

UNIT 621

CARDIFF STATE BEACH

GENERAL PLAN

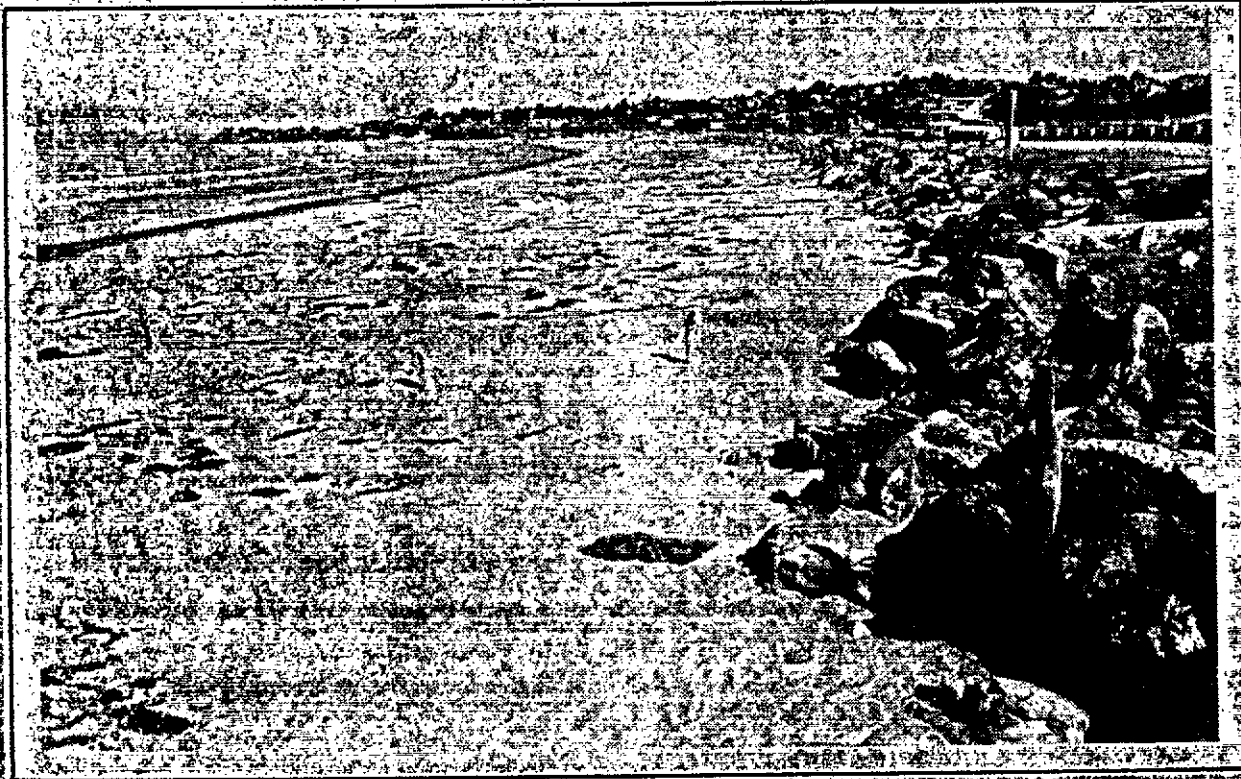
November 1983



San Diego Coastal State Park System General Plan

Volume 7 - Cardiff State Beach

July 1984



CARDIFF STATE BEACH



State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

This is volume seven of the general plan for nine coastal State Park System units in San Diego County. Below is a list of the nine booklets that comprise the San Diego Coastal State Park System General Plan.

Volume Number	Name
1	Summary and Regional Data
2	Carlsbad State Beach
3	South Carlsbad State Beach
4	Leucadia State Beach
5	Moonlight State Beach
6	San Elijo State Beach
7	Cardiff State Beach
8	Torrey Pines State Beach and State Reserve
9	Silver Strand State Beach

DEPARTMENT OF PARKS AND RECREATION

STATE PARK AND RECREATION COMMISSION

P. O. BOX 2390, SACRAMENTO 95811



Resolution 78-83
adopted by the
State Park and Recreation Commission
at its regular meeting in San Diego on
November 4, 1983

WHEREAS, the Director of the Department of Parks and Recreation has presented to this Commission for approval the proposed General Plan for the San Diego Coastal State Park System; and

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

NOW, THEREFORE, BE IT RESOLVED that the State Park and Recreation Commission approves the Department of Parks and Recreation's General Plan for the San Diego Coastal State Park System, which includes South Carlsbad, Carlsbad, Silver Strand, Leucadia, Moonlight, San Elijo, and Cardiff State Beaches; preliminary dated July, 1983, subject to such environmental changes as the Director of Parks and Recreation shall determine advisable and necessary to implement carrying out the provisions and objectives of said plan.



PLANNING LIBRARY

San Diego Coastal State Park System
General Plan Volume 7 - Cardiff State Beach

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July 1984

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General Data



Cardiff State Beach, with 6,550 feet of ocean frontage, is undeveloped at this time.

GENERAL DATA ON
CARDIFF STATE BEACH

Location: On the Pacific Ocean in San Diego County, south of San Elijo State Beach, in Cardiff, adjacent to Highway S-21 (old Coast Highway) and San Elijo Lagoon. The unit is about 17 miles north of the City of San Diego. Access is via Highway S-21.

Size: 25.27 acres, with 6,550 feet of ocean frontage. A separate 1.43-acre parcel on the east side of Highway S-21 is part of the unit.

Existing Facilities: At the north end, an unpaved parking area with an estimated 100-vehicle capacity, one beach shower, and two portable chemical toilets. At the south end, an unpaved parking area with an estimated 425-vehicle capacity, four portable chemical toilets, and an emergency vehicle access ramp. A rehabilitation project scheduled for the 1983-84 fiscal year will increase the capacities of these parking lots to a total of 653 cars.

Vegetation: Almost no terrestrial plant life is established on the ocean beach. Sea fig and sea rocket are able to survive. A rare plant (beach lotus) is found on the parcel adjacent to San Elijo Lagoon.

Wildlife: Cardiff State Beach provides habitat for shorebirds and gulls on the beach. The California ground squirrel is also found in this unit.

Outstanding Features: The sandy beach frontage is the primary feature.

Historical and Archeological Values: The unit has been completely surveyed and no evidence has been found of significant historical events or archeological sites.

Ownership: Acquisition of Cardiff State Beach from San Diego County began in 1949. Further acquisitions were made from both public agencies and private parties in the 1950s and 1960s, with the final acquisition in 1977.

Resource Element



The sandy beach, one of Cardiff's most valuable resources, depends on natural processes for replenishment.

RESOURCE ELEMENT

This Resource Element was prepared to meet the requirements of 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. In compliance with this section of the Public Resources Code, the Resource Element establishes long-range management objectives for the unit's natural and cultural resources. Specific actions or restrictions required to achieve these objectives are also set forth in this element. Maintenance operations and details of resource management are left for inclusion in specific resource management programs to be prepared later.

Summary and Evaluation of Resources

The following resource information is summarized from a large collection of primary and secondary literature located in offices of the Department of Parks and Recreation in Sacramento and at the Area Office in Carlsbad. An inventory of features, prepared for this unit during the general plan process, is on file with the department.

Natural Resources

Topography

Cardiff State Beach (25.27 acres - 10.11 hectares) consists primarily of a portion of the barrier beach which separates San Elijo Lagoon from the Pacific Ocean. The unit also includes a small 1.43-acre (.6-hectare) portion of San Elijo Lagoon east of the Coast Highway and a 12-acre (4.9-hectare) triangular parcel 1,500 feet (457 meters) long by 550 feet (167 meters) wide at the south end of the unit where the coastal terrace begins to rise. Elevations within most of the unit are less than 10 feet (3 meters), but rise to about 30 feet (9.1 meters) at the southern end.

Climate

The Mediterranean climate, characterized by warm, dry summers and cool, wet winters, is moderated by the unit's location next to the Pacific Ocean and by the coastal fog. Extremes of heat or cold are unusual. Average maximum temperatures range from 64.6°F (17.9°C) in January to 77.3°F (24.9°C) in August.

Prevailing winds are from the west most of the year. Strong hot, dry easterly winds, known as the Santa Anas, sometimes blow for several days, raising the temperature to 90-100°F (32-38°C). Santa Anas can occur anytime of the year, but are most prevalent in the fall.

85% of precipitation occurs between November and March. The annual average is about 10 inches (25 cm).

Hydrology

Cardiff State Beach is adjacent to San Elijo Lagoon, which covers a surface area of about 550 acres (225 hectares). The lagoon's watershed covers about 77 square miles (200 square kilometers). Before 1887, the lagoon was a saltwater marsh receiving fresh water, mostly natural runoff, from Escondido Creek. Since then, various projects have affected this process, including the railroad crossing (constructed in 1887), Pacific Coast Highway (1912), the Escondido sewage treatment plant (1954), and Interstate 5 (1965). Two sewage treatment plants were built at the lower end of the lagoon but were abandoned in 1966. In the same year, the existing water treatment facility was constructed which currently discharges treated effluent into the Pacific Ocean.

All these alterations have been responsible for changing the lagoon's ecological condition, resulting in a saline coastal pond in the west and brackish marshland in the east. This ecological diversity has provided a variety of habitats for freshwater, saltwater, and terrestrial plant and animal communities. The lagoon outlet to the sea is normally blocked by a sand bar, so there is little or no drainage or flushing movement. A few times a year, heavy rain and runoff raises the level of the lagoon until the sand bar is overtopped and the outflowing water cuts a deep channel. While the lagoon is open, tidal forces allow an exchange of fresh and salt water. A few days after the sand bar is breached, littoral sand movement usually closes the mouth and ends the tidal exchange.

Geology

Cardiff State Beach is composed of cobbles, beach sand, and fill which separates San Elijo Lagoon from the Pacific Ocean. At the extreme south end of the unit, cliffs rise steeply to an elevation of 60 feet (18 meters). The Delmar Formation forms the lower 30 feet of the cliff and is overlain by the Lindavista Formation. Most of the Eocene-aged Delmar Formation is dusky yellowish-green sandy claystone interbedded with medium-gray coarse-grained sandstone. The Pleistocene-aged Lindavista Formation is composed of boulder conglomerate, conglomeritic sand, and silty sandstone.

Due to the low elevation of this unit, facilities constructed on or adjacent to the beach are subject to damage from tsunamis, high tides, and storm waves. The unconsolidated beach sand may also be subject to liquefaction in association with a seismic event.

The beach is composed of sand and cobbles. During the winter, there is little sandy beach, especially at high tide. The lack of sand is due to a deficit in the amount of littoral sand. Wave action generally moves sand southward along this stretch of coastline. Construction of Oceanside Harbor and the damming of rivers that previously transported large quantities of sediment to the beaches have disrupted the normal process of sand movement. The southward-moving sand eventually reaches the Scripps Submarine Canyon near La Jolla and is lost from the littoral cell. Each year, more sand is lost to the canyon than is replaced by transport of sediment down rivers, creating the deficit. As a result, Cardiff State Beach has less sand each year. Loss of sand exposes the ocean-facing cliffs and oceanside development to direct wave attack, especially during severe storms.

McDon
off shore
1950s
Lagoon
beach

The cliffs at the southern end of the unit are subject to landsliding and rapid seacliff retreat. Seacliff retreat in this area results in a wider beach, as the cliffs are steepened and cut back by wave action. At the southern end of the unit where the cliffs begin to rise is a resistant layer of the Delmar Formation, comprised of abundant accumulations of Eocene-aged fossil oysters. This bed is subject to direct wave attack, undermining, and collapse. As the resistant bed is broken, the base of the seacliff becomes even more subject to direct wave attack and undermining.

Soils

The only soil that occurs at Cardiff State Beach is Marina loamy coarse sand, 2 to 9% slopes. This soil is somewhat excessively drained, very deep loamy coarse sand derived from weakly consolidated to noncoherent ferruginous sand. Fertility is medium. Permeability is rapid.

Plant Life

This unit is mostly ocean beach where almost no terrestrial plant life is established due to the daily inundation by ocean waves. On the upper beach, sea-fig (Carprobrotus aequilaterus) and sea rocket (Cakile edentula) are among the few plants able to survive this harsh environment.

At the south end of this unit is a triangular parcel currently used as a parking lot. In addition to sea-fig and sea rocket, vegetation includes lupine (Lupinus spp.) and myoporum (Myoporum laetum). At the south end of the parking lot, the north-facing cliff slope is heavily vegetated. The understory is sea-fig; the overstory includes Monterey cypress (Cupressus macrocarpa) and Torrey pine (Pinus torreyana). These trees are landscape plants, not native to this site.

This unit also includes 1.4 acres of land adjacent to San Elijo Lagoon east of the highway. This property represents a remnant dune system that has been displaced by the adjacent highway. The dominant plant is sea-fig. Lagoon vegetation is essential habitat for a variety of wildlife.

The state beach property adjacent to San Elijo Lagoon is the site of the beach lotus (Lotus nuttallianus), which is rare in California, but common elsewhere.

Animal Life

Cardiff State Beach provides habitat for shorebirds and gulls on the beach. The value of the beach habitat has been reduced by loss of beach sand. Public recreation activity disturbs shorebird habitat during the summer.

The most conspicuous mammal in the unit is the California ground squirrel whose burrowing has the potential to damage facilities and create hazards for the public.

San Elijo Lagoon, adjacent to the beach, provides habitat for a wide variety of bird life. Three endangered species, the light-footed clapper rail, the California least tern, and the Belding's savanna sparrow, are known to occur at the lagoon. One rare species, the California black rail, also occurs there.

Marine Life

The dominant marine habitat at Cardiff State Beach is the intertidal sand and cobble beach. Both nearshore sandy and rocky sublittoral zones occur. The constant daily shifting of sand and cobbles on the exposed beach makes it a harsh environment for most animals. Relatively few animals and almost no plants exist here.

Species that do live on the beach, including worms, bivalves, and sand crabs, possess unusual behavioral, morphological, and physiological adaptations which allow them to counteract adverse environmental conditions. Cobble beaches are much harsher environments than sandy beaches. Among the cobbles, there is no water-holding capacity. Animals are not able to bury themselves and are often crushed as the cobbles roll about in the surf. As littoral sand continues to be lost from the beach, the diversity and quantity of intertidal organisms will probably decrease.

Offshore fish include surfperch, croakers, corbina, and grunion. Surf fishing and fishing while snorkeling and scuba diving are common activities along the beach.

Cultural Resources

Native American Resources

The unit has been completely surveyed for cultural resources, and there are no known archeological sites, features, or isolated artifacts.

Euroamerican Resources

There are no known historical sites or features within unit boundaries. An underwater survey for cultural resources will be conducted.

Historical Sketch

Human skeletal material found in cliffs at Del Mar near Torrey Pines State Beach has been dated to 28,000, 44,000, and 48,000 years B.P. (before present) by an experimental amino acid racemization dating technique. However, these dates are controversial and are considered to be hypothetical because they have not been confirmed by other dating techniques.

The earliest documented assemblage of tools in this area came from the banks of the San Dieguito River. This site in western San Diego County yielded a small number of leaf-shaped and weak-shouldered projectile points, knives, crescents, cores, flake scrapers, choppers, hammers, and engraving tools. The San Dieguito culture is considered to have been a regional variation of a wide-spread hunting tradition that came to southern California from the Great Basin.

The San Dieguito culture, based primarily on hunting, began 10-12,000 B.P. and lasted to 7,500-8,500 B.P. Four phases of the San Dieguito cultural tradition have been recognized, based on increasing refinement and specialization of tool types.

Archeological sites dating between 7,500 B.P. and 3,000 B.P. include numerous milling stones and mullers that were used to harvest wild seeds. Occupational middens became larger and deeper and include shellfish, some animal bones, and a few heavy projectile points.

A variety of burials have been found in milling stone sites but without elaborate or abundant grave goods. The regional variant of this horizon is called the La Jolla Complex. The La Jolla Complex is known from several sites along the shores, terraces, and nearby hills of the coastal plain, and reflects an economy based on shellfish and seed collecting.

After 5,000 years ago, mortars and pestles were added to handstones and mills for processing plant foods. The projectile points found are better made but are still relatively rare. The following intermediate period up to A.D. 1400 is not well defined in the San Diego area. Pottery was introduced from the east sometime after the beginning of the Christian era and marks the arrival of Yuman-speaking people in San Diego County.

Late Horizon sites after A.D. 1400 include finely chipped projectile points without stems, curved shell fishhooks, a variety of shell, bone, and stone ornaments, and elaborate mortuary customs.

European contact with this part of California began with Juan Rodriguez Cabrillo's 1542 voyage north from Navidad, Mexico. In 1602-1603, Sebastian Vizcaino surveyed this coastline, but no Europeans settled in the area until 1769 when the Mission San Diego de Alcalá was founded at San Diego.

Also in 1769, Governor of the Californias Gaspar de Portola began a land expedition northward up the coast. In mid-July, Portola's party reached the vicinity of the present Carlsbad State Beach. Friar Juan Crespi, who recorded their adventures in his diary, described broad, grassy mesas interrupted by rich, green valleys.

On July 16, 1769, Portola's exploration expedition camped along the banks of the lagoon, a two days' journey from the little colony settlement of San Diego. The explorers named the lagoon in honor of Saint Alexius. Friar Crespi called it "Laguna de San Alijo," while the engineer Manuel Costanso dubbed the area "Canada de San Alexas."

Although Indian people in coastal San Diego County were called Diegueno or Mission Indians, they are now known by and prefer a variety of other names. Many ethnographers use Ipai to describe those living between San Diego and Agua Hedionda, and Tipai for those living in the territory from San Diego south past Ensenada, Mexico, and east beyond the Imperial Valley. Some inland Indian groups prefer the name Kumeyaay.

The Ipai people hunted and gathered a wide variety of foods, with acorns making up a smaller part of their entire diet than those of many other California tribes. They had a well-developed trade system with peoples to the east, from whom they obtained foodstuffs and obsidian. The Ipai rapidly integrated Spanish crops, domestic animals, and some tools into their subsistence economy. However, introduced species, especially sheep, competed with native flora and fauna that were traditional food sources.

The Ipai took poorly to mission life. Six years after the founding of the San Diego Mission, it was attacked by its "own" Indians.

By the close of the 18th century, Portola's original route had become the main coastal road connecting the missions and the large ranches along its path. During the Mexican Period (1821-1846), cattle grazed the coastal hills and valleys, supplying the hide trade centered in San Diego at Point Loma.

The secularization of the missions in 1834 and the American takeover of California in 1846 left most Indians without a legal claim to the land. Access to traditional hunting and gathering areas, including the coast, was increasingly restricted. A series of small reservations was established in scattered inland areas beginning in 1875.

The coast in the vicinity of present-day Cardiff State Beach remained isolated for much of the 19th century. In July 1842, a land grant, the Rancho Las Encinitas, was given to Andres Ybarra, but its western boundary was east of the coast. During the early years of the American period, Joseph Mannassee and Marcus Shiller purchased the rancho but did not extend the holdings to the sea.

The coming of the railroad in the early 1880s caused an extreme interest in the coastal area. A number of small "boom towns" appeared, including a little service town known as San Elijo. While some land was acquired by real estate speculators, other parcels were sold by the U.S. Government under the various School Land Acts. In some cases, homesteads were filed. By 1884, the area bloomed with small farms producing various grains, beans, and small herds of cattle.

J. Frank Cullin, a promoter, in 1910-1911 laid out the town of Cardiff-By-the-Sea around San Elijo. In 1910, a pier was constructed at Cardiff beach just north of "George's Lobster House." The pier was built in conjunction with a salt plant located across the highway in the slough. The plant operated for several years and finally closed in 1915. The next year a major Pacific storm destroyed the pier and cut sections of the coast highway. (Old pilings running north-south are now exposed on the state beach, remnants of an old boardwalk, circa 1916.)

During 1917, a company was formed by several citizens for the purpose of generating electricity with a "perpetual motion machine" run by the ocean swells. A 300-foot pier was constructed on the site of the pier destroyed the year before. Installed on the end of the pier were two "barrel-like, basket gadgets" that went up and down with the tidal surge and swell and were supposed to operate generators; unfortunately, the machine didn't work. In 1919 the pier was again washed out and the "perpetual motion machine" was lost to the sea.

San Diego County acquired the two main parcels of the beach in September 1938 from the Santa Fe Irrigation District, and in September 1948 deeded the property to the State Park System. Small parcels were added to the state beach from 1955 to 1962.

Esthetic Resources

Cardiff State Beach provides opportunities to enjoy the esthetic resources of the Pacific Ocean from the ocean beach and while driving by on the old Coast Highway. San Elijo Lagoon is also visible from the highway. Surfers, sunbathers, fishermen, and swimmers are prominent and positive visual elements of the beach environment. Animal life, including pelicans, shorebirds, whales, and porpoise, can be seen in or from the unit.

Suburban and commercial development near the unit, including the highway, restaurants, power lines, residences, and railroad tracks, all detract from state beach scenery. Low-flying aircraft and traffic can be loud and distracting.

Recreation Resources ✓

Virtually all recreation activities at Cardiff State Beach are beach and ocean oriented. A wide variety of activities occurs, including:

Passive

Sunbathing
People Watching
Picnicking
Beachcombing
Sightseeing
Contemplation
Wildlife Observation

Active

Surf Fishing
Swimming
Skin Diving + SCUBA
Jogging
Volleyball
Beach Play
Boating
Bicycling
Surfing
Windsurfing

Many of these activities, including sunbathing, jogging, and bicycling, do not require a beach environment, but the esthetic qualities of this beach make these activities more enjoyable here.

Resource Policy Formulation

Classification

Cardiff State Beach has been a unit of the State Park System since November 18, 1949. The unit was classified a state beach by the State Park and Recreation Commission in May 1969. The Public Resources Code defines a state beach as a type of state recreation unit as follows:

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

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

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

(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 State Park and Recreation Commission approved the following declaration of purpose for all San Diego coast state beaches on June 19, 1964:

The purpose of San Diego coast state beaches is to make available to the people, for their benefit and enjoyment forever, the scenic and recreational resources inherent to the coastal beaches and adjacent uplands of San Diego County.

The function of the Division of Beaches and Parks at San Diego coast state beaches is to prescribe and execute appropriate programs which provide facilities and opportunities for maximum public use and enjoyment, in accordance with the declared purpose of the unit.

A new declaration of purpose for Cardiff State Beach is established as part of this general plan as follows:

The purpose of Cardiff 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 related uplands.

The function of the California Department of Parks and Recreation at Cardiff State Beach shall be to preserve and protect public opportunities for ocean beach-oriented recreation in a high-quality environment. A natural setting for recreational activities shall be preserved.

Zone of Primary Interest

A zone of primary interest is that area in which the department would like to influence development and use so that a unit's resources will not be seriously jeopardized or degraded.

The zone at Cardiff State Beach includes all adjacent land, the offshore areas, and the water body of San Elijo Lagoon.

In addition, the department is concerned about all lands, no matter how far from the unit, that can, through their development and use, adversely affect the resources and features within the unit. Activities that continue to affect the unit include the generation of air pollution in southern California urban areas and the damming of rivers and the building of breakwaters and other structures along the coastline, which has caused the disruption of littoral sand movement.

Natural Resource Management Policies

The management of natural resources in the State Park System is governed by statutes, policies, and directives found in the Public Resources Code, California Administrative Code (Title 14), and the department's Resource Management Directives. The specific policies from the department's Resource Management Directives that pertain to the natural resources of Cardiff State Beach are: 13, 14, 15, 16, 18, 19, 33, 36, 38, 39, and 46. Directive 18 is particularly relevant to planning southern California state beaches. It is quoted below:

(18) Insofar as is possible in state beaches, the entire area of the sandy littorals will be available for recreational 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.

The Resources Agency established the Policy for Shoreline Erosion Protection on September 14, 1978, which applies to planning, purchasing, and improving State Park System units. The policy states, in part:

Development of the lands adjacent to large bodies of water carries with it an element of danger from wave action, which can threaten the safety of public and private property and recreational values.

It is the policy of the Resources Agency that the use of these lands avoid hazardous and costly situations caused by erosion and minimize or resolve existing problems. Only in those situations where structures or areas of public use are threatened should the state resort to funding or approving remedial projects. When necessary, projects should restore natural processes, retain shoreline characteristics, and provide recreational benefits to the extent possible.

The planning and improvement of parks and beaches should be done in a way consistent with protection against the potential erosion of the affected segment of the coastline, and any structures located in areas subject to erosion damage should be expendable or moveable.

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

Coastal Erosion

Cardiff State Beach is subject to direct wave erosion and beach sand depletion. Any structures built within the unit will be subject to direct ocean wave attack. Commercial buildings adjacent to the beach were damaged by a combination of storm-generated ocean waves and high tides during January 1983.

Policy: No structures shall be constructed at beach level within Cardiff State Beach unless they are portable, expendable, or capable of withstanding direct wave attack. In the design of beach-level parking areas, consideration should be given to using surfaces which are permeable and adjustable to changing elevations.

Littoral Sand Loss

Loss of littoral beach sand at Cardiff State Beach has reduced recreational opportunities and animal life habitat. Sand loss exposes shoreline facilities and ocean-facing cliffs to direct wave attack. Littoral sand loss is a regional problem common to the entire San Diego County coastline. The U.S. Army Corps of Engineers is conducting a regional shoreline erosion study, including the Cardiff area. The study will include the monitoring of littoral sand movement and may make recommendations concerning where artificial sand replenishment may be beneficial.

Policy: Littoral sand loss is recognized as a major threat to existing facilities and recreational resources. The department shall work with other agencies, including the San Diego Association of Governments, the California Department of Boating and Waterways, and the U.S. Army Corps of Engineers, to develop regional solutions to the sand loss problem. Any major program of sand replenishment or retention must consider the regional nature of the problem and the regional impact of actions taken along a segment of the shoreline.

Monitoring Sand Loss

The problem of littoral sand loss has been recognized as a serious threat to facilities. Little information is available on the rates of erosion. If rates of loss were known, a management program could be developed for facility protection or replacement of lost facilities.

Policy: A regular program of monitoring rates of cliff erosion and the width and elevation of Cardiff State Beach shall be established by field staff under supervision of the Southern Region and the Resource Protection Division. The monitoring program should include ground photos, taken at regular intervals at the same locations, to document beach profiles and seacliff retreat.

Landscape Plants

Cardiff State Beach and the adjacent highway are located on the sandy littoral strand separating San Elijo Lagoon from the Pacific Ocean. This sandy zone once provided coastal strand habitat for native vegetation. Such strand vegetation has been displaced by coastal development throughout San Diego County. Additional development at Cardiff State Beach could further displace native plant habitat, a situation which can be mitigated by landscaping any new development with native plants. Native plants also do not require irrigation, thereby saving construction and water costs.

Policy: Any landscaping associated with new developments at Cardiff State Beach shall be composed of native plant materials whenever possible.

Lagoon Management

San Elijo Lagoon, of which 2.7 acres (1.1 hectares) is part of Cardiff State Beach, is an extremely important habitat for a wide variety of plants and wildlife, including several rare or endangered species.

Policy: State beach property at San Elijo Lagoon shall be managed for the perpetuation of native plant and animal habitats. Transfer or sale of this parcel to another agency, to enable the entire lagoon to be managed as an ecological unit, should be considered only if the long-term management of the parcel's ecological values is assured. The California Department of Fish and Game, which owns a portion of the lagoon, shall be consulted on all activities related to lagoon management.

The small portion of San Elijo Lagoon within Cardiff State Beach contains a plant, beach lotus (Lotus nuttallianus), which is rare in California but common outside the state.

Policy: Beach lotus habitat needs and ecological characteristics shall be determined. If needed, a management plan shall be developed and implemented to assure the survival of beach lotus at Cardiff State Beach.

Cultural Resource Management Policies

Management of the cultural resources at Cardiff State Beach is governed by state statutes and departmental policies and directives. The following portions of the Public Resources Code pertain to the management of cultural resources: Chapter 1.7, Section 5097.5 and Chapter 1.75, Section 5097.9.

The following Resource Management Directives pertain to the cultural resources of Cardiff State Beach: 3, 18, 19, 24, 25, 50, 51, 52, 54, 55, 56, 58, 59, 60, 69, 70, 71, and 72.

The inventory of features and this Resource Element have been prepared to comply with the Public Resources Code sections and Resource Management Directives listed above. There are no known cultural resource sites at Cardiff State Beach, but an underwater survey is needed to inventory any remaining offshore piers or foundations.

Policy: Any archeological or historical resources that may be discovered at Cardiff State Beach by department employees should be reported to the Resource Protection Division, which is responsible for maintaining a statewide inventory of cultural resources. Any discoveries should be protected in situ until they can be professionally described and evaluated (based on Resource Management Directives 25, 50, 51, 54, 58, and 70). A clearance is given for this general plan and its development, construction, and resource management projects at Cardiff State Beach, in accordance with Directive 59.

Allowable Use Intensity

California state law (Section 5019.5, Public Resources Code) requires that a land carrying-capacity survey be made before any park or recreational area development plan is prepared. As a step in determining carrying capacity, the department considers allowable use intensity.

Appropriate use intensity is determined by the analysis of three components: 1) management objectives, 2) visitor perceptions and attitudes, and 3) the impact of any development and use on natural and cultural resources.

The management objectives for Cardiff State Beach are generally set forth in the statutes defining a state beach (see the Classification section of this Resource Element).

The second component, visitor perceptions and attitudes, is sometimes referred to in relation to "social carrying capacity," and involves assessing the social objectives of the department, what recreationists perceive as an acceptable recreational environment, what degree of isolation or crowding is acceptable, and other perceptions and attitudes pertaining to the quality of visitor recreation experiences. These factors are very difficult to quantify. State Park System planners must take a leading role in increasing public awareness and appreciation of high-quality recreation experiences.

The third, and most important, component in determining allowable use intensity involves an analysis of the natural and cultural resources to determine the area's physical limitations for development of facilities, and the ability of the ecosystem to withstand human impact (ecological sensitivity). This analysis is based on a number of environmental considerations, including: soils and their erosion and compaction potential; geological factors, such as slope stability and relief; hydrologic considerations, including the potential for pollution of surface waters, flooding, and depletion of surface and groundwater through water use; vegetation characteristics, such as durability, fragility, and regeneration rates; occurrence of paleontological strata; and wildlife considerations, such as tolerance to human activity, wildlife population levels, and stability. Additional considerations in determining ecological sensitivity are: rare and/or endangered plants and animals, unique botanical features and ecosystems, and examples of ecosystems of regional or statewide significance (marshes, riparian areas, and vernal pools).

Based on the preceding factors, four zones of allowable use intensity have been developed for the state beaches in San Diego County (all zones may not exist in each unit):

- I. Ocean beach. Capable of high-intensity use but subject to periodic inundation by ocean waves. No permanent facilities allowed within this zone.
- II. Ocean-facing cliffs. Defined as the zone inland from the toe of the cliff to a horizontal distance equal to the height of the cliff as measured from a vertical plane to the toe. Visitor use restricted to designated corridors to provide access from the terrace level to the beach. New construction only for stairways and trails; special construction methods shall be employed to reduce the potential for accelerating erosion and landsliding. Existing facilities, including buildings and campsites, may remain in use subject to regular inspections by field personnel in coordination with the department's geologist. Use of facilities shall be discontinued if determined to be unsafe.

III. Sand dunes and low areas inland from beach. Subject to inundation only during unusually heavy storms, swells, and tsunamis. Any native vegetation in this zone should be protected. New developments are allowed in this zone, but risk of damage from ocean waves and shoreline erosion is significant.

IV. Terrace lands. Capable of high-intensity public use and development with appropriate setbacks.

Ownership patterns and other limiting factors, including esthetic, socioeconomic, and design considerations, may indicate that a higher or lower use intensity is desirable in a particular area. If appropriate mitigating actions are incorporated in planning and design, and if risks are understood, higher use levels may be acceptable. In these cases, innovative approaches, such as portable buildings and controlled pedestrian accessways, will be used to provide recreation opportunities.

Land Use and Facilities Element

North parking lot



The north and south parking areas at Cardiff State Beach are scheduled for rehabilitation projects to improve parking and recreation opportunities.



South parking lot

LAND USE AND FACILITIES ELEMENT

This element provides information on current land uses around the unit, explains current conditions in the unit, and recommends new facilities.

For purposes of this plan, three study areas have been identified (see Existing Facilities Map):

- Area 1 -- The northern portion, primarily used for informal day-use parking.
- Area 2 -- The central beach portion, including a separate 1.43-acre parcel on the east side of Highway S-21.
- Area 3 -- The southern portion, once known as the Seaside Trailer Park, and currently used as an informal day-use parking area.

Land Use Patterns of Surrounding Area

Cardiff State Beach is somewhat isolated from surrounding land uses by Highway S-21 and San Elijo Lagoon. To the north is San Elijo State Beach. On the east, Highway S-21 forms a definitive boundary. Most of the land east of the highway is the wetland of San Elijo Lagoon. The outlet of the lagoon serves as the boundary between Cardiff and San Elijo state beaches. Three restaurants are located in a pocket of private land west of Highway S-21 near the north end of Cardiff State Beach.

Some off-site parking is currently available for day users at Cardiff State Beach. The parking, informal and parallel to Highway S-21 about midpoint in the unit, occurs within highway right-of-way.

Ownership

Ownership patterns of the unit are fragmented primarily due to the sequence of acquisition. Ownership information is contained in DPR drawing number 17601, Land Ownership Record, dated April 1982. A minor acreage adjustment was made based on planimeter measurements of the map.

The following is the sequence of department acquisition:

1949	--	3.07 acres
1956	--	0.6 acre
1957	--	2.00 acres
1960	--	.74 acre
1962	--	2.15 acres
1963	--	1.00 acre
1973	--	11.73 acres
1976	--	.63 acre
1977	--	.29 acre
Total	--	24.01 acres
1982 Adjusted	--	25.27 acres

Existing Unit Conditions

Cardiff State Beach is primarily a sandy day-use beach with undeveloped parking available at either end of a 6,550-foot beach frontage. Primary uses of the beach include sunbathing, swimming, and surfing. Support facilities are minimal at this time. Attendance in fiscal 1980-81 was estimated at 1,350,000.

In Area 1, at the northern end, a segment of the abandoned old coast highway is used for parking about 100 vehicles. Nearby are two portable chemical toilets and one beach shower.

Area 2, the central portion of the unit, is a moderately narrow, sandy beach with a scattering of lifeguard stands. The entire length of this section of beach is directly adjacent to the coast highway. Currently, visitors parallel park along the highway. The width of available parking space is not consistent along this area. In extremely narrow areas, no parking is allowed. Towards the north end of this segment, adjacent to the restaurants, is an area designated as a small craft boat launch. This is an informal launch and lacks the access space needed to safely maneuver a boat trailer from the highway to the beach. Parking for boat trailers is also limited.

On the east side of Highway S-21, a 1.43-acre parcel is surrounded by the lagoon wetlands. Not contiguous with the rest of the unit, this undeveloped parcel has little compatibility with the other portions of Cardiff State Beach.

In Area 3, the southern end of Cardiff State Beach is primarily used for beach parking. This unimproved parking area will accommodate about 425 vehicles. Existing facilities include an identification sign, four portable chemical toilets, and an emergency beach access ramp. Approximately 1,800 feet of riprap separates this parking area from the sandy beach and provides protection from high surf.

In light of its high use, the unit's lack of facilities and unimproved conditions have put a burden on the operating staff to maintain an acceptable standard of public service. Also, the trend of reduced tax revenue is forcing the department to look at all possible sources to help generate operating funds.*

Proposed Rehabilitation Project

Under Section 5002.2(c) of the Public Resources Code, the department is not required to prepare a general plan for the rehabilitation of an existing facility. Consequently, before the start of this general planning effort, the department initiated a budget request to refurbish both the north and south parking lots (Areas 1 and 3). Concurrent with the preparation of this general plan, the department submitted to the Legislature a request for fiscal year 1983-84 funds to rehabilitate the lots.

*Information regarding the department's economic goals and policies is available under the section "DPR Statewide Program - Mission 1990" in Volume 1 of this general plan.

The parking lot rehabilitation projects are intended to provide necessary sanitary facilities, increase the amount of visitor parking, and generate revenue through day-use parking fees and a concession in the southern lot.

The planned improvements for Area 1 include:

- Paved parking lot for 103 vehicles
- Entrance contact station (portable)
- One 200 series comfort station (portable) ✓
- Two beach showers ✓
- Ten fire rings
- One lifeguard stand
- Signing and minor landscaping

Proposed improvements for Area 3 include:

- Paved parking lot for 556 vehicles
- Entrance contact station (portable)
- Two 500 series comfort stations (portable) ✓
- Four beach showers ✓
- Three beach access ramps ✓
- Concession facility (portable)
- Three portable lifeguard stands
- Interpretive panels ✓
- Signing and landscaping

Land Use Recommendations

The current land uses at Cardiff State Beach are long established and have occurred, in some cases, without adequate facilities. This plan recommends maintaining those uses while proposing improvements and management policies to enhance and protect such uses for the public's enjoyment. Additional acquisition and the deletion of one parcel will enable the department to better serve the needs of the public. (Note: Recommendations involving land not owned or controlled by DPR are provided to coordinate DPR efforts with the appropriate owner or agency and do not constitute a commitment on the part of DPR to unilaterally implement the proposal or pursue acquisition of property.)

The following is proposed for each area:

Area 1

- Facilities planned for this area encroach on the old highway right-of-way. It will be necessary to acquire management responsibility for approximately 1.50 acres from San Diego County. Measures to secure necessary rights have begun as part of the rehabilitation project.

Area 2

- The 1.43-acre parcel east of Highway S-21 will be declared surplus property. It is recommended that the parcel be transferred to the Department of Fish and Game or another appropriate public agency to ensure the proper management of wetland resources present on this parcel.

Facility Recommendations

These proposals are the result of many contributing factors. Public involvement, Local Coastal Plan recommendations, operational experience, and other information previously mentioned in this document have provided their foundation.

In addition, nature has played a major role. Winter storms in late 1982 and early 1983 caused severe damage at beach units throughout California. At Cardiff State Beach, these storms resulted in considerable alteration of an existing riprap and concrete sea wall, as well as general site inundation. This situation underscores the need for a fundamental change in the approach previously used for beach development.

In coastal units, the department has constructed solidly built structures and paved parking areas in locations where sea walls and riprap were required to protect them. When confronted with severe storms, these protective measures are usually not entirely effective.

We should consider what appears to be a more prudent approach to future beach-level structures. This involves the use of portable buildings in lieu of permanent structures in locations subject to inundation. During the winter, the structures would be removed from the site and stored until storm conditions subside. This method would entail the use of staff and funds to move the structures on or off site as conditions change.

The following listing of recommended actions for the development of Cardiff State Beach is organized by area as identified on the General Plan Conceptual Map. Commission approval of the general plan will apply only to those recommendations specifically involving DPR property at the time of the commission's action.

Area 1

- Major rehabilitation has already been proposed for this area. (See Proposed Rehabilitation section for explanation.)
- This area would serve as the primary day-use access point for divers in the event an underwater facility is established at San Elijo State Beach. (See volume six for more information.)

Area 2

- Discontinue highway parking to eliminate safety and traffic congestion problems.
- Develop a small-boat launching ramp extending from the highway shoulder to the sand. The length of the ramp will be minimal, to allow for a safe transition to the beach from the highway. An area adjacent to the ramp shall be designated for five car or trailer parking spaces. Identification signing will be necessary.
- Develop bus stop pull-outs in two locations as shown on the General Plan Conceptual Map. Cooperation with the local transit agency will be required.

Area 3

- Major rehabilitation has already been proposed for this area. (See Proposed Rehabilitation section.)

Putting all proposals into effect will substantially improve recreational opportunities at this unit. Table 1 provides a summary of key recreational facilities before and after implementation.

Table 1
Facilities Summary

<u>Facility</u>	<u>Existing on DPR Property</u>	<u>After Implementation</u>
Comfort Stations	3	3
Concessions Buildings	1	1
Car Parking Spaces	653	659
Small-Boat Launch	1	1
Beach Showers	6	6
Entrance Stations	2	2

Note: "After Implementation" figures include existing facilities. Existing facility figures include the proposed rehabilitation projects to be constructed.

This plan involves the potential acquisition of 1.5 acres of land in Area 1. Also the plan proposes deleting a 1.43-acre portion of Area 2. With these actions, total unit acreage would be increased from 25.27 acres to 25.34 acres, a net gain of .07 acre.

Special Considerations

Local bus service will be more effectively used by providing safe and appropriately spaced bus stops near the unit. This will substantially improve beach access while potentially reducing nearby traffic congestion.

State law requires that projects be designed to be accessible to the physically disabled. Beach ramps in Areas 1 and 3 will allow beach access from parking lots and other facilities. All structures and parking areas will be designed to accommodate wheelchairs and, where appropriate, braille signing.

Local Coastal Plan Conformance

Proposals contained in this general plan are consistent with policies and designations identified in the Local Coastal Plan adopted and certified by the California Coastal Commission in June 1981.

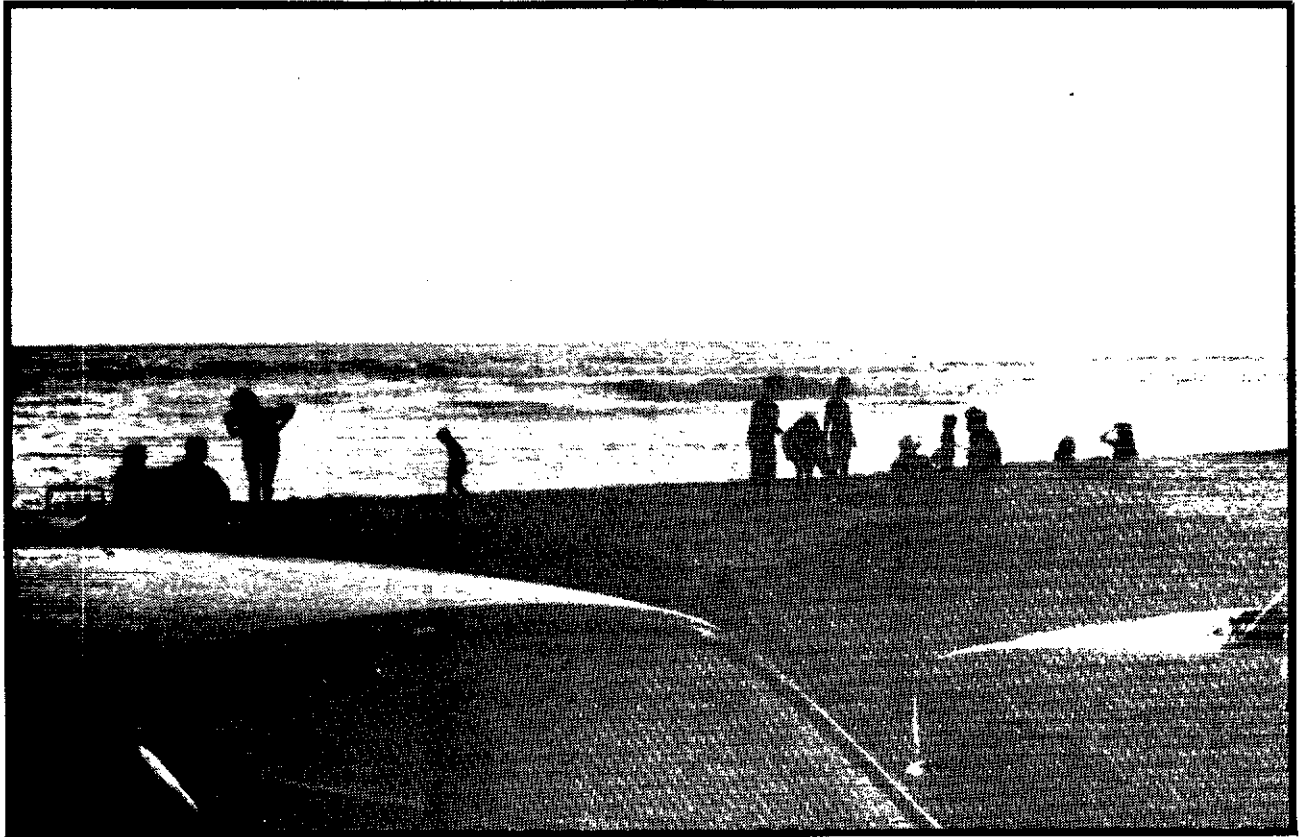
Sequence of Action

As previously explained, the project for rehabilitating the parking lots has already been initiated. In recommending a sequence of implementation, it is assumed that the parking lot rehabilitation will be completed as scheduled. Next in order of priority would be:

1. Boat launching improvements
2. Bus stop developments

If the rehabilitation project is not funded, it will be deemed a high-priority item to be programmed into the regular general plan implementation schedule. The 1.43-acre parcel east of Highway S-21 can be deleted through normal surplus procedures at any time without interrupting the sequence of implementation.

Interpretive Element



Beach discovery walks, water safety, and rescue demonstrations are some of the interpretive programs proposed for Cardiff State Beach.

INTERPRETIVE ELEMENT

This general plan element outlines interpretive programs and facilities to enhance the recreational experience available at Cardiff State Beach. (The unit's interpretive prospectus on file with the department contains additional information.)

Methods and Media

Suitable interpretive methods and media include demonstrations, outdoor exhibit panels, a small mobile exhibit trailer (shared with other San Diego coast state beaches), Junior Lifeguard programs, off-site talks, and beach discovery walks. Water safety and rescue demonstrations (possibly in conjunction with Junior Lifeguard programs) should be conducted by the lifeguards. Docents could conduct beach discovery walks, as well as demonstrate recreational forms such as surf fishing and surfing.

Interpretive Themes

Staying Safe at the Beach

Interpretation should explain the dangers posed by rip currents and offer advice as to how to avoid and escape them. Other beach safety tips recommended by the lifeguards should be interpreted. Current weather, tide, surf, and emergency information, fishing regulations, interpretive program schedules, and natural history information should be posted on a bulletin board.

Catching Fish at the Beach

The common saltwater sport fishes caught along the San Diego coast and the angling techniques used to catch them should be interpreted. The grunion merits special emphasis.

The Animals of the Coast and How They Live

The varied life forms and lifestyles of the common invertebrate and vertebrate animals of the San Diego coast should be interpreted. Interpretive approaches could include: "The Life Underfoot" (the invertebrate life in the wave-wash zone), "A Bill for Every Purpose" (a comparison of size, food, behavior, and bill length among common shorebirds), and "Sea-Going Mammals" (identification and interesting life history information on the San Diego coast's common marine mammals).

Flotsam and Jetsam -- Where did it come from? Where will it go?

Beachcombers are naturally curious about things washed up on shore. Commonly found objects of plant and animal origin, such as kelp blades, seashells, crustacean shells, jellyfish, and floating shark egg cases, should be interpreted in light of their original form and lifestyle and their ultimate consumption by beach invertebrates. In contrast, human-originated flotsam, such as styrofoam, bottles, cans, fish lures, and plastic packaging, should be interpreted in light of its nonbiodegradable qualities and the hazards it poses to both humans and wildlife.

Rivers of Sand

The local littoral cells, the factors affecting their sand input, and the seasonal and long-term dynamics of San Diego County's beaches need to be interpreted so that the visitor can better understand the changing size of the beach.

It's Costing You!

The short- and long-term recreational, esthetic, health, wildlife, and fiscal costs of littering and vandalism on the state beaches of California need to be interpreted in a positive problem-solving manner. Slide programs, campfire talks, off-site talks, and newspaper articles are appropriate media to interpret this issue.

What the Railroad Brought

The development of the once-remote northern San Diego coast into a string of resort communities should be interpreted in light of the changes brought by the completion of the railroad in the early 1880s. The 1910 salt plant pier and the later 300-foot-long experimental electricity-producing pier, which were built in the Cardiff area, should be interpreted. A selection of early photographs depicting southern California beach recreation scenes could interpret the changes and similarities in beach use over the last century.

Visitor Facilities

Interpretive panels and an information bulletin board exhibited in outdoor kiosk shelters or attached to buildings will constitute the major fixed interpretive facilities. They should be as impervious as possible to corroding elements and vandalism. By associating them with heavily used, well-lit areas, they would be both well used and better protected from vandals. These shelters should be designed to accommodate standard-size, interchangeable panels which should be rotated to interpret seasonal topics. Panels with coastwide themes should be shared with nearby state beaches to maximize use of interpretive resources. As the center of activity at Cardiff State Beach will be the paved area around the future concession-restroom area, this would be a good place to provide orientation and interpretive information.

A mobile exhibit trailer can be designed as an interpretive facility for use along the entire San Diego County coastline. Exhibitory would not have to be confined to two-dimensional panels, and interpretation could cover in more detail such topics as marine terrace formation, ocean currents, sand movement, and erosion. Photographs and artifacts should be employed to give an idea of what equipment early California beachcombers used and what they wore. In addition, the natural world can be interpreted for visitors through photographs or an audio-visual program. This would help identify birds and marine mammals, show rarely seen plants and animals, and illustrate the problems facing endangered species.

In short, the trailer could become a roving interpretive center, useful not only at the state beaches but also as a way to reach school children throughout the region during the off-season.

Other off-site locations where interpretation should occur are the highway reststops en route to the San Diego coast. These should orient people to all the state beaches and describe the facilities and activities available at each.

Visitor Activities

State Park System visitor activities involving interpretation fall under the category of personal services. As such, they require trained interpretive personnel, docents, rangers, or lifeguards. Appropriate visitor activities for this unit include talks (on natural and historic resources and the State Park System), guided tours (beach walks and birdwatching), and demonstrations (lifeguard rescue, aquatic safety, and surf fishing). If a docent organization is established for Cardiff State Beach, some of these activities could be led by docents.

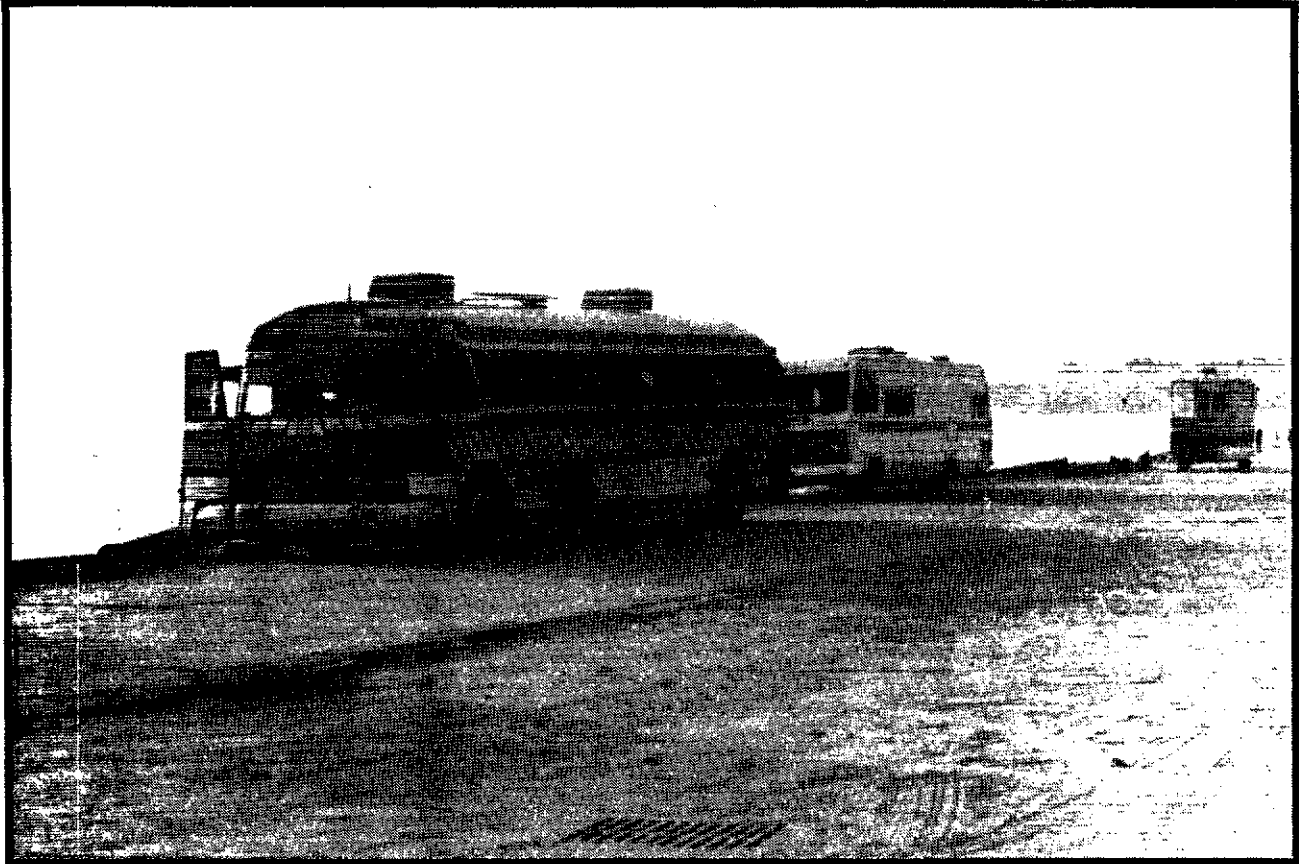
Revenue-Generating Activities

A nominal entrance fee might be charged at the proposed interpretive trailer when it is at Cardiff State Beach. Tours, walks, and demonstrations should first be established free of charge to test public acceptance before any consideration is given to charging for these services. Safety demonstrations should never involve a fee.

Recommendations

- Fund four interpretive panels to be attached to permanent structures near the future concession-restroom area.
- Provide a mobile regional interpretive exhibit trailer at this unit.
- Develop a teachers aid packet for visiting school groups, and to encourage and facilitate visitation during the off-season. This packet should address wetland resources, such as San Elijo Lagoon, as well as the beach and ocean environments.
- Work with the State Department of Transportation (Caltrans) to provide regional orientation panels at roadside reststops along Interstates 5 and 8 in San Diego County. The panels would orient motorists and potential State Park System visitors to the diverse recreational opportunities offered in the system, and provide detailed information on the San Diego coast units.
- Schedule beach walks, on- and off-site talks, aquatic safety demonstrations, and surf fishing demonstrations at times when projected visitor participation would warrant such efforts.
- Coordinate lagoon interpretation with San Elijo State Beach and any future interpretive facilities and programs established by the California Department of Fish and Game and/or San Diego County.
- Encourage the formation of an interpretive association to provide personal interpretation and to raise funds to further the interpretive effort.

Operations Element



The collection of day-use fees will be one of the operational changes proposed once the parking areas are rehabilitated.

OPERATIONS ELEMENT

Current Conditions

Cardiff State Beach is in the San Diego Coast management area. Current operations involve Area 1 (including the north parking lot), Area 2 (the undeveloped central beach area, including the isolated parcel across the highway), and Area 3 (the southern parking lot).

At Cardiff State Beach, staff currently:

- Provides lifeguard and law enforcement services
- Maintains two informal parking lots
- Contracts service for portable chemical comfort stations
- Provides litter pickup

Future Conditions

The general plan will improve service to the public and provide more consistent management, particularly in Areas 1 and 3.

Implementation of the general plan proposals will also substantially increase the workload of the staff by adding the following responsibilities:

- Maintenance of three new comfort stations
- Staffing and maintenance of two additional contact stations
- Concession supervision
- Additional pavement maintenance
- Landscape maintenance

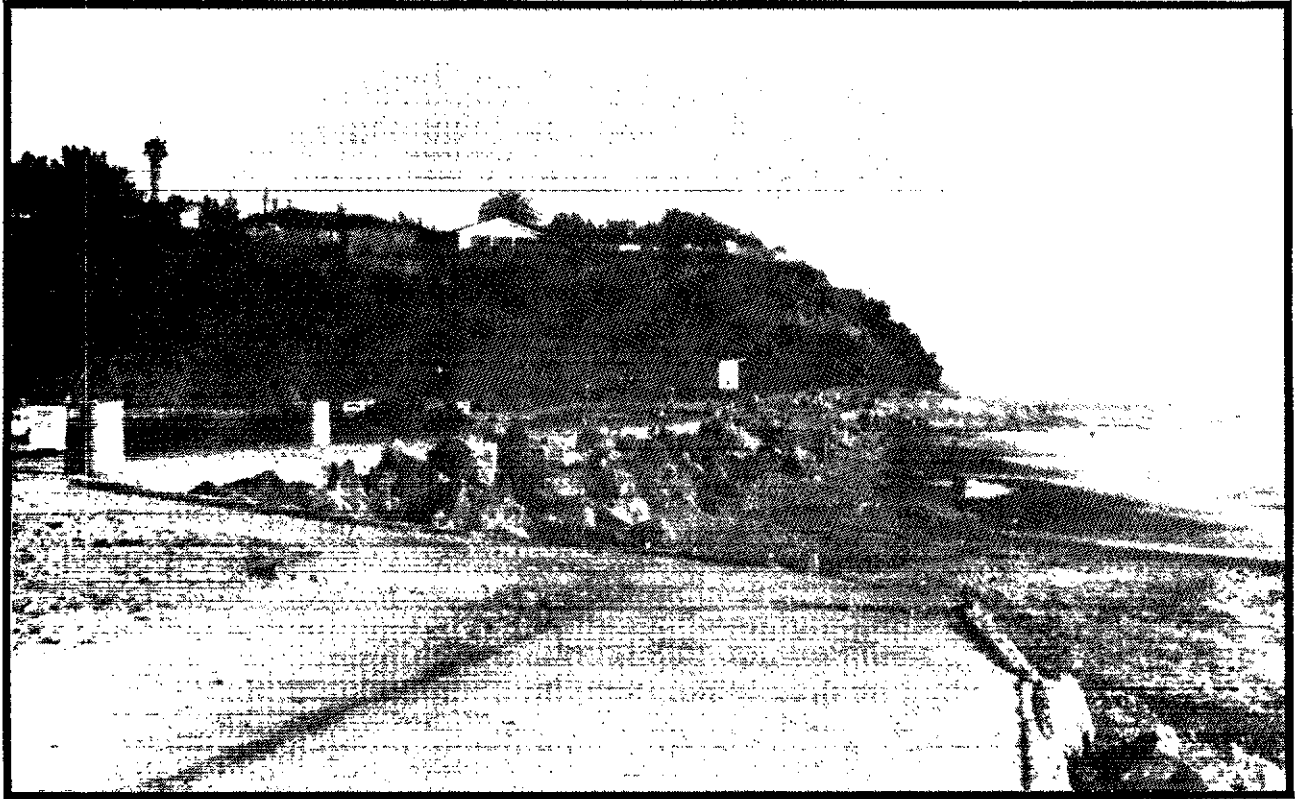
Revenue Generation

If developed as proposed, the unit will generate revenues to help offset the costs of these additional responsibilities. Parking space for a total of 559 cars, under the control of two entrance stations, will provide additional revenue. Assuming capacity use on 150 days a year and a turnover factor of two per day, potential revenue can be estimated as follows:

$$\begin{array}{r} 559 \text{ spaces} \\ \times \quad \$3 \text{ per space (day-use fee)} \\ \hline \$1,677 \\ \times \quad 2 \text{ (turnovers per day)} \\ \hline \$3,354 \text{ total revenue per day} \\ \times \quad 150 \text{ days} \\ \hline \$503,100 \text{ total revenue per year, plus concession returns} \end{array}$$

This hypothetical example is provided to evaluate the cost-benefit ratio of the proposed development. Development costs are currently estimated at \$2,250,000.

Concessions Element



A mobile concession facility is one of the improvements scheduled for the south parking lot rehabilitation project.

CONCESSIONS ELEMENT

Existing Conditions

Currently, there is no concession at Cardiff State Beach.

Future Concession Activities

A preliminary study of the concession needs conducted during the rehabilitation planning for Area 3 (south portion) of Cardiff State Beach indicated that this area has excellent potential for a beach stand concession. Area 3 serves the majority of users at Cardiff State Beach. As a result, a concession is included as a part of the rehabilitation project. Concession activities at this location will include beach equipment rentals, and the sale of food, drinks, and beach-related accessories.

In addition, an agreement has been signed with the restaurant adjacent to the north (Area 1) parking lot, which allows the restaurant to use designated parking space in the lot for valet parking. The agreement expires December 31, 1983. Restaurant use of the lot is limited to the hours the unit is normally closed. The restaurant pays a monthly fee for this privilege.

Economic Impacts

The concession is needed to supplement other facilities and to generate revenue to help offset unit operating costs. The concession will have little or no impact on commercial services already provided in the vicinity.

Environmental Impact Element



The entire unit is subject to potential wave damage during storms.

ENVIRONMENTAL IMPACT ELEMENT

Explanatory Note

In accordance with SB 1892, Chapter 615, this general plan (with this Environmental Impact Element) constitutes a report on the project for the purposes of the California Environmental Quality Act. The plan indicates management policies and development plans for Cardiff State Beach. The Draft Environmental Impact Element (or Environmental Impact Report) analyzes and reports potential impacts of these policies and plans on the environment.

Because the general plan is broad in scope, the Draft Environmental Impact Element is a broad, general assessment of environmental impacts. Should specific plans be proposed and budgeted for implementation, more detailed environmental assessments will be prepared along with documentation required by the California Environmental Quality Act. The level of detail of this Environmental Impact Element corresponds to that of the general plan (California Administrative Code, Section 15147).

This Draft Environmental Impact Element has been prepared according to the amended mandates of the California Environmental Quality Act, which call for an objective assessment of the proposed project's environmental consequences. Those aspects of the proposed project with the greatest potential to cause an adverse change in the environment have been emphasized. Existing environmental conditions and effects that are not expected to cause a substantial adverse change in the environment are briefly discussed. Also, published documents such as county general plan elements and local coastal plan elements are incorporated into this report by reference to avoid unnecessary repetition.

Pursuant to the Public Resources Code, Section 5002.2a, and the California Administrative Code, Section 15147, and also to avoid needless repetition, the Environmental Impact Element incorporates by reference all information contained in the preceding elements of this document.

To begin the general plan process, the inventory of features of a State Park System unit (a documentation of the unit's natural, cultural, and recreational resources) is critically analyzed in terms of the purpose, philosophy, and objectives of the unit. Specific policies for the management of the unit's resources are then formulated. (The inventories of features for all units in this general plan are on file with the department's Resource Protection Division in Sacramento.) State Park System planners then work within the framework of the Resource Element to develop unit plans.

Development proposed for this unit reflects the policies presented in the Resource Element of this plan. User facilities that have been selected will promote public use and encourage enjoyment of the unit without impairing and devastating the natural and cultural values. Throughout this planning process, a continuing analysis of possible impacts is made so that mitigating measures, such as decreasing use intensity, can be designed into the general plan to provide recreational opportunities to complement and preserve the unit's valuable resources.

Description of the Project

Please refer to the Land Use and Facilities Element.

Description of the Environmental Setting

For information on topography, climate, hydrology, geology, soils, biota, and other resources, please refer to the Resource Element. For information on land use, see the Land Use and Facilities Element.

Air Quality

Cardiff State Beach is located in the South Coast Air Basin. The overall air quality of San Diego County is good. During 1981, California Air Quality Standards were equaled or exceeded for three pollutants: ozone, nitrogen dioxide, and particulate matter. The standard for ozone was equaled or exceeded 192 days, nitrogen dioxide one day, and particulate matter 41 days during the year.

Ozone is the most important atmospheric pollutant in San Diego County. A major reason for the high levels of ozone in the county is the pollutant transport from more densely populated areas to the north in Los Angeles, San Bernardino, and Orange counties. Ozone levels are lower along the coast and increase as one moves eastward and inland.

The closest air quality monitoring station to Cardiff State Beach is in the City of Solana Beach, about 1.5 miles to the south. The air quality of Solana Beach is very good, and it is expected that the air quality of Cardiff State Beach is similar.

At the Solana Beach air quality monitoring station, only one pollutant, ozone, is monitored. During 1981, the California Air Quality Standard for ozone was equaled or exceeded 55 times (days), compared to 35 times (days) during 1979.

Noise

The two major sources of noise at Cardiff State Beach are vehicle and train traffic. Other minor sources of noise are human activity and the surf. The four-lane Pacific Coast Highway runs parallel to the state beach. Highway noise experienced by state beach visitors is in the 69-85 dBA range.

The Atchison, Topeka and Santa Fe Railroad tracks run parallel to the state beach at a distance varying from 300-700 feet. There are usually 14 trips per day. The trains produce noise in the 50-80 dBA level, depending on the distance from the source.

Human recreational activities produce noise in the 50-65 dBA level, depending on the activity and distance from the source. The surf is also a source of constant noise.

The following data concerns Santa Fe Railroad operations in the vicinity.

<u>Train Type and Direction</u>	<u>Length (ft.)</u>	<u>Speed (mph)</u>	<u>Number Equivalent Daily Operations</u>
Freight North	2,500	60	33
Freight South	2,500	60	23
Passenger North	655	90	16
Passenger South	655	90	7

(Source: City of Carlsbad, Draft Environmental Impact Report for the Widening and Extension of Poinsettia Lane, March 10, 1983.)

Human Community Factors

The 1980 census population of Cardiff-by-the-Sea was 10,054, including 8,549 (85%) White, 28 (.28%) Black, and 1,181 (11%) of Spanish origin. Half the population (4,997) was female.

The census also indicated there were 2,434 families in Cardiff-by-the-Sea and that 2,144 (88%) were White, 5 (.20%) Black, and 213 (9%) of Spanish origin.

According to the census, the population of Cardiff-by-the-Sea increased 75.6% over 1970, from 5,724 to 10,054. The median home value for Cardiff-by-the-Sea was \$117,200.

Public Services

Water

Water is provided to Cardiff State Beach by the San Dieguito Water District. The system is not at capacity, and there were no restrictions to new connections as of February 1983.

Sewer

The portion of the San Diego Coast that includes Cardiff State Beach is serviced by the Department of Public Works, Water and Flood Control. The sewage system is not at capacity (as of February 1983), and there are no restrictions for new connections.

Traffic

Access to Cardiff State Beach is via the Pacific Coast Highway, a four-lane highway (two northbound and two southbound lanes).

Traffic volumes for the stretch of Pacific Coast Highway adjacent to Cardiff State Beach were not available. However, volumes for the Pacific Coast Highway north, near Chesterfield Avenue, were available and are as follows: during July 1982, the volume southbound was 8,460 vehicles and northbound was 7,860 vehicles. The combined volume (northbound and southbound) for the Pacific Coast Highway south of Chesterfield Avenue during July 1981 was 17,086 vehicles.

The peak traffic hour of the Pacific Coast Highway north of Chesterfield Avenue is 11:30 a.m.; south of Chesterfield Avenue it is 12:30 p.m. The volume is about 10% of average daily traffic.

Fire/Paramedic

Fire services are provided by the Encinitas Fire Protection District. The closest fire station to Cardiff State Beach is Fire Station 2, at the corner of Birmingham and McKinnon, about 1.5 miles from the beach. Response time for a fire unit is less than five minutes.

Routine first-aid is administered to Cardiff State Beach visitors by state park lifeguards and rangers. In life-threatening situations, paramedics from the Encinitas Fire Protection District's headquarters unit at 415 Second Street in Encinitas are called. The response time for the paramedic unit is about five minutes.

Police

Law enforcement at Cardiff State Beach is handled by state park personnel. Both state park lifeguards and state park rangers are designated as state park peace officers and are responsible for law enforcement on State Park System lands. The San Diego County Sheriff's Department provides law enforcement services to the Cardiff-by-the-Sea area.

The closest sheriff's station to Cardiff State Beach is at 175 North El Camino in Encinitas. When the sheriff is called to back up state park personnel, the response time is about five minutes, depending on the location of the sheriff unit and traffic conditions.

Cultural Resources

For information on Native American and Euroamerican cultural resources, please refer to the Resource Element.

Scenic and Recreational Values

Please refer to the Resource Element.

Environmental Impacts of the Proposed Project

The only difference between the 1983-84 rehabilitation project and general plan recommendations is the plan's call for upgrading of the informal boat launch facility and bus stop pull-outs in Area 2. Since these last two projects are seen as minor, they will be evaluated along with the 1983-84 rehabilitation project. The cumulative impacts of all projects will then be assessed. As a result, no additional environmental documentation will be necessary for the development and rehabilitation covered by this general plan.

Significant Environmental Effects

Effects on Soils and Geology

The rehabilitation of the parking facilities in Area 1 (103 spaces) and Area 3 (556 spaces), and the upgrading of the informal launch facility in Area 3 (5 spaces), will require grading and other modifications to the sand. The undergrounding of utilities will also require disturbance of the ground surface.

Mitigation Measures: Areas within the project which have been disturbed and are subject to erosion will be landscaped, or other measures will be used to reduce the amount of erosion.

Effects on Hydrology and Water Quality

The surfacing of the parking lots in Areas 1, 2, and 3 will increase the amount of impervious surface area. The increase in impervious surface area will mean an increase in the amount of surface water runoff. The surface water runoff from the parking lots will contain pollutants such as oil, chemicals, and asbestos.

Mitigation Measures: The parking lots will be designed to disperse surface water runoff into many small drainages rather than collecting the water into several larger structures. Surface water will be directed into percolation strips and allowed to percolate into the sand rather than flow into the ocean or San Elijo Lagoon. Pollutants contained in surface water runoff will be deposited into the sand as it percolates. The pollutants are not expected to have a significant impact on area water quality.

Effects on Scenic and Recreational Values

The development identified in the general plan will have a positive affect on the scenic and recreational values of the state beach.

Unavoidable Environmental Effects

1. The sand surface will be altered.
2. There will be an increase in impervious surface area.
3. The amount of surface water runoff will increase.

Alternatives to the Proposed Project

1. NO PROJECT: There would be no rehabilitation of existing facilities and new facilities would not be constructed. This status quo alternative was rejected because it does not meet public needs.
2. ELIMINATE UPGRADING OF THE INFORMAL BOAT LAUNCH IN AREA 2: If this alternative had been selected, the development outlined for Areas 1 and 3 would take place. The amount of ground disturbance and paving would be reduced. This alternative was rejected because it does not allow the department to provide a variety of quality facilities to meet part of the recreational demand.
3. REHABILITATE AREA 2 ONLY: The selection of this alternative would mean that Areas 1 and 3 would remain as they are now and would not be rehabilitated. There would be less ground disturbance, paving, and surface water runoff.

This alternative was rejected because the department wants to provide quality recreational facilities at all three areas of Cardiff State Beach.

Relationship Between the Local Short-Term Uses of Man's Environment and the Maintenance of Long-Term Productivity

The current short-term use of Cardiff State Beach is beach-related recreation. If the property was not in State Park System ownership, it would most likely be developed for residential or commercial uses. The short-term use of the land proposed by this general plan includes measures designed to improve and protect unit resources, and will, therefore, protect its long-term productivity. The relationship between short-term and long-term productivity is complementary, one in which the short-term use retains and expands the environment's long-term productivity.

Irreversible Environmental Changes and Irretrievable Commitments of Resources Which Would be Involved Should the Proposed Project be Implemented

If future demands or environmental priorities change and this site is deemed more suitable for other uses, the area will not have been altered enough by the project's implementation to preclude changes in its uses. Proposed development will utilize some undeveloped land for a boat launch facility. Some nonrenewable resources in the form of oil, gasoline, and other petrochemicals will be expended. Nonrenewable resources in the form of aggregate materials and other construction materials will also be consumed.

Growth-Inducing Impacts of the Proposed Project

The development and rehabilitation outlined in this general plan will improve the quality of the recreational experience available to Cardiff State Beach visitors. There will be a three-vehicle increase in the amount of available parking. Proposed development and rehabilitation is not considered growth-inducing.

Effects Found Not to be Significant

Development and rehabilitation outlined in this general plan will not have a significant adverse impact on the following: climate, population, community development, water, sewer, police, and fire services, hydrology, biota, air quality, noise, land use, cultural resources, and scenic values.

Organizations and References Consulted

California Department of Boating and Waterways
California Department of Fish and Game
Cardiff-by-the-Sea Town Council
County of San Diego Department of Planning and Land Use
County of San Diego Department of Traffic Engineering
County of San Diego Sheriff's Department
Southern California Association of Governments

* * *

California Air Resources Board, Summary of 1979 Air Quality Data, 1980.

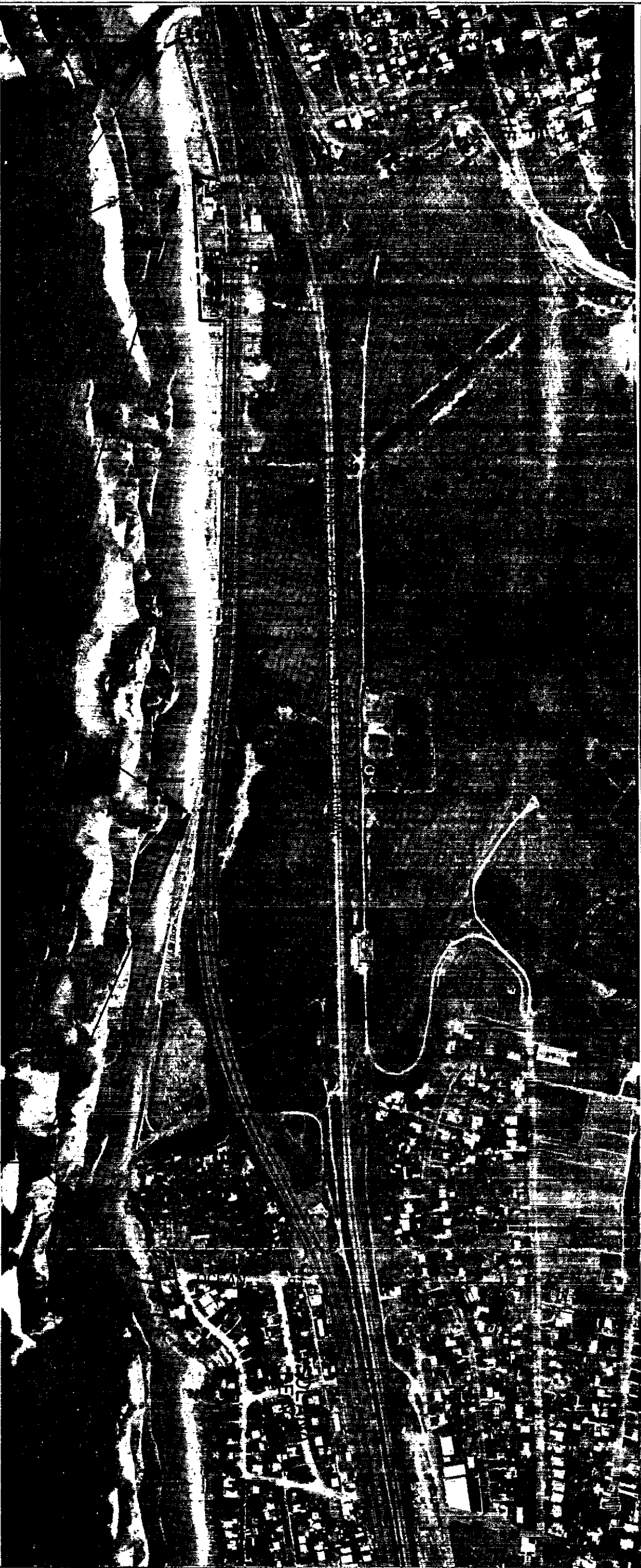
California Air Resources Board, Summary of 1981 Air Quality Data, 1982.

United States Department of Commerce, Bureau of the Census, 1980 Census of Population, July 1982.

Maps



Cardiff State Beach is a popular coastal access point -- when sand is present.



AREA 1

- SCHEDULED FOR PARTIAL ACQUISITION AND REHABILITATION
- DAY USE PARKING FOR 103 CARS
- COMFORT STATION



AREA 2

- INFORMAL SMALL BOAT LAUNCH FACILITY
- PARALLEL PARKING ALONG THE HIGHWAY



AREA 3

- SCHEDULED FOR REHABILITATION
- DAY USE PARKING FOR 550 CARS
- CONCESSION
- 2 COMFORT STATIONS AND LANDSCAPING



CARDIFF STATE BEACH

GENERAL PLAN

LEGEND

—— DPR BOUNDARY

NOTE: PHOTO BASE COURTESY OF THE DEPARTMENT OF NAVIGATION AND OCEAN DEVELOPMENT. PHOTO BASE DATE 4-23-78.



RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF PARKS AND RECREATION

APPROVED _____ DATE _____

REVISIONS

DATE

DESIGNED

DRAWN

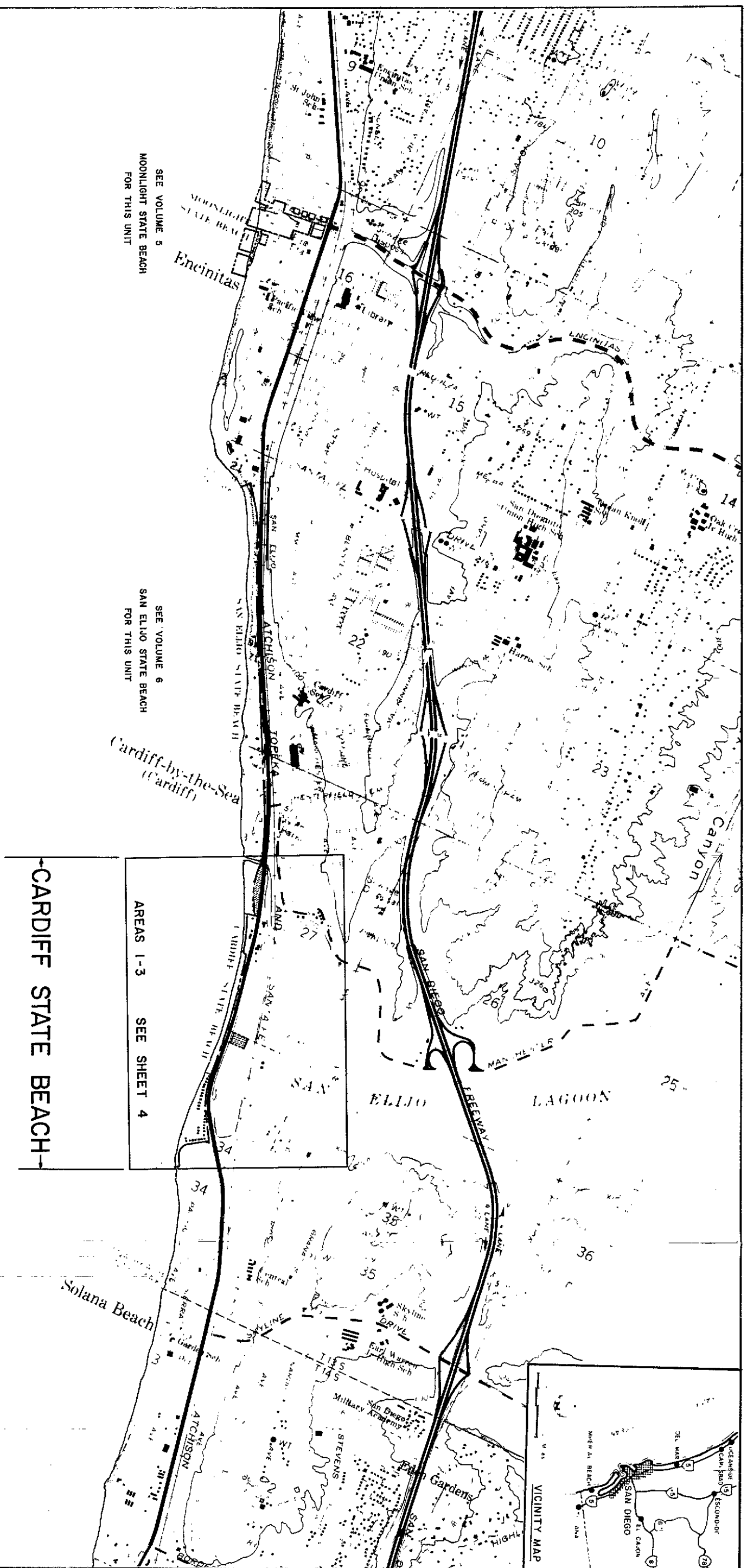
CHECKED

CARDIFF STATE BEACH
SAN DIEGO COAST
GENERAL PLAN
EXISTING FACILITIES MAP

DRAWING NO.
19152

SHEET NO.
2
OF
4

CARDIFF STATE BEACH GENERAL PLAN



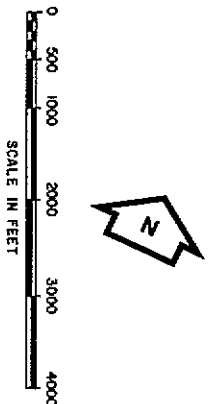
SEE VOLUME 5
MOONLIGHT STATE BEACH
FOR THIS UNIT

SEE VOLUME 6
SAN ELIJO STATE BEACH
FOR THIS UNIT

AREAS 1-3 SEE SHEET 4

CARDIFF STATE BEACH

- LEGEND**
- EXISTING STATE PARK OWNERSHIP
 - ▨ AREAS OF POTENTIAL BOUNDARY ADJUSTMENT
 - AREA OF CONCEPTUAL MAP



DRAWING NO. 19152 SHEET NO. 3 4	CARDIFF STATE BEACH		REVISIONS	DATE	DESIGNED
	SAN DIEGO COAST GENERAL PLAN				DRAWN
	INDEX MAP				CHECKED
CALIFORNIA DEPARTMENT OF PARKS AND RECREATION					

THE SAN DIEGO COASTAL STATE PARK SYSTEM GENERAL PLAN

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