the Yacht Harbor to 41st Avenue and includes Twin Lakes Beach and Sandy Beach.

Clearly, there is a shortage of law enforcement in the area and with the fiscal problems confronting our County, there seems to be little or no improvement in the foreseeable future.



On Page 40, (Law Enforcement) your document. cites such problems as assault, robbery and indecent exposure. You further report that the "area has also developed a reputation as a transient sleeping area."

On Page 31, under Schwan's Lagoon and Upland (Peninsula), your published guidelines suggest the following:

"New trails may be considered for connecting the upland with future county parks, local trails, and the beach."

In any proposal for trails which would connect the uplands with the beach, the neighbors have great concern that such remote trails would make their homes vulnerable to the criminal element. At the present time, it is difficult to protect our homes from breakin and we have initiated "Neighborhood Watch" programs and other means of protection.

We shutter at the thought of the State creating backwoods trails from the beach, adjacent to our homes and then connecting to the remote railroad track area. Such a trail would be impossible to properly patrol and would be inviting as an escape route for those engaged in breaking and entering.

Further, we question the safety for women and children using these trails. In short, they would be too secluded for their safety, and unless the trails were developed to that of a full-fledged roadway, it would be impossible for either the State or County to provide vehicle patrols.

We sincerely request that prior to considering trails along the bank of Schwan's Lagoon, that the neighbors be consulted and have the opportunity to relate their experiences with some of the non-desirables in the area. We would like to emphasize that we are concerned over the safety of our families and homes.

I would personally appreciate the opportunity to discuss these concerns.

Very truly yours,

*Alan B. Simpkins*

Alan B. Simpkins

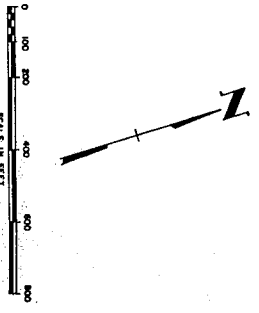
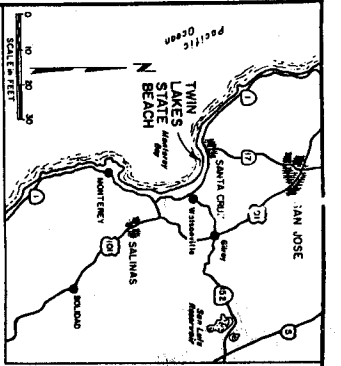
25 TL  
con+3

# MAPS

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TWIN LAKES  
STATE BEACH

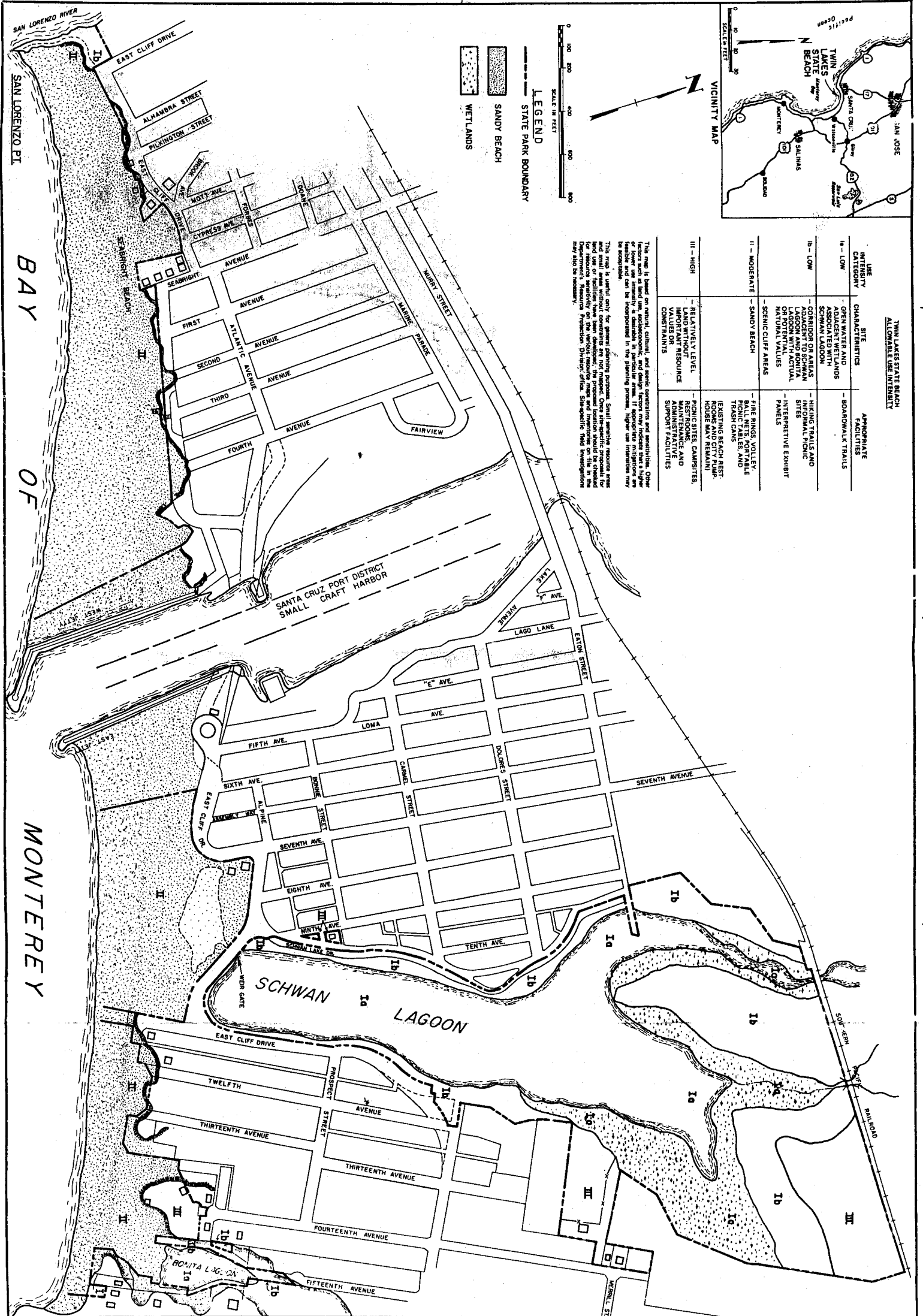
GENERAL  
PLAN



USE INTENSITY CATEGORY	SITE CHARACTERISTICS	APPROPRIATE FACILITIES
Ia - LOW	- OPEN WATER AND ADJACENT WETLANDS - SCOPMAN LAGOON	- BOARDWALK TRAILS
Ib - LOW	- CORRIDOR ON AREAS ADJACENT TO LAGOON WITH ACTUAL NATIONAL VALUES	- HIKING TRAILS AND INTERPRETIVE EXHIBIT PANELS
II - MODERATE	- SANDY CLIFF AREAS	- FINE RINGS, VOLLEY, PICNIC TABLES AND TRASH CANS - EXISTING BEACH REST ROOMS AND CITY PLUMB HOUSE MAY REMAIN
III - HIGH	- RELATIVELY LEVEL LAND WITHOUT IMPORTANT RESOURCE CONSTRAINTS	- PICNIC SITES, CAMPSITES, RESTROOMS, AND ADMINISTRATIVE SUPPORT FACILITIES

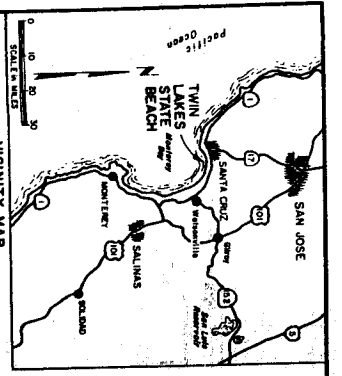
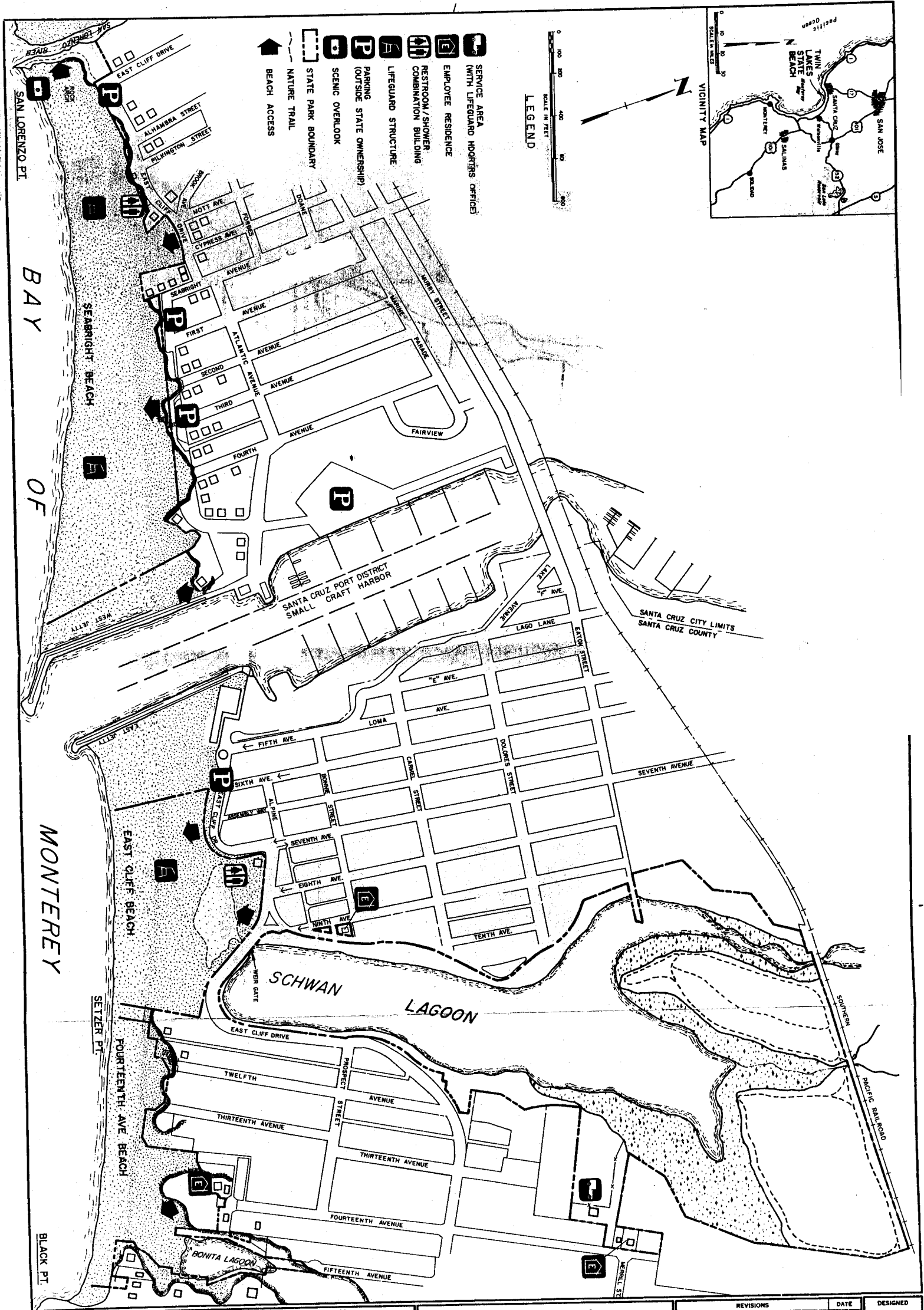
This map is based on natural, cultural, and scenic constraints and sensitivities. Other factors such as land use, socioeconomic, and design factors may indicate that higher use intensities are feasible and can be incorporated in the planning process. Higher use intensities may be acceptable.

This map is useful only for general planning purposes. Small sensitive resource areas and small areas without constraints are not mapped. Only site-specific proposals for resource sensitivity on the various resource areas and intensities on this in the Department's Resource Protection Division offices. Site-specific field investigations may also be necessary.



BAY OF MONTEREY

DRAWING NO. <b>24048</b>	TWIN LAKES STATE BEACH	RESOURCES AGENCY OF CALIFORNIA DEPARTMENT OF PARKS AND RECREATION	REVISIONS	DATE	DESIGNED K. GRAY
	<b>ALLOWABLE USE INTENSITY</b>		Shoreline Revised	6-88	3 DRAWN BB D. AMBAGIS
SHEET NO. 1	GENERAL PLAN-RESOURCE ELEMENT	APPROVED _____ DATE _____			CHECKED D. KECK



DRAWING NO.  
24127  
SHEET NO.  
1

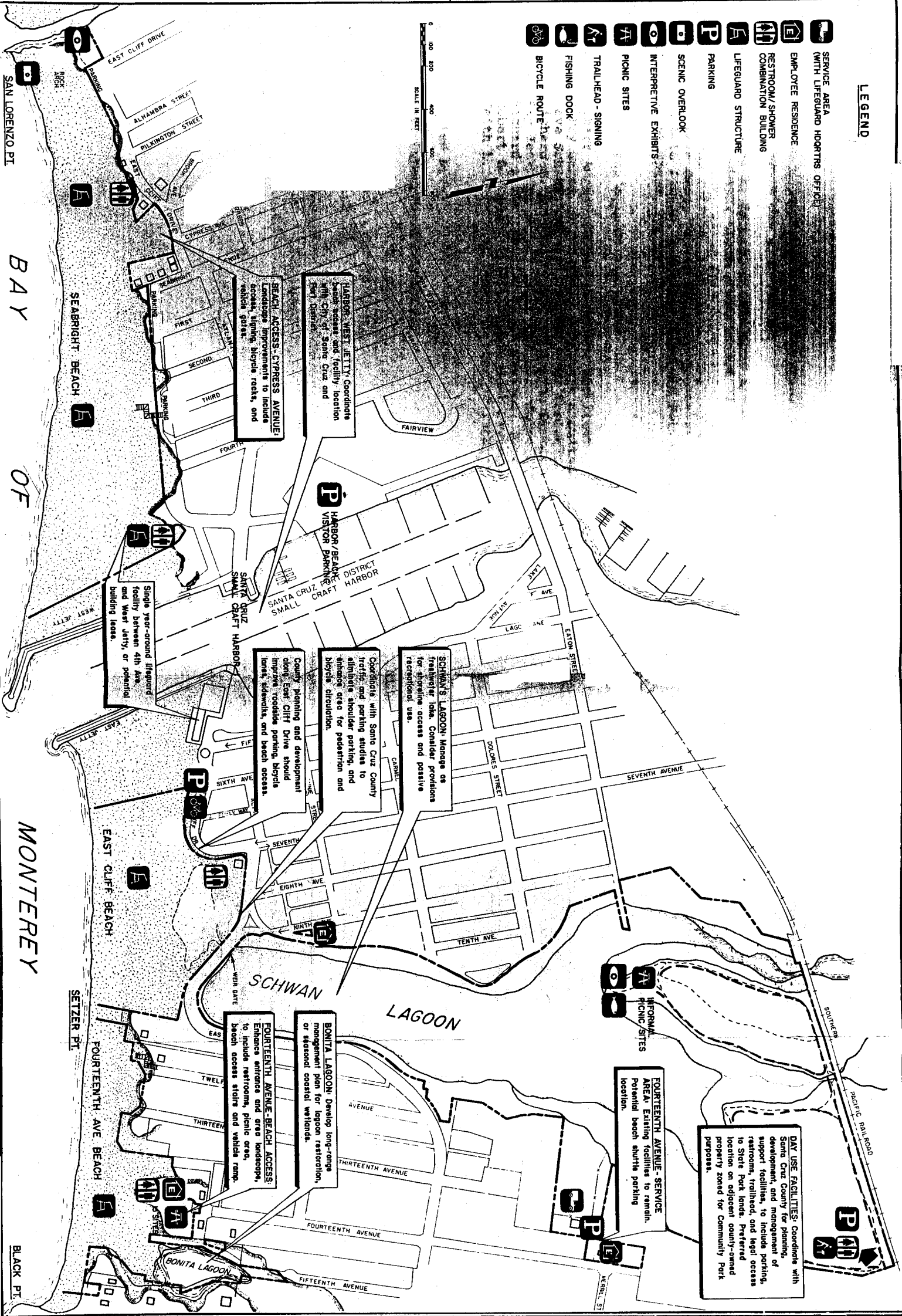
TWIN LAKES STATE BEACH  
**EXISTING CONDITIONS**  
GENERAL PLAN - LAND USE AND FACILITIES ELEMENT

RESOURCES AGENCY OF CALIFORNIA  
DEPARTMENT OF PARKS AND RECREATION  
APPROVED \_\_\_\_\_ DATE \_\_\_\_\_

REVISIONS	DATE	DESIGNED
Enlarged beach area	4-88 DK	DRAWN
		CHECKED D. KECK

**LEGEND**

- SERVICE AREA (WITH LIFE GUARD HOURLY OFFICE)
- EMPLOYEE RESIDENCE
- RESTROOM/SOWER COMBINATION BUILDING
- LIFE GUARD STRUCTURE
- PARKING
- SCENIC OVERLOOK
- INTERPRETIVE EXHIBITS
- PICNIC SITES
- TRAILHEAD - SIGNING
- FISHING DOCK
- BICYCLE ROUTE



**BEACH ACCESS - CYPRESS AVENUE:**  
Landscape improvements to include access, signing, bicycle racks, and vehicle gates.

**HARBOR WEST JETTY:** Coordinate beach access and facility location with City of Santa Cruz and San Jose.

**HARBOR BEACH VISITOR PARKING:**

Single year-round lifeguard facility between 4th Ave. and West Jetty, or potential building lease.

County planning and development along East Cliff Drive should improve roadside parking, bicycle lanes, sidewalks, and beach access.

Coordinate with Santa Cruz County traffic and parking studies to eliminate shoulder parking, and enhance area for pedestrian and bicycle circulation.

**SCHWAN'S LAGOON:** Manage as freshwater lake. Consider provisions for shoreline access and possible recreational use.

**FOURTEENTH AVENUE - SERVICE AREA:** Existing facilities to remain. Potential beach shuttle parking location.

**DAY USE FACILITIES:** Coordinate with Santa Cruz County for planning, development, and management of support facilities, to include parking, restrooms, trailhead, and legal access to State Park lands. Preferred location on adjacent county-owned property zoned for Community Park purposes.

**FOURTEENTH AVENUE - BEACH ACCESS:** Enhance entrance and area landings, to include restrooms, picnic area, beach access stairs and vehicle ramp.

**BONITA LAGOON:** Develop long-range management plan for lagoon restoration, or seasonal coastal wetlands.

TWIN LAKES STATE BEACH  
**PROPOSED LAND USE & FACILITIES**  
 GENERAL PLAN - LAND USE AND FACILITIES ELEMENT

RESOURCES AGENCY OF CALIFORNIA  
 DEPARTMENT OF PARKS AND RECREATION

APPROVED \_\_\_\_\_ DATE \_\_\_\_\_

REVISIONS	DATE	DESIGNED
Enlarged beach area	4-88 DK	
		DRAWN
		CHECKED
		D. KECK

DRAWING NO.  
**24189**

SHEET NO.  
 1 of 1

This report was prepared by:

David Keck, Associate Landscape Architect  
Jim Woodward, State Archeologist II  
Eileen Hook, State Park Interpreter II  
Mary Ann Burford, Associate Governmental Program Analyst  
Kenneth Gray, Senior Resource Ecologist  
Kenneth Pierce, Associate Park and Recreation Specialist  
Frank Spear, Ranger II

Under the Supervision of:

Robert Acrea, Senior Landscape Architect  
Kerry Gates, Supervising Landscape Architect  
Dave Schaub, Supervising Resource Ecologist  
Richard G. Rayburn, Chief, Resource Protection Division  
Ray Jenkins, Pajaro Coast District Superintendent  
Richard Felty, Central Coast Regional Director  
Robert D. Cates, Chief, Development Division  
Keith L. Demetrak, Chief, Office of Interpretive Services

Edited by:

Jeff Cohen, Research Writer