

UNIT 612

CARLSBAD STATE BEACH

GENERAL PLAN

November 1983



San Diego Coastal State Park System General Plan

VOLUME 2



CARLSBAD

Preliminary

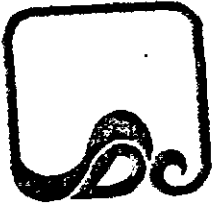
July 1983



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

This is volume two 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 |
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| 1 | Summary and Regional Data |
| 2 | Carlsbad State Beach |
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| 9 | Silver Strand State Beach |



San Diego Coastal State Park System General Plan

VOLUME 2

PRELIMINARY GENERAL PLAN

CARLSBAD State Beach

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July 1983

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General Plan in NOV 1983
A Final General Plan was printed dated JULY 1984

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General Data



Looking south from the Tamarack Avenue parking lot

(1982 DPR photo)

GENERAL DATA ON
CARLSBAD STATE BEACH

Location: On the Pacific Ocean, in the City of Carlsbad (San Diego County), near the mouth of Agua Hedionda Lagoon, west of Carlsbad Boulevard between Pine Avenue and the San Diego Gas and Electric Company's Encina Power Plant. This unit is about 26 miles north of the City of San Diego.

Size: 24.88 acres with approximately 7,150 lineal feet of ocean frontage. The unit is comprised of four separated parcels.

Existing Facilities: Three parking lots totaling about 270 car spaces, one comfort station, and an area office. Two comfort stations, a beach access stairway, and portions of the Tamarack Avenue parking lot were destroyed by storms in early 1983.

Vegetation: The state beach has retained very little native vegetation. Exotic plants growing on the cliff faces of the northern section include giant reed, sea-fig, and statice. Near the south end of the beach is a "beach primrose scattered herb" community. On the south bluff, a "toyon short open scrub/sea-fig herb" community exists. No rare or endangered plants are known to be on the site.

Wildlife: The unit is a habitat for shorebirds and gulls, as well as ground squirrels. No rare or endangered species are known to exist here.

Outstanding Features: The beach in front of Agua Hedionda Lagoon provides outstanding beach-oriented recreational opportunities because sand is replenished through periodic dredging of the lagoon.

Historical and Archeological Values: This unit has been extensively surveyed, and no archeological or historic sites are known to exist.

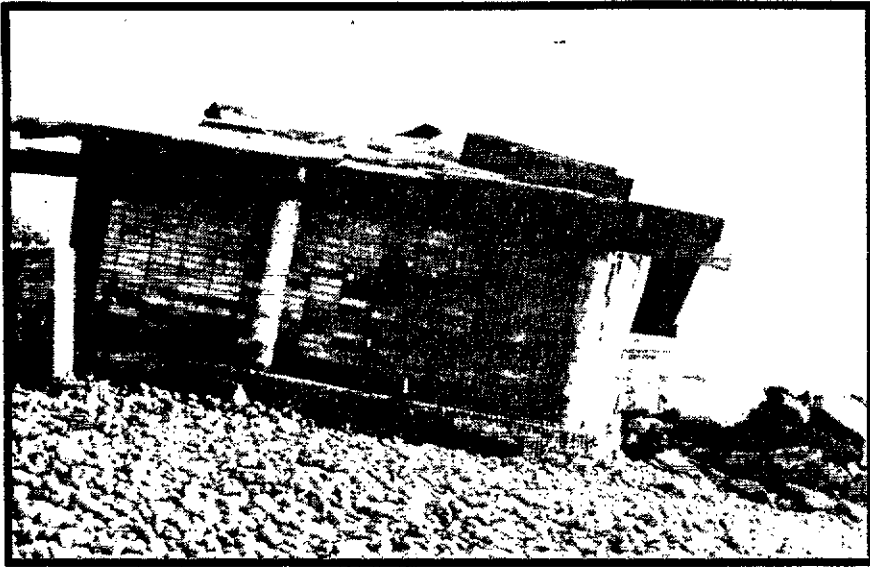
Ownership: The initial unit, acquired in 1933, was made up of 10 acres located between Pine Avenue and the Agua Hedionda Lagoon mouth. A small addition to this parcel (.37 acres) was made in 1964. In 1972, a 4.2-acre parcel was acquired downcoast of the lagoon mouth, and a separate 10-acre parcel further south was acquired in 1976. The area office was acquired in 1973 from the California Division of Forestry.

Resource Element

The winter storms
of 1982-83 had a
severe impact on
Arilsbad State Beach.



Most of the sand was removed from the beach areas, as shown here in Area 2.



Two comfort stations were destroyed and removed.



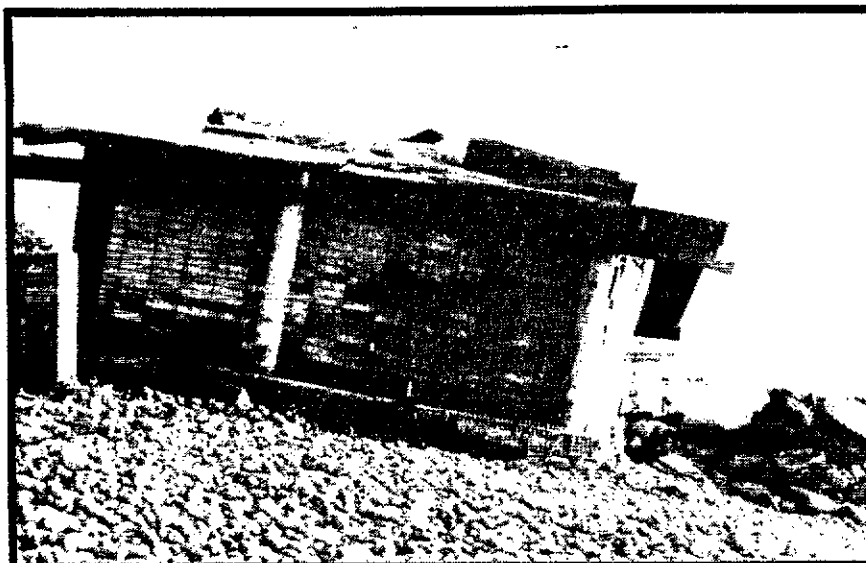
Bluff erosion was accelerated by the failure of a number of drain pipes.

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RESOURCE ELEMENT

This Resource Element was prepared to meet requirements 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. 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 included in this element. Maintenance operations and resource management details 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. A detailed inventory of features, prepared for this unit during the general plan process, is on file with the department.

Natural Resources

Topography

This unit consists of a narrow strip of cliff-top terrace, an eroded ocean-facing cliff, and sand and cobble beaches. The maximum elevation of the terrace is 40 feet (12 meters). A portion of the beach is the remnant of the barrier beach that separates Agua Hedionda Lagoon from the Pacific Ocean.

Littoral sand movement constantly alters the width, elevation, and configuration of the beach. At times, there is no beach sand, only cobbles.

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 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 any time of 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

The hydrology of this unit is primarily related to runoff from Carlsbad Boulevard and other adjacent inland developments. Storm drains carry runoff from the paved surfaces inland over the cliffs. These culverts are in need of redesign and repair or replacement. Many of the culverts have failed, resulting in severe erosion of the cliff faces.

Agua Hedionda Lagoon is adjacent to this unit. The lagoon covers 388 acres (159 hectares) and drains a 18,560-acre (7,610-hectare) watershed. The outer lagoon is dredged every other year by San Diego Gas and Electric Company, and the spoils material is deposited on the adjacent beach. In 1981, over 235,000 cubic yards (178,000 cubic meters) of material were deposited on the beach. The dredge material is good quality, clean sand, and the dredging activity helps to maintain a broad sandy beach popular with visitors.

The outfall of the Encina Power Plant adjacent to Carlsbad State Beach releases water into the ocean which is about 5°F (3°C) warmer than surrounding ocean water.

Geology

The beach is composed mostly of cobbles. There is very little sandy beach, especially at high tide, except in the portion of the beach between the intake and outfall jetties of the Encina Power Plant. Here, material dredged from Agua Hedionda Lagoon is deposited, and the material is sufficient to maintain a broad sandy beach. The lack of sand on the rest of the beach is due to a deficit in the amount of littoral sand. Wave action generally moves what sand there is southward along this stretch of coastline. Sand may also move offshore and gets "captured" in the Carlsbad Sink directly offshore. 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, or moves offshore to the Carlsbad Sink. In both cases, it is lost permanently from the beach sand system. Each year, more sand is lost to the canyon and topographic lows than is replaced by transport of sediment down rivers, creating the deficit. As a result, Carlsbad 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 and high tides. The loss of the sandy beach at Carlsbad State Beach has severely reduced public recreation opportunities.

The coastal bluff in this unit is a marine terrace composed of the Lindavista Formation and artificial fill. The Lindavista Formation is a Pleistocene-aged terrace deposit composed of reddish-brown to red to yellow-brown to brown, boulder conglomerate, conglomeritic sand, and silty sandstone. The formation is very erodible, with problems including slope wash and gullyng from surface runoff. Storm drains designed to carry runoff from cliff-top and inland roadways to the beach have failed, resulting in severe erosion and landslides that threaten to undermine Carlsbad Boulevard, located on the cliff top adjacent to the unit. Wave erosion is also a major agent which is actively eroding the cliffs from below, steepening them and resulting in major episodes of seacliff retreat during high tides and storm waves.

Soils

The only soil at Carlsbad State Beach is classified as Marina loamy coarse sand, 2 to 9% slopes, which is somewhat excessively drained, very deep loamy coarse sand derived from weakly consolidated to noncoherent ferruginous sand. Fertility is medium and permeability is rapid.

Plant Life

Carlsbad State Beach has been highly developed and therefore contains no pristine plant communities. The cliff face in the northern portion of the unit is vegetated with a mostly exotic plant community. The common species are giant reed (Arundo donax), sea-fig (Carpobrotus aequilaterus), and static (Limonium perezii). The sandy beach south of the Agua Hedionda Lagoon jetties is almost devoid of vegetation. Near the southern end of the beach, there is a beach primrose (Oenothera cheranthifolia) scattered herb community. Associated species include sea-fig, sand verbena (Abronia maritima), and sea rocket (Cakile edentula).

At the southern end of Carlsbad State Beach, where the marine terrace begins to rise, a toyon (Heteromeles arbutifolia) short open scrub/sea-fig herb community occurs. This community is well established with mostly native plants, including California poppy (Eschscholtzia californica), box thorn (Lycium spp.), and dudleya (Dudleya spp.).

Animal Life

This unit 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, which has burrowed under walkways and buildings. This burrowing has the potential to damage facilities and create hazards for the public.

Carlsbad State Beach is adjacent to Agua Hedionda Lagoon, which is an extremely important wildlife habitat.

Marine Life

The dominant marine habitat at Carlsbad 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, like worms, bivalves, and sand crabs, possess unusual behavioral, morphological, and physiological adaptations, allowing them to counteract adverse environmental conditions. Cobble beaches are much harsher environments than sandy beaches. Among the cobbles, there is no water-holding capacity, and 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 beaches, 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 along the beach.

Cultural Resources

Native American Resources

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

Euroamerican Resources

There are no known historic sites or any significant Euroamerican cultural resource sites or resources at Carlsbad State Beach.

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 widespread 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 millers that were used to harvest wild seeds. Occupational middens became larger and deeper and included 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 some time 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.

In the centuries before European contact, the area now occupied by Carlsbad State Beach was alternately inhabited by the Luiseno, a Shoshonean language group people who occasionally pushed south from the vicinity of present-day San Luis Rey, and the Ipai, the northern division of a Yuman language group formerly known as the Diegueno and more recently called Kumeyaay. Agua Hedionda Lagoon appears to have been the southern extent of this disputed territory.

As far as the material and economic cultures of the two peoples were concerned, the Ipai and the Luiseno were practically identical. Both of these peoples hunted and gathered a wide variety of foods, with acorns making up a lesser 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 religious orientation of the two peoples definitely set them apart. Anthropologist A. L. Kroeber noted "the Luiseno are mystics, crude but earnest. The Diegueno are left untouched by the obstruse. The actual -- picturesque or decorative but either visible or tangible -- is what interests them."

This variance in cosmographic outlook seems to have had a strong influence on these peoples' differing reactions to the imposition of mission life on them.

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. In the same year, 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 frequent rich green valleys.

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

Due to their relative isolation, however, the natives in the Carlsbad area remained more or less free of mission influence until the establishment of Mission San Luis Rey de Francia in 1798. The mission was situated north of Carlsbad in territory more frequented by the Luiseno than the Ipai. Probably due to the inherently more spiritual orientation of these people, "(t)he natives of this region were quite friendly towards the Spaniards. They never showed any hatred toward the padres and were easily won over by them...San Luis Rey was the most magnificent of all the missions. During the first ten years of its existence it made more converts than any other and by 1818 was the most prosperous of all the missions."

The mission holdings took in land that now includes Carlsbad State Beach, extending 35 miles north to south and 45 miles east to west, more than 1,500 square miles in all.

In contrast to Fr. Crespi's account, Alfred Robinson, traversing the area with Jedediah Smith in late 1826, commented that the soil was one continual waste of bareness, entirely destitute of cultivation.

During the Spanish period of occupation, the region north of El Encinas Canyon was an isolated portion of the mission lands of San Luis Rey and was not occupied by Hispanic settlers. The Euroamerican population associated with the Presidio of San Diego and the missions of San Diego and San Luis Rey was extremely small and produced little pressure on the government for private use or ownership of the present study area. This condition lasted into the later part of the second decade of Mexican rule. Few land grants were issued that included the coastal boundary north of San Diego. In October 1839, Juan Maria Marron, who was temporarily located at San Juan Capistrano, petitioned for a rancho which he called Agua Hedionda after the shore side lagoon of the same name. After two years of bureaucratic wrangling, Marron was given possession of the land.

Marron died in 1853 and left the property to several family heirs, and the property was confirmed in U.S. courts in late 1872. In the meantime, Francis Hinton, a former San Diego and Arizona merchant, began to purchase the rancho in 1860. Hinton died in 1870, and the land was transferred to Robert Kelly, a business associate of Hinton. Kelly died in 1890, and the land was transferred to his nephews and nieces. In the meantime, portions of the land had been sold to a coastal rail line as a right-of-way. The first attempt to build a line ended in failure but, in 1881, the California Southern Railway completed track through the area which would become Carlsbad. Along with the railroad sales, parcels were sold, or leased, for farming use. Many of these sales coincided with the California land boom of the mid-1880s.

The beach parcel of the Rancho Agua Hedionda was held in common by the Kelly heirs who sold portions. John A. Frazier bought such a portion in 1883, dug a well for irrigation purposes, and discovered that his water contained minerals which appeared beneficial to his health. To exploit the water, another recent arrival, Gerhard Schutte, created the Carlsbad Land and Water Company to build a health resort and to speculate on land. By late 1888, the small community of Carlsbad was founded with great hopes of prosperity and growth. Within a year, the bubble had burst throughout southern California and life slipped back into an era of agriculture, primarily dry farming. The Carlsbad Land and Water Company failed, and ownership of the property apparently returned, for the most part, to the Kelly family, although Schuttes continued to live in the area until 1906.

Over the years, small parcels were sold, some as farms and some as rural residences on the fringe of Carlsbad. The major use of the beach seems to have been recreation: beach parties and a firm track for occasional horse races. Most of the recreational activities were centered north of Carlsbad State Beach at Buena Vista Lake.

Just before World War I, a large development company, South Coast Land, purchased the remaining portions of the ranch and whatever portions of the defunct Carlsbad Land and Water Company that were still available. South Coast Land Company, through water projects and advertising, hoped to start another trend in rapid sales. With water, the farming emphasis could turn to grain crops, poultry, and additional crops of winter vegetables.

During World War I, a small industry flourished on Carlsbad beach. Eight local men began to haul wagonloads of the hard blue stones up to "Farr Station" (where Cannon Street approaches the railroad). The blue stones were shipped to Nevada and Arizona where they were used in the processing of silver ore. Originally, the supply of hard blue stones had come from Belgium, but the war had cut off the supply. Carlsbad's beaches had been exploited to correct the situation.

In 1933, the State of California purchased 4,299 feet of beach frontage (about 10 acres) and added the land to the State Park System. In 1964, an additional parcel of three and a half acres was acquired.

Esthetic Resources

Sweeping 180-degree panoramas of the ocean can be seen from the clifftops at Carlsbad State Beach. The view from the beach is less dramatic and the focus tends to be closer, concentrating on the breaking waves along the surf line. Observation of human activity is part of the beach experience. Surfers, sunbathers, fishermen, and swimmers are prominent and positive visual elements of the beach environment. Animal life, including pelicans, shorebirds, whales, and porpoise, is also seen in or from the unit.

The urban and industrial land uses adjacent to the unit, including traffic on Carlsbad Boulevard, housing developments, and the Encina Power Plant, detract from the unit's scenery. Noise from low-flying aircraft and traffic can be loud and distracting.

Recreation Resources

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

| <u>Passive</u> | <u>Active</u> |
|----------------------|---------------|
| Sunbathing | Surf Fishing |
| People Watching | Swimming |
| Picnicking | Skin Diving |
| Beachcombing | Jogging |
| Sightseeing | Volleyball |
| Contemplation | Beach Play |
| Wildlife Observation | Boating |
| | Bicycling |
| | Surfing |

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

Resource Policy Formulation

Classification

Carlsbad State Beach has been a unit of the State Park System since 1933. The unit was classified a state beach by the State Park and Recreation Commission in May 1969. A state beach is a category of a state recreation unit. The Public Resources Code (Section 5019.56) defines these units 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 Carlsbad State Beach is established as part of this general plan as follows:

The purpose of Carlsbad 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 Carlsbad 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 State Park System unit's resources will not be seriously jeopardized or degraded.

The zone at Carlsbad State Beach includes all adjacent land, the offshore areas, and the water body of Agua Hedionda 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 unit's resources and features. 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 coast, 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. Specific policies from the department's Resource Management Directives that pertain to the natural resources of Carlsbad State Beach are: 13, 14, 15, 16, 18, 19, 33, 36, 38, 39, and 46. Directive 18, particularly relevant to planning southern California state beaches, says:

(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 policies, directives, and laws that apply statewide, the following specific natural resource management policies have been developed for Carlsbad State Beach:

Abiotic Resources

Drainage

Storm drains that transport runoff down the cliff faces to the beach level have not been effective. Failure of these culverts due to improper design, corrosion, inadequate maintenance, or vandalism has resulted in accelerated erosion and landslides on the cliff faces. Several of the storm drains drain areas off state beach property.

Policy: A drainage plan shall be developed and implemented for Carlsbad State Beach to minimize erosion, culvert failures, vandalism, and the unscenic quality of drainage systems. The culverts shall be carefully maintained and regularly inspected. The normal useful life of the culverts shall be determined. Culverts shall be replaced when inspections indicate significant corrosion or when life expectancy is reached. Development of a new storm drain system to carry runoff parallel to the coastline rather than directly down cliff faces shall be considered. Use of materials resistant to the corrosive effects of salt air and water shall be considered in the design of drainage systems. Creation of a comprehensive drainage plan must include the participation of the City of Carlsbad.

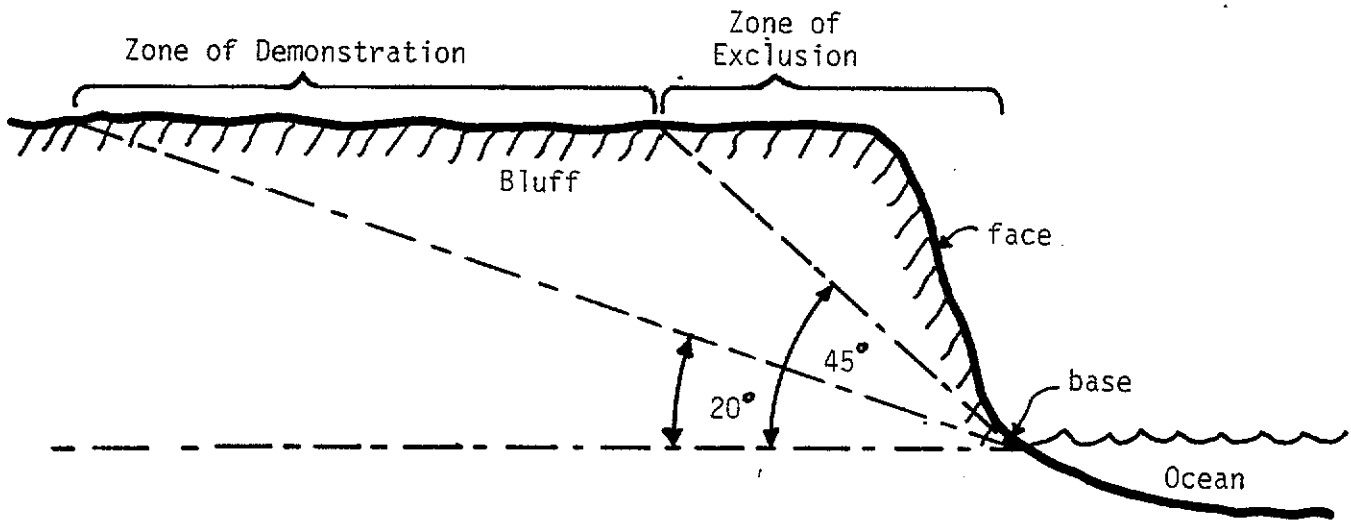
Bluff Setbacks

That seacliff retreat is an ongoing process should be taken into consideration when designing and placing facilities near cliff edges. To protect investments in facilities and to 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 allowed 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 moveable 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).

Figure 1

Zones of Demonstration and Exclusion



Human-Caused Erosion

Foot traffic directly down cliff faces causes cliff erosion by dislodging soil and damaging protective vegetation. Vandalism of cliffs, including graffiti carved into the soft sandstone bluffs, also accelerates erosion.

Policy: Fencing or similar measures shall be considered to discourage foot traffic down the cliff faces. Elevated stairways should be provided down the cliffs where needed. Interpretive programs shall describe the permanent destructive effects of climbing on bluffs and carving graffiti into the cliffs.

Littoral Sand Loss

Loss of littoral beach sand at Carlsbad 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 Carlsbad area. The study will include the monitoring of littoral sand movement and may make recommendations as to where artificial sand replenishment might 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 California Department of Boating and Waterways, the City of Carlsbad, the U.S. Army Corps of Engineers, and the San Diego Association of Governments, 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 and Cliff Erosion

The problems of littoral sand loss and cliff erosion have been recognized as serious threats to facilities. Little information is available on erosion rates. 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 Carlsbad 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.

Coastal Erosion

The portion of Carlsbad State Beach adjacent to Agua Hedionda Lagoon is subject to direct wave erosion and beach sand depletion. Any structures built in this area will be subject to direct ocean wave attack. This littoral zone is normally maintained as a wide sandy beach through biannual deposition of sand dredged from Agua Hedionda Lagoon by San Diego Gas and Electric Company. The combination of high tides and storm-generated waves removed the sand from the beach during January 1983. Similar events can be expected in the future.

Two restroom buildings constructed on the beach in the northern portion of Carlsbad State Beach were exposed to direct wave attack due to their low elevation and the absence of littoral beach sand. Efforts to protect the buildings by placing riprap around their foundations failed, and the restrooms

were damaged by wave attack in December 1982 and January 1983. These facilities were abandoned and removed by the department in early 1983. Efforts to save structures in similar locations over the long term are hopeless, considering the ongoing process of ocean cliff erosion and the regional problem of littoral sand loss, unless: (a) a substantial effort is made to artificially replenish beach sand and maintain it, or (b) large sums of money are spent to construct protection devices.

The parking lot north of the Agua Hedionda inlet jetty is exposed to direct wave attack in a situation similar to that of the restrooms. The lot was severely damaged in January 1983 during a period of high tides and storm waves. If this lot is to be saved from total destruction, sand replenishment or a sea wall will be needed to protect it from ocean waves. A sea wall might further deplete the beach. Further study is needed to determine the feasibility and desirability of a sea wall at this location.

Policy: No structures shall be constructed at beach level within Carlsbad State Beach unless they are portable, expendable, or capable of withstanding direct wave attack. The design of parking facilities should consider the use of permeable surfaces that are adjustable to changing beach elevations.

Landscape Irrigation

Overirrigation of ornamental landscape plants can raise the water table and possibly lead to groundwater seepage out of the cliff faces. Most existing landscaping is grass, which requires frequent sprinkler irrigation.

Policy: Conversion of the current irrigation system at Carlsbad State Beach to a drip irrigation system shall be considered to reduce overwatering and groundwater seepage. Long-term plans should strive for removal of exotic (alien) vegetation that requires irrigation and replacement by native plants.

Biotic Resources

Ground Squirrels

Ground squirrels, which are abundant within Carlsbad State Beach, burrow under pavement and along walkways, creating safety hazards and damaging facilities.

Policy: Ground squirrel populations shall be controlled to minimize public hazards and protect facilities. Reduction of preferred habitat will be considered a primary control method.

Cultural Resource Management Policies

Management of cultural resources at Carlsbad 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, Section 5019.74 (if a Cultural Preserve is designated); Chapter 1.7, Section 5097.5 and Chapter 1.75, Section 5097.9.

The following Resource Management Directives pertain to the cultural resources of Carlsbad 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 Carlsbad State Beach.

Policy: Any archeological or historical resources that may be discovered at Carlsbad 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 otherwise given for this general plan and its development, construction, and resource management projects 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 Carlsbad 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 at 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



In Area 3, the sand will be periodically replaced by dredging Agua Hedionda Lagoon. . . (DPR photo)



*. . .and the beach will, once again, return to this condition.
(photo courtesy of DNOD)*

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 and uses.

For purposes of this plan, three study areas have been identified, which encompass four existing unit parcels and additional lands of interest to ultimate unit operation and development (see General Plan Index Map). These areas are:

- Area 1 -- The existing San Diego Coast Area Office at the corner of Carlsbad Boulevard and Beech Avenue
- Area 2 -- The existing cobble beach fronting Carlsbad Boulevard between Pine Avenue and the entrance to Agua Hedionda Lagoon
- Area 3 -- The sandy beach fronting Agua Hedionda Lagoon

Land Use Patterns of Surrounding Area

The City of Carlsbad provides the setting for this beach. Urban development limits any potential for significant expansion, and the beach serves as a major recreation site for the local population as well as statewide visitors.

The Encina (SDG&E) power plant is a strong visual feature in the area, and Agua Hedionda Lagoon is affected by its use as the supplier of cooling water for the plant. As a result, the lagoon is dredged periodically (about every two years) and the dredged sand is deposited on the ocean beach in Area 3. (This beach area is extremely popular because of the quality of beach sand. Its popularity has been further increased by the natural loss of sand in Area 2, which at present is a cobble beach.) The outer portion of Agua Hedionda Lagoon is characterized by swift currents when the plant is operating, because of cooling water extraction and tides. A log boom has been installed to prevent accidental entry by people or small boats into the plant's pump intakes. Boating on the outer lagoon is not currently permitted, although fishing is allowed along the lagoon side of Carlsbad Boulevard.

Carlsbad Boulevard, which is at present two lanes wide in Area 3, is scheduled for widening to four lanes by the City of Carlsbad, tentatively in 1984. Widening will eliminate about 235 existing car parking spaces along the ocean side of Carlsbad Boulevard.

Businesses are conveniently located near the state beach, offering many needed services.

Residential development has taken place at the extreme northern and southern ends of the unit.

During periods of heavy use, traffic on Carlsbad Boulevard is congested by people parking along the roadway to gain beach access.

Ownership

Total unit acreage is 24.88. Ownership patterns of the unit are fragmented primarily due to the sequence of acquisition. (Detailed ownership information is contained in DPR drawing number 17326, Land Ownership Record, dated May 7, 1982.)

The following is an outline of the department's property by area:

Area 1 is a +.31 acre parcel acquired from the California Division of Forestry in 1973. The area office building existed before acquisition.

Area 2 was primarily acquired in 1933 (10+ acres) with a small addition (.37 acres) acquired in 1964.

Area 3 contains two parcels owned by the department. The upcoast parcel (4.2 acres) was acquired in 1972, and the larger downcoast parcel (10 acres) was acquired in 1976. Area 3 includes additional lands controlled by the City of Carlsbad (Carlsbad Boulevard) and the San Diego Gas and Electric Company. The City of Carlsbad has easements on DPR parcels to permit the widening and maintenance of Carlsbad Boulevard. San Diego Gas and Electric Company's oceanside land in Area 3 is currently involved in litigation and could be transferred to DPR as a result.

Existing Unit Conditions

Existing facilities (also see Existing Facilities Map) are, by area:

- Area 1 -- Area office
- Area 2 -- One comfort station
- Three car parking areas with total space for 219 cars
- A small landscaped area
- One access stairway which was damaged during the 1983 storms
- Area 3 -- One parking area (upcoast parcel) for about 80 cars

Although the unit is small, its level of use is significant. Visitors during the 1980-81 fiscal year totaled an estimated 1,825,000.

Use is currently occurring primarily in Area 3. The beach in Area 2 has been depleted to the point where the sand is almost totally gone. Without sand, summer use of Area 2 has been limited despite the availability of comfort stations.

The following problems, by area, require attention:

- Area 1 -- The area office is isolated from the units and from maintenance areas. More suitable locations offer the opportunity of combining these functions for improved management.
- Area 2 -- This area is experiencing severe sand depletion. The remaining cobble beach is prone to excessive erosion problems and leaves little recreation potential.
- Two beach restrooms have been destroyed by high surf and tide conditions.
- The beach access stairway has been destroyed by surf.
- The Tamarack Avenue parking lot is being eroded by surf. (Approximately 10% of the paved area was destroyed during winter storms in 1983.)
- Carlsbad Boulevard is threatened by seacliff retreat due to direct wave attack at the base of the cliffs.
- Bluff erosion is excessive due to pedestrian traffic, sand depletion on the beach, seacliff retreat from direct wave attack, and concentrated storm runoff.
- The area generates no revenue to offset operating costs.
- Area 3 -- Existing oceanside parking will be eliminated by future widening of Carlsbad Boulevard.
- Parking is inadequate to meet current demands for beach access.
- No restrooms are available in the area.
- Management of the area is currently fragmented due to ownership patterns.
- Traffic along Carlsbad Boulevard is congested due to parking patterns.
- There are no safe pedestrian crossings on Carlsbad Boulevard in the area.
- The area generates no revenue to offset operating costs.
- Additional fishing access and wind surfing use of the lagoon is desired.
- Most of the area is subject to high wave conditions during winter storms.

Winter storms in late 1982 and early 1983 severely damaged beach units throughout California. At Carlsbad State Beach, these storms resulted in the

loss of two beach-level comfort stations, a beach access stairway, and portions of the Tamarack Avenue parking lot. These facts underscore the need for a fundamental change in the approach previously used for beach development.

In coastal units, the department has historically relied on capital-intensive development to provide for public needs. This has meant the construction of solidly built structures and paved parking areas in places where additional structures, such as sea walls or riprap, were required to protect them. When confronted with severe storms, these measures are usually not entirely effective.

A more prudent approach appears to involve the use of portable buildings in lieu of permanent structures in locations subject to present, or likely future, inundation. During winter periods, the structures would be removed from the site and stored until storm conditions subside.

This is a labor-intensive approach because staff or funds would have to be available to move the structures off or on the site as conditions warrant. This approach will be considered for all future beach-level structures.

Facility Recommendations

The following list of recommended actions for the development of Carlsbad State Beach is organized by area (as identified on the General Plan Index Map).

Commission approval of the general plan will apply only to those recommendations specifically involving DPR property at the time of commission action. Recommendations involving land not owned or controlled by DPR are provided to coordinate DPR efforts with appropriate owners or agencies and do not constitute a commitment by DPR to unilaterally act on the proposal or acquire property.

Area 1

-- Declare surplus the +.31-acre property and sell. The proposal is not to be implemented until a new facility is constructed at South Carlsbad State Beach (see South Carlsbad State Beach Plan).

Area 2

-- Determine the feasibility of installing +4,000 lineal feet of beach protection device. Such a device (Longard Tube or equivalent) might help protect facilities and retard sand depletion after replenishment. Such a facility is experimental and its cost-effectiveness should be reexamined at the time of implementation.

-- Replenish beach with imported sand. Replenishment will not occur until feasibility and cost-effectiveness can be demonstrated and a source of sand identified.

-- Develop a +12-car parking lot at the corner of Ocean Street and Carlsbad Boulevard after beach sand is replenished.

-- Install 219 parking meters in existing and proposed parking lots after beach sand is replenished.

- Replace two beach-level comfort stations with portable units if beach sand is replenished.
- Replace beach access stairway or alternate access to beach.
- Revegetate bluff areas with native vegetation where needed.
- Develop pedestrian ramp from Tamarack Avenue parking lot to bridge over Agua Hedionda Lagoon. Coordinate development with City of Carlsbad.
- Install protective fencing along bluff edge where needed.
- Install interpretive panels.

Area 3

- Acquire management responsibility for some 12 acres of land currently controlled by San Diego Gas and Electric Company.
- Develop a secondary boom on Agua Hedionda Lagoon in cooperation with San Diego Gas and Electric Company to permit wind surfing or other recreational uses on the lagoon.
- Develop a fishing pier on Agua Hedionda Lagoon in cooperation with San Diego Gas and Electric Company.
- Expand existing Agua Hedionda Lagoon fishing access parking lot from its present 40 cars to +120 cars in cooperation with City of Carlsbad and San Diego Gas and Electric Company. Develop portable comfort station and install parking meters.
- Develop four portable comfort stations for installation on oceanside of Carlsbad Boulevard.
- Develop bus stop pullouts on Carlsbad Boulevard at two locations. Cooperate with City of Carlsbad.
- Develop pedestrian crossings on Carlsbad Boulevard in two locations. Cooperate with City of Carlsbad.
- Continue periodic replenishment of beach sand on ocean beach. Cooperate with San Diego Gas and Electric Company.
- Develop parallel parking for +187 cars along oceanside of Carlsbad Boulevard in cooperation with City of Carlsbad. Install parking meters.
- Revegetate bluffs with native plants where needed.
- Install interpretive panels.

These proposals would substantially improve recreational opportunities at the unit while minimizing traffic congestion, sanitation problems, and erosion. Table 1 provides a summary of key recreational facilities before and after implementation.

Table 1
Facilities Summary

| <u>Facility</u> | <u>Current</u> | <u>After Implementation</u> |
|--------------------|-----------------|-----------------------------|
| Area Office | 1 | 0 |
| Comfort Stations | 1 | 8 |
| Car Parking Spaces | 299 | 541 |
| Beach Sand Area | 375,000 sq. ft. | 1,156,000 sq. ft. |

Note: "After Implementation" figures include existing facilities.

General plan proposals involve the potential acquisition of about 12 acres in Area 3, and the surplusings of .31 acres in Area 1. The unit would then total +36.57 acres.

Special Considerations

Local bus service could be used more effectively by providing safe and appropriately spaced bus stops with pedestrian crossings located conveniently nearby. This measure would substantially improve beach accessibility while reducing traffic congestion.

State law requires that projects be designed to be accessible to the physically disabled. Carlsbad State Beach offers outstanding opportunities for beach access in Area 3 and from the Tamarack Avenue parking lot in Area 2. Bluff sections of Area 2 are a considerable impediment to people who have difficulty with stairs or steep ramps. All buildings and parking areas will be designed to accommodate wheelchairs and, where appropriate, braille signing.

Unresolved Planning Issues

Area 2 Sand Loss

Area 2's loss of beach sand is a function of natural and human actions that have resulted in the formation of a steep cobble beach. The lack of sand means that the beach is no longer attractive for recreational use. The destroyed comfort stations at beach level were subject to direct wave attack, as is the toe of the bluff and the Tamarack Avenue parking lot. The department's interest in restoring sand to the beach is obvious, since there is demand for recreational beach activity, and the past investment in land can be lost if action is not taken to restore it. Equally obvious is the threat to Carlsbad Boulevard, which parallels the edge of the bluff top, creating a potential problem for the City of Carlsbad. Other important factors from the city's standpoint include the economic impact of tourism, traffic circulation, and esthetic considerations. Both the city and the state have an interest in tackling the expensive, and probably repetitive, process of restoring sand to the beach in this area. A March 1982 letter from the secretary for resources to the Resources Agency's department directors and other officials establishes that the state can partially fund beach erosion control efforts, which the Department of Boating and Waterways will coordinate. The recommendations put forth to the Legislature are summarized by the following quotation:

- Replace two beach-level comfort stations with portable units if beach sand is replenished.
- Replace beach access stairway or alternate access to beach.
- Revegetate bluff areas with native vegetation where needed.
- Develop pedestrian ramp from Tamarack Avenue parking lot to bridge over Agua Hedionda Lagoon. Coordinate development with City of Carlsbad.
- Install protective fencing along bluff edge where needed.
- Install interpretive panels.

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- Acquire management responsibility for some 12 acres of land currently controlled by San Diego Gas and Electric Company.
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- Continue periodic replenishment of beach sand on ocean beach. Cooperate with San Diego Gas and Electric Company.
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- Revegetate bluffs with native plants where needed.
- Install interpretive panels.

These proposals would substantially improve recreational opportunities at the unit while minimizing traffic congestion, sanitation problems, and erosion. Table 1 provides a summary of key recreational facilities before and after implementation.

1. The amount of public benefit shall be the basis for allocation of costs between state and local sources with the state and/or the federal government providing up to 75 percent of the costs for projects with high public benefit. A minimum local share of 25 percent is recommended on any project in which the state participates. The public benefit would be determined by the amount of public property protected, public access, and public use; however, no specific funding formula is recommended because of the unique nature of each project.

2. The coordination of beach erosion control efforts of state agencies shall be the responsibility of the Department of Boating and Waterways in federal/state/local and state/local projects. Coordination of erosion control projects on state-owned and operated property is the responsibility of the department responsible for managing the property with the Department of Boating and Waterways responsible for the final approval of plans prior to implementation.

There is no change in the longstanding policy of the Resources Agency that only in those situations where structures or areas of public use are threatened should the state resort to funding or approving remedial projects. Where remedial efforts are deemed necessary, projects should restore natural processes, retain shoreline characteristics, and provide recreational benefits to the extent feasible.

At this time, these items remained unresolved:

1. The city's commitment to participate financially in this effort.
2. The source of replenishment sand. The current periodic dredging of Agua Hedionda Lagoon may be one possibility. However, other sources may have to be found.
3. The amount of an equitable cost sharing for the effort.

Area 3 Use

These factors provide the background for proposals in Area 3:

Area 3 is an extremely popular area made up of a sandy ocean beach replenished by dredging Agua Hedionda Lagoon. The lagoon side of Carlsbad Boulevard contains a small (40+ car) parking lot developed by the San Diego Gas and Electric Company for fishing access. Carlsbad Boulevard is currently a two-lane road in this area with a 235-car parking lot extending along the ocean side of the road. Portions of the parking lot are on a DPR parcel which contains an easement to the city for road purposes. The entire area on the ocean side of Carlsbad Boulevard may be granted to the department as a result of active litigation. San Diego Gas and Electric Company holds title to the

land area on the lagoon side of Carlsbad Boulevard. The City of Carlsbad intends to widen Carlsbad Boulevard to four lanes in Area 3, thus eliminating the existing 235-car parking lot.

Recreation use of Area 3 should be managed by a single agency for consistent operation. The area is relatively small, and the provision of basic services such as restrooms, litter collection, lifeguard services, and pedestrian access are critical to safe use of the area. The public has also expressed a desire to use Agua Hedionda Lagoon for wind surfing as well as fishing. San Diego Gas and Electric Company is justifiably concerned about such use because of the currents in the lagoon created by the pumping of coolant water. Unresolved at this time are the following points:

1. Current litigation may result in the department's acquisition of parcels in Area 3 on the ocean side of Carlsbad Boulevard.
2. Potential acquisition or management of land in Area 3 on the lagoon side of Carlsbad Boulevard.
3. The actual configuration of a wider Carlsbad Boulevard.

General plan proposals for this area are made on the premise of a single agency management approach that will require coordination with the city and San Diego Gas and Electric as implementation proceeds.

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

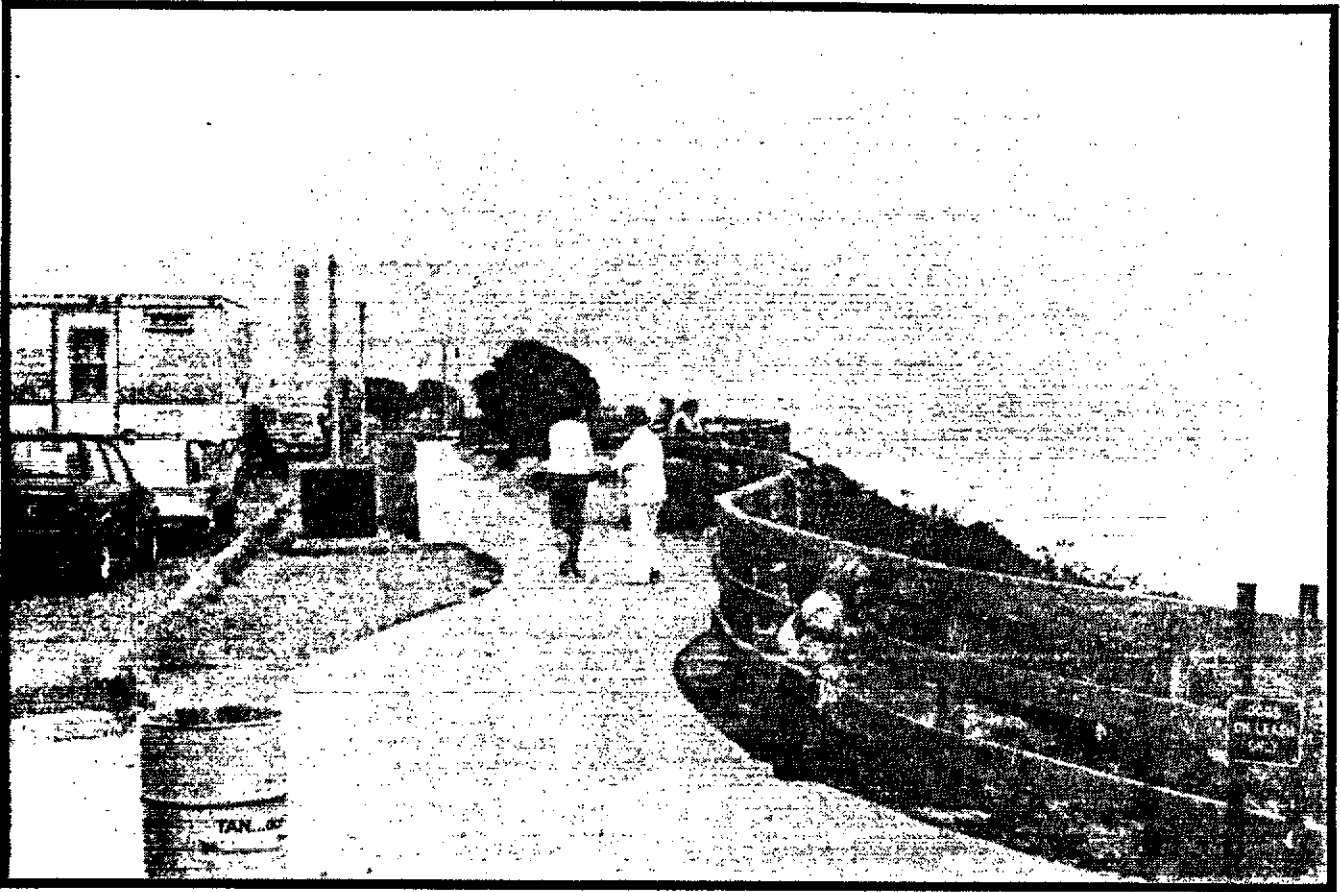
The sequence of implementation of the general plan for this unit is critical. Erosion problems in Area 2 and the impending Carlsbad Boulevard widening provide an impetus for priority action.

Area 2 is considered to be the greatest area of concern at this time because of the potential loss of Carlsbad Boulevard. No facility development should occur until it is demonstrated that the beach can be replenished and maintained.

Area 3 should be developed following the widening of Carlsbad Boulevard and the determination of the department's ultimate ownership pattern in that area.

Area 1 should be declared surplus only after a new facility is developed at South Carlsbad State Beach.

Interpretive Element



Interpretive programs and facilities can enhance the recreational experience of visitors.

INTERPRETIVE ELEMENT

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

Methods and Media

The following recommendations from the department's 1975 Draft Interpretive Plan for Carlsbad State Beach still apply because the situation there has changed little since then:

Other than ranger patrols operating out of South Carlsbad State Beach and daytime lifeguard services, this day-use unit is not staffed by ranger personnel. This places a limitation on the extent to which personal services can be provided. Occasional demonstrations by lifeguards would be appropriate and probably well received by the public. Use of outdoor exhibits and other interpretive facilities should be low key and aimed at the recreational interest of the visitors. However, an ideal situation exists along the bluff to interpret the California grey whale by means of exhibits. When the whales are not migrating, the whale exhibit can be removed and other appropriate themes can be interpreted.

An additional recommendation is now made: To avoid the vandalism endemic to this area and to provide high-quality interpretation for the entire San Diego coast beach system, the department, as funding permits, should eventually develop an exhibits trailer for use at the state beaches that have similar resources. The trailer could be moved from beach to beach, as well as to other locations, including schools.

Interpretive Period

The department will interpret a flow of history at Carlsbad State Beach.

Interpretive Themes

(Material for some of these theme statements has been adapted from the Draft Interpretive Plan prepared for Carlsbad State Beach by the Operations Division in 1975.)

The Changing Coast

Interpretation should address both the beach and the bluffs. Visitors should understand how the summer beach differs from the winter beach, where beach sand comes from and where it goes, and the meaning of such terms as "littoral drift," "littoral cells," and "sand budget." In addition, marine terrace formation, natural bluff erosion, and human-accelerated erosion and its prevention should be interpreted.

Animals You Can See Here

Beach visitors should receive information on the gray whale: dimensions, habitat, migration, breeding, clues to identification, etc. Other marine animals and birds commonly seen from the beach and at Agua Hedionda Lagoon should also be interpreted.

Recreational Uses of the Surf and the Lagoon

Opportunities for board and body surfing, wind surfing, boating, and fishing should be explained to visitors unfamiliar with this beach and the lagoon. Techniques, regulations, and developed points of access should be covered.

Bygone Beachcombers

The use of the beach environment by the Ipai and Luiseno Native Americans, and these peoples' histories, should be interpreted to beach visitors. Interpretation should also cover early Hispanic and American recreational uses of the beach and Carlsbad's brief history as a popular spa.

Staying Safe at the Beach

Interpretation should aid visitors by explaining the formation of rip currents and how swimmers can escape them. It should also cover other hazards, such as stinging jellyfish, stingrays, sunburn, and buried fires and glass.

Visitor Facilities

Because of the recreation-oriented interests of visitors to Carlsbad State Beach, the department does not plan a great degree of interpretive development. However, this does not imply that the department intends to compromise the integrity or high quality of interpretation there.

Exhibits should be limited to interpretive panels in display cases that are impervious to the elements and as vandalproof as possible. They should only be installed in conjunction with permanent structures, such as restrooms, and should be placed at sites that are well-lighted at night and also easily visible from areas where people are likely to be most of the time, such as Carlsbad Boulevard.

Panels and cases should be standardized so that seasonal exhibits or those that are worn out can be easily replaced with new panels by park staff. Modular cases and panels should be used throughout the San Diego Coast Area, making it possible to rotate panels from beach to beach.

Specific recommended panel locations are at the restroom on the bluff at the entrance to the Tamarack Avenue parking lot, along the Whale Watchers' Walk, and possibly at other future blufftop restroom facilities. Subjects most appropriate for interpretation at Tamarack Avenue and other proposed restrooms would be beach safety and recreational surfing. The Whale Watchers' Walk would be best suited for exhibits dealing with whales and other wildlife, as well as the changing coast (especially seasonal changes on the beach) and Carlsbad area history. Coin-operated telescopes could augment whale interpretation. Some exhibits should be rotated seasonally: whale panels

should be left in place during the fall and winter months; body surfing would be of most interest during the months of high beach use. Selected cultural history themes, particularly the history of Carlsbad as a recreation area, might be used to replace these in the off-season.

The mobile exhibit trailer could ultimately be used along the entire San Diego County coastline and could function as a public contact point. Exhibitory would not have to be confined to two-dimensional panels and could be more dynamic than elsewhere at the state beach, covering in more detail such topics as marine terrace formation, ocean currents, sand movement, and erosion.

In addition, the natural world can be made more easily available for visitors to see through photographs or an audio-visual program. This would be an aid in identifying elusive species of birds or marine mammals, for showing rarely seen plants and animals, and for illustrating how human use and natural erosion affect particularly vulnerable species.

The trailer could also become a roving interpretive center, useful not only at the state beaches but also at schools throughout the region during months of low visitation.

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

Visitor Activities

There are two kinds of department personnel to provide personal services to beach visitors. First is the ranger staff. As this state beach has no resident rangers, any ranger-led activities scheduled for Carlsbad State Beach will require a redistribution of staff within the area.

Beach walks led by rangers could focus on beach geology and animal life. During the months when whales are visible from Carlsbad and migratory wildfowl are in the area, a department staff person or knowledgeable volunteer should be available in the promenade area to help novices spot whales, as well as other animals.

If a docent organization is established in the area, beach walks may be successfully led by docents.

The other category of department employee who ought to do interpretation are lifeguards, whose expertise should be used to demonstrate beach safety and rescue maneuvers.

Revenue-Generating Activities

Minor revenue-generating sources might be encouraged at Carlsbad State Beach. Some possibilities are:

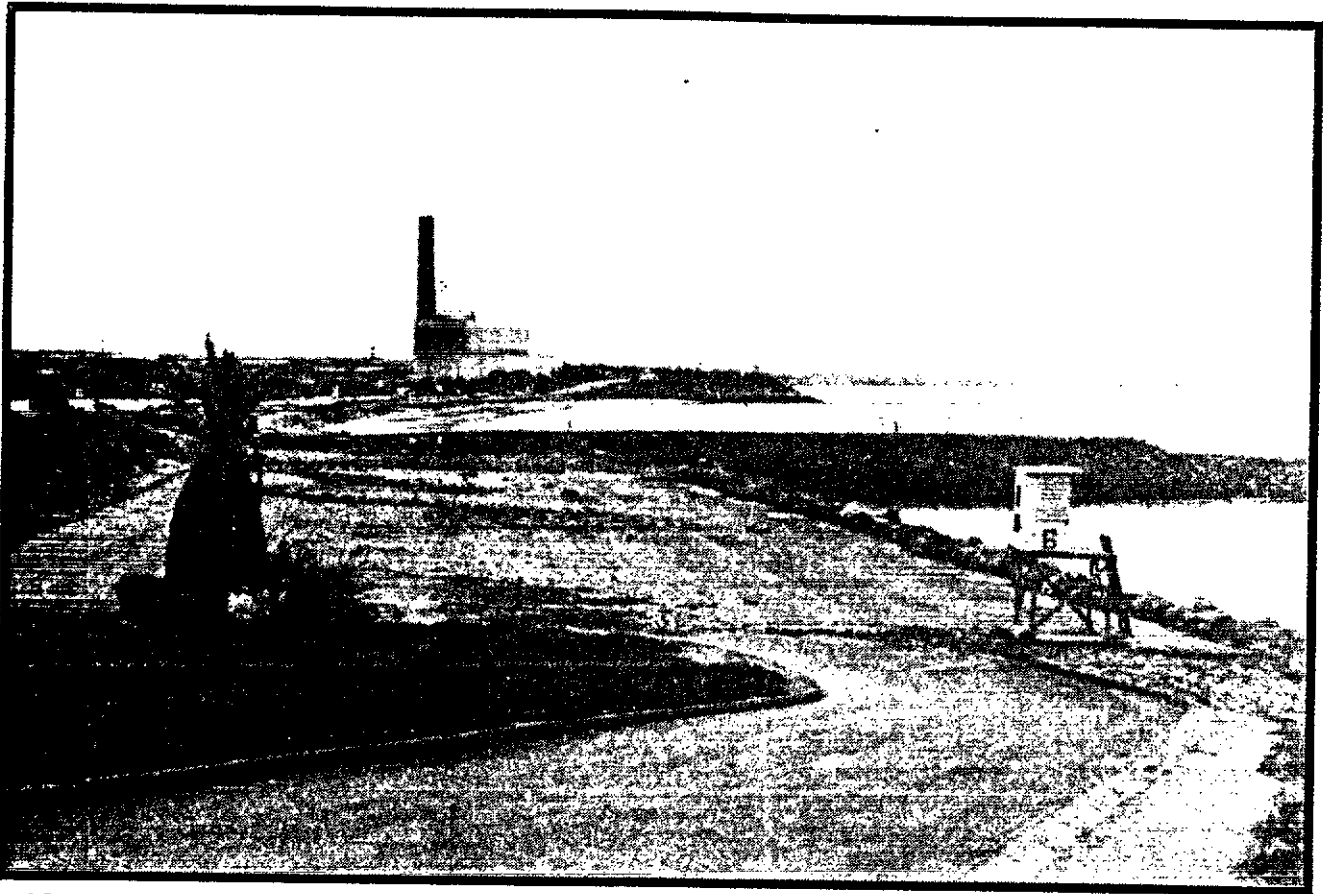
- Coin-operated telescopes along Whale Watchers' Walk.
- Coin-operated dispensers for park brochures.

- A modest entry fee to the proposed interpretive trailer when it is on State Park System property.

Recommendations

- When funding permits, install interpretive panels at blufftop restrooms and on the Whale Watchers' Walk.
- Provide a mobile regional interpretive exhibit trailer at this unit.
- Develop teachers aid packet for visiting school groups.
- 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.
- Encourage the formation of a volunteer group to provide personal services interpretation to beach visitors.
- Schedule beach and lagoon walks and safety demonstrations, and post schedules.
- Study the long recreational history of the Carlsbad area in more depth.

Operations Element



Lifeguard service and storm cleanup are two of the many responsibilities of the Operations staff.

OPERATIONS ELEMENT

Current Conditions

Carlsbad State Beach is in the San Diego Coast management area. The area also supervises South Carlsbad State Beach, Leucadia State Beach, Moonlight State Beach, San Elijo State Beach, Cardiff State Beach, and Torrey Pines State Beach and State Reserve. Relocating the area office to South Carlsbad State Beach is desirable.

At Carlsbad State Beach, staff currently:

- Provides lifeguard services in Areas 2 and 3
- Provides law enforcement
- Maintains three parking lots
- Maintains one comfort station
- Provides litter pickup

Future Conditions

Improved service and more consistent management, particularly in Area 3, will result from implementing the general plan. They will also substantially increase the workload of staff at the unit by adding the following responsibilities:

- Cleaning and maintenance of seven new comfort stations
- Potential additional litter pickup
- Maintenance and servicing of parking meters
- Additional pavement maintenance
- Potential increased law enforcement responsibilities

Revenue Generation

If developed as proposed, the unit will generate additional revenue, which will help offset the expenses of added work responsibilities.

No policy on parking meter installation or a rate structure have been established at this time. The following hypothetical structure might be considered:

- Number of proposed parking spaces at various locations: 551.
- Normal beach visitation period per vehicle: six hours.
- Current day-use fee at coastal units: \$3.00.

- Meter rate per hour to provide \$3.00 in six hours: \$.50.
- Number of days per year for capacity use: 100.
- Revenue generated per year:

$$\begin{array}{r}
 551 \text{ spaces} \times \$0.50 = \$275.50 \text{ revenue per hour} \\
 \quad \quad \quad \times \quad \quad 12 \text{ hours per day} \\
 \quad \quad \quad \hline
 \quad \quad \quad \$3,306.00 \text{ revenue per day} \\
 \quad \quad \quad \times \quad \quad 100 \text{ days per year} \\
 \quad \quad \quad \hline
 \quad \quad \quad \$330,600.00
 \end{array}$$

This example is provided simply to examine the possibility of meter installation. Maintenance costs of meters in the coastal environment will be high, and public acceptance of meters is unknown. If revenue is to be generated at this unit, however, there appears to be no practical alternative.

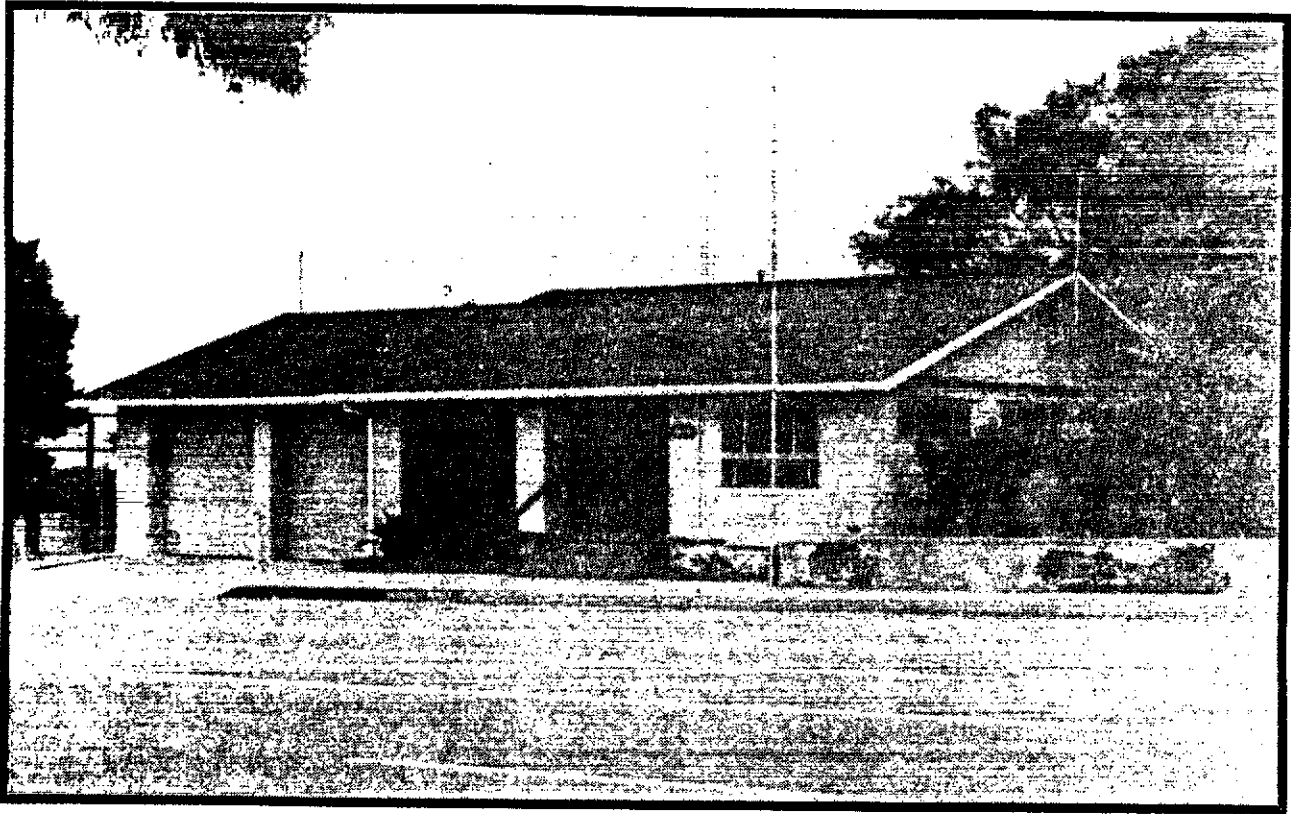
Concessions Element

CONCESSIONS ELEMENT

There are no concession facilities at this unit, nor are any proposed, based on an analysis of user needs and the unit's development potential.

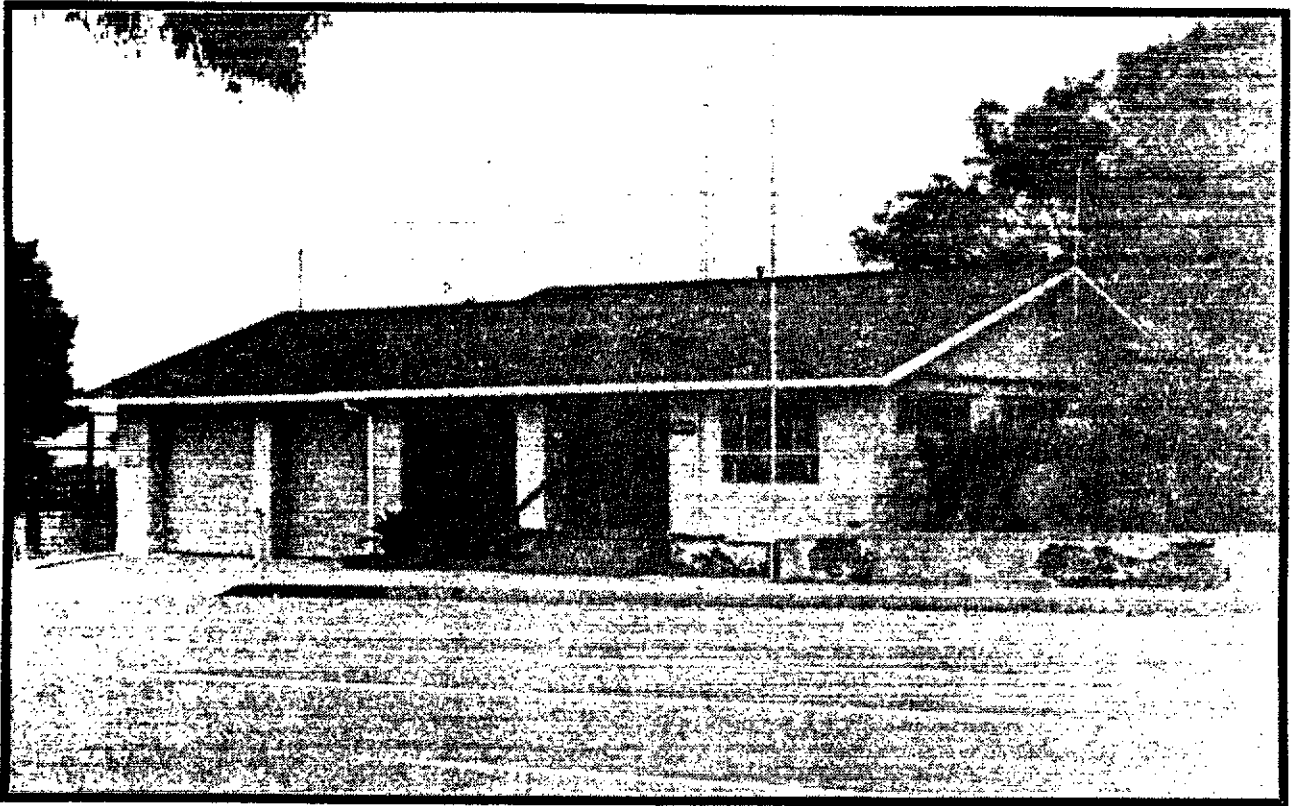
No operating agreements are envisioned with local agencies, who might take over operation of state-owned facilities.

Environmental Impact Element



The existing Area Office will be relocated to South Carlsbad State Beach.

Environmental Impact Element



The existing Area Office will be relocated to South Carlsbad State Beach.

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 Carlsbad 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

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

Air Quality

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 county's high ozone levels 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.

Automobile exhaust is the major source for nitrogen dioxide, sulfur dioxide, and carbon monoxide. The major sources for particulate matter are the automobile, sea salt along the coast, and erosion from agriculture.

The closest air quality monitoring station to Carlsbad State Beach is in the City of Oceanside, about 3.5 miles north of the unit. The air quality of Oceanside is very good; therefore, it is expected that the air quality of Carlsbad State Beach is similar. During 1981 at that station, only two pollutants (ozone and particulate matter) equaled or exceeded California Air Quality Standards. Standards for ozone and particulate matter were equaled or exceeded 48 and 24 days, respectively, compared to 22 and 20 days in 1979.

Noise

Noise experienced at the beach and its parking areas is generated by automobile and train traffic, human activities, and the surf. The parking areas are adjacent to Carlsbad Boulevard and about a quarter of a mile from the Santa Fe Railroad. The noise level at the state beach is in the 65-75 dBA range, depending on the distance from the source. The Santa Fe Railroad, an average of 1,000 feet away from the beach, generates noise of about 50 dBA. No significant increase in noise is expected to occur as a result of the development proposed in the general plan.

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 Carlsbad was 35,490, with 29,450 (83%) White, 213 (.6%) Black, and 4,790 (13%) of Spanish origin. Of the total population, 17,703 (50%) are female.

Carlsbad has 9,750 families -- 8,549 (88%) are White, 52 (.53%) are Black, and 919 (9.4%) are of Spanish origin.

The city grew 137.5% from 1970-80 (14,944 - 35,490). The median income per household is \$22,354.

Public Services

Water and Sewer

Water and sewer services are supplied to Carlsbad State Beach by the City of Carlsbad.

Traffic

Carlsbad State Beach is located along Carlsbad Boulevard, which is classified as a major arterial with a 20-40,000 average daily traffic capacity. Carlsbad Boulevard is currently a four-lane road to the Agua Hedionda Bridge, and from there south is a two-lane road separated by a left-turn lane. The following are typical traffic counts taken along Carlsbad Boulevard.

| <u>Road</u> | <u>Vehicle Trips North</u> | <u>Vehicle Trips South</u> | <u>Date</u> |
|---|----------------------------|----------------------------|-------------|
| Carlsbad Boulevard @ Redwood Street | 7,837 | 7,785 | 7-15-82 |
| Carlsbad Boulevard @ Agua Hedionda Bridge | 8,965 | 9,043 | 7-7-82 |
| Carlsbad Boulevard @ Agua Hedionda Bridge | 9,626 Total Both Ways | | 12-15-80 |

(Source: Carlsbad City Engineering Department, 1/83.)

In 1982, there were 27 traffic accidents on Carlsbad Boulevard between Pine Street and the Encina Power Plant.

Fire/Paramedic

The emergency response time by the Carlsbad City Fire Department, from the headquarters station on Elm Street, is about five minutes. In life-threatening situations, fire department paramedics are called in, arriving one to two minutes later, depending on traffic. Routine first-aid is administered to State Park System visitors by state park lifeguards and rangers.

Police

Law enforcement at Carlsbad State Beach is handled by State Park System personnel. Both state park lifeguards and rangers are designated as state park peace officers and are responsible for law enforcement on State Park System lands. The Carlsbad City Police are occasionally called as backup by State Park System personnel. Response time is about five minutes, depending on the location and traffic.

Cultural Resources

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

Scenic and Recreational Values

Please refer to the Resource Element.

Environmental Impacts of the Proposed Project

Significant Environmental Effects

Installation of the beach protection device and sand replenishment of Area 2 will have a significant positive effect on recreational resources of the state beach.

Mitigation Measures Proposed to Eliminate or Minimize Effects

As part of the proposed project and contingent on the availability of funds, a new storm drainage system will be developed to minimize erosion. Bluffs will be revegetated with native vegetation to retard erosion.

Unavoidable Environmental Effects

The development of parking areas, bus stops, pedestrian overcrossings, and related facilities will require a small loss of open beach available for recreational use. The development of parking areas will result in an increase in surface water runoff. Water which drains off the parking areas will contain petrochemicals and other pollutants.

Alternatives to the Proposed Project

1. NO PROJECT: Under this alternative, the status quo would continue. Area 1 would continue to be an administrative area. In Areas 2 and 3, problems identified in the Land Use and Facilities Element would continue. Environmental damage caused by the surf would persist. With the development of Carlsbad Boulevard, the amount of parking would greatly reduce the availability of recreation resources available to the public. This alternative was rejected because recreational demand would not be met. The alternative makes no effort to increase recreation facilities and reclaim existing recreational resources.
2. DEVELOP ONLY AREA 3: The status quo for Areas 1 and 2 would continue and problems identified in the Land Use and Facilities Element would continue or worsen. The beach at Area 2 would not be rehabilitated, and facilities now being damaged would continue to be damaged. This alternative was not selected because it does not try to improve the existing resources of the state beach, including the quality of recreation available to the public.
3. EXCLUDE THE DEVELOPMENT OF RECREATIONAL FACILITIES AT AGUA HEDIONDA LAGOON: There would be a decrease in the amount of sand area replaced by pavement. The amount of parking available to the public would be reduced because of the widening of Carlsbad Boulevard. This alternative was rejected because the lagoon is a valuable recreational resource and should be made available for use by a greater number of people.

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

The current short-term use of Carlsbad State Beach is for enjoyment of the coastal scenery and beach-oriented recreation. The general plan continues the current short-term use of the unit and should not alter existing types of uses but should generate revenues for the State Park System.

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

None of the changes produced by the general plan are irreversible. The majority of proposed development will occur on imported sand. Part of the project consists of the installation of a beach protection device and the replenishment of beach sand. The beach protection device is experimental -- if it does not succeed, conditions will return naturally to the pre-project state.

The project will require the use of nonrenewable resources such as aggregate materials, fossil fuels, petrochemicals, and other related construction materials.

The general plan commits the land to a specific use. If in the future a decision is made to use the land for other purposes, or to let it return to its natural state, facilities could be removed and the area could be rehabilitated.

Growth-Inducing Impacts of the Proposed Project

If management control of the 12 acres of San Diego Gas and Electric Co. land is achieved, and the inland lagoon fishing access is constructed, there will be an expansion of recreational opportunities. However, these new opportunities will not require a major expansion of utilities.

If sand replenishment in Area 2 is achieved, beach use will increase. This may improve beach-related trade for businesses in the immediate area but should not necessitate an increase in the number of businesses.

Effects Found Not to be Significant

Development proposed by the general plan should not have a significant impact on the following resources: air quality, geology, soils, climate, hydrology, biota, noise, land use, public services, cultural resources, and esthetics.

Organizations and References Consulted

California Department of Fish and Game
City of Carlsbad Fire Department
City of Carlsbad Engineering Department
City of Carlsbad Planning Department
County of San Diego Department of Planning and Land Use
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.

City of Carlsbad, Poinsettia Lane Widening and Extension, Draft Environmental Impact Report, March 10, 1983.

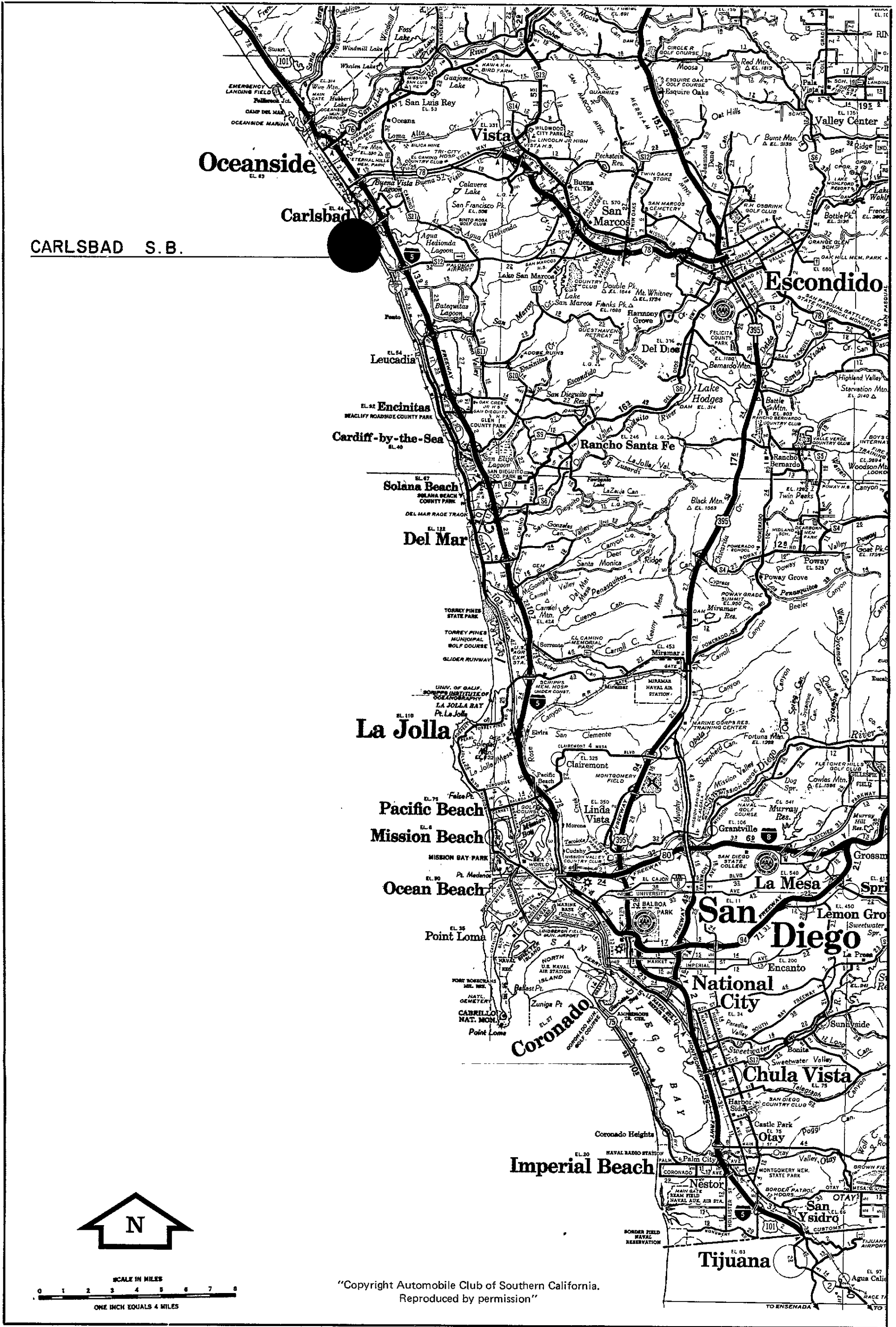
United States Department of Commerce, Bureau of the Census, 1980 Census of Population, July 1982.

I-1299L

Maps



Beach protection devices, such as this Longuard tube, may be necessary to retain the beach in Area 2.



CARLSBAD S.B.



SCALE IN MILES
0 1 2 3 4 5 6 7 8
ONE INCH EQUALS 4 MILES


"Copyright Automobile Club of Southern California.
Reproduced by permission"

| | | | | |
|------------------|---|---|-------------------|------------------------------|
| 6 19147 57 | CARLSBAD STATE BEACH SAN DIEGO COAST GENERAL PLAN VICINITY MAP | RESOURCES AGENCY OF CALIFORNIA DEPARTMENT OF PARKS AND RECREATION APPROVED _____ DATE _____ | REVISIONS DATE | DESIGNED DRAWN CHECKED |
| | | | | |
| | | | | |





AREA 1

- AREA OFFICE



AREA 2

- PARKING SPACE (3 LOCATIONS) FOR 219 CARS
- 1 COMFORT STATION
- LANDSCAPED AREA
- 2 BEACH ACCESS ROUTES

CARLSBAD STATE BEACH

GENERAL PLAN

LEGEND

--- DPR BOUNDARY

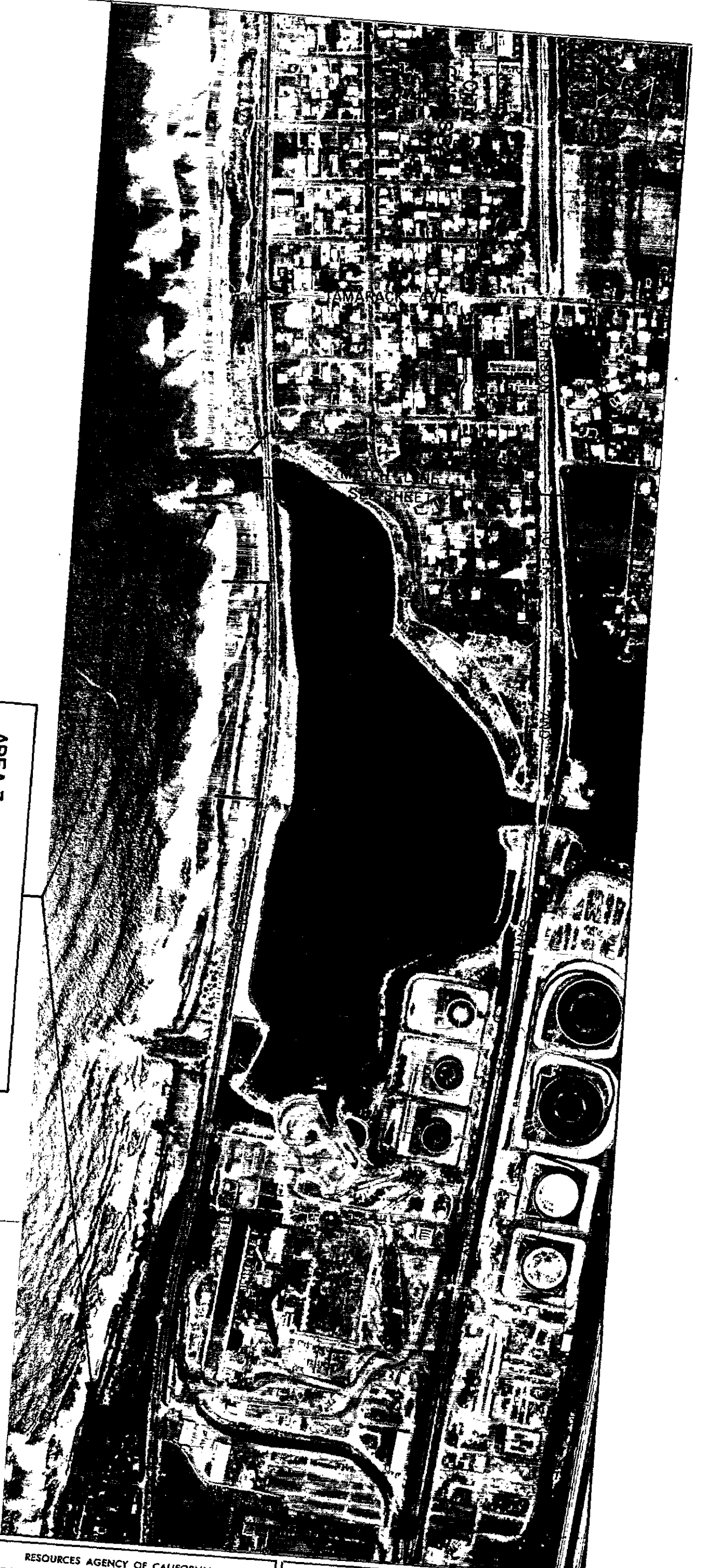
NOTE: PHOTO BASE COURTESY OF THE DEPARTMENT OF NAVIGATION AND OCEAN DEVELOPMENT, PHOTO BASE DATE 4-23-78.



AREAS 1 & 2

| | | | | |
|-----------------------------|--|--|--|----------|
| DRAWING No. 19147 | REVISIONS | | DATE | DESIGNED |
| | | | | DRAWN |
| | | | | CHECKED |
| SHEET No. 2 | CARLSBAD STATE BEACH SAN DIEGO COAST GENERAL PLAN EXISTING FACILITIES MAP | | RESOURCES AGENCY OF CALIFORNIA DEPARTMENT OF PARKS AND RECREATION | |
| 6 | APPROVED _____ | | DATE _____ | |

CARLSBAD STATE BEACH
GENERAL PLAN

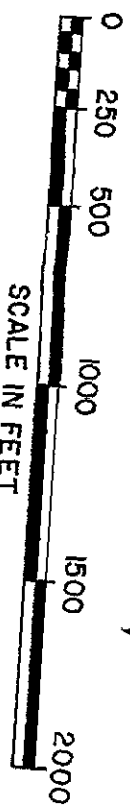


AREA 3
 ● PARKING SPACE FOR 80 CARS ON
 DPR PROPERTY.
P

LEGEND

--- DPR BOUNDARY

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



AREA 3

CARLSBAD STATE BEACH
**SAN DIEGO COAST
 GENERAL PLAN**
 EXISTING FACILITIES MAP

RESOURCES AGENCY OF CALIFORNIA
 DEPARTMENT OF PARKS AND RECREATION

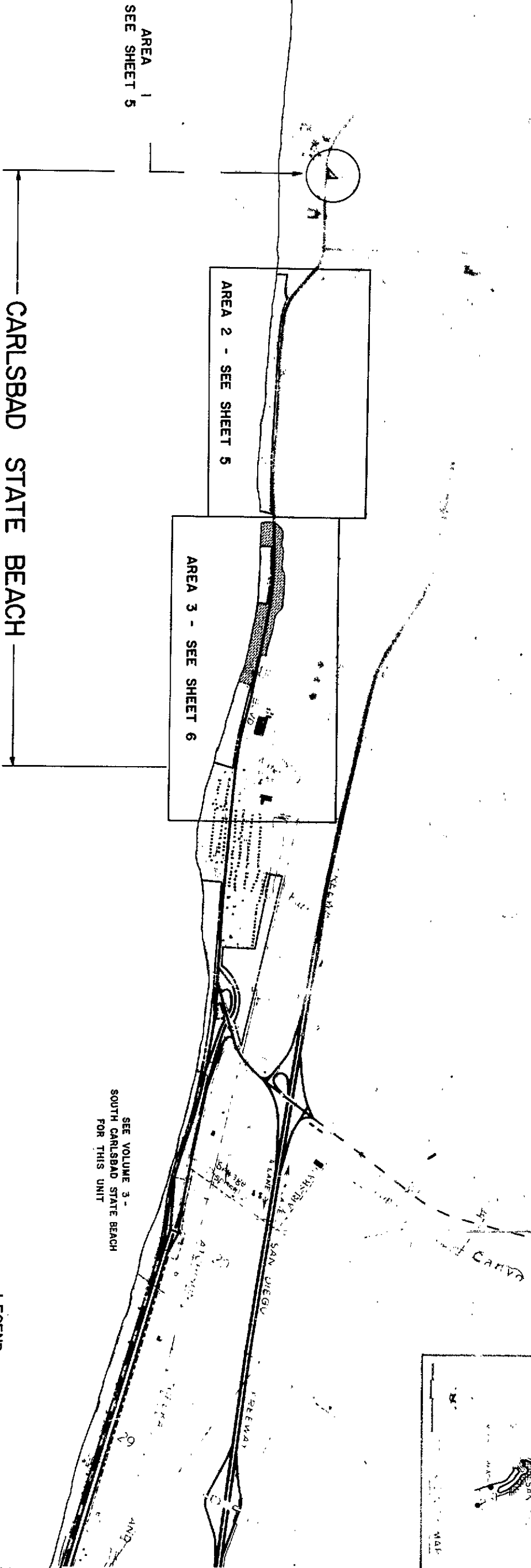
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| | | DRAWN |
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DRAWING NO.
 19147

SHEET NO.
 3
 OF
 6

CARLSBAD STATE BEACH
GENERAL PLAN



PACIFIC OCEAN

LEGEND

- EXISTING DPR OWNERSHIP
- ▨ AREA OF INTEREST TO DPR
- AREA OF CONCEPTUAL MAP

SEE VOLUME 3 -
 SOUTH CARLSBAD STATE BEACH
 FOR THIS UNIT

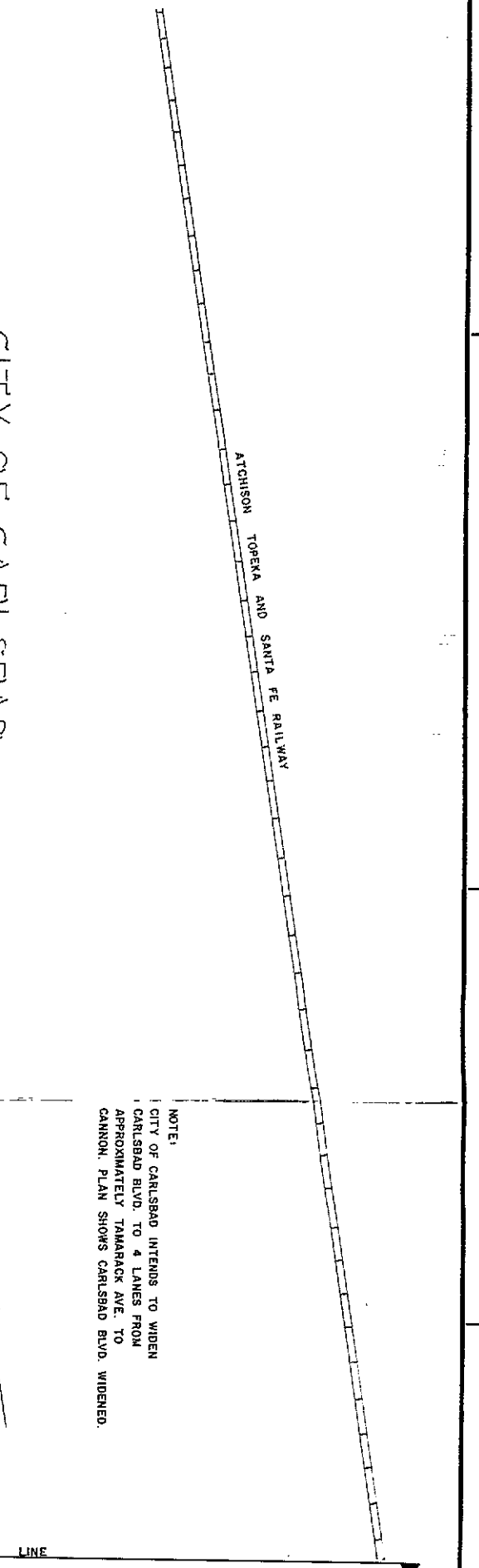
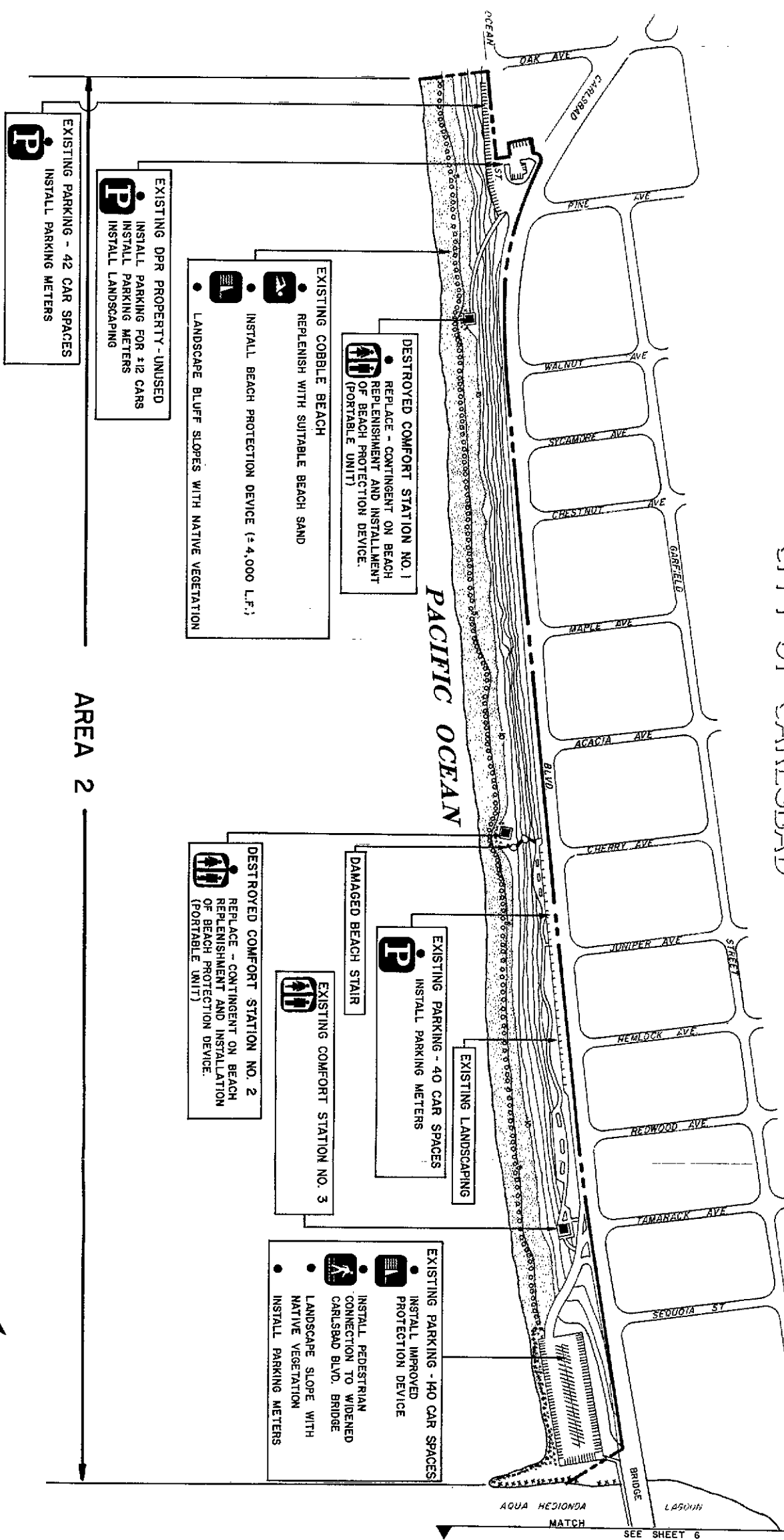
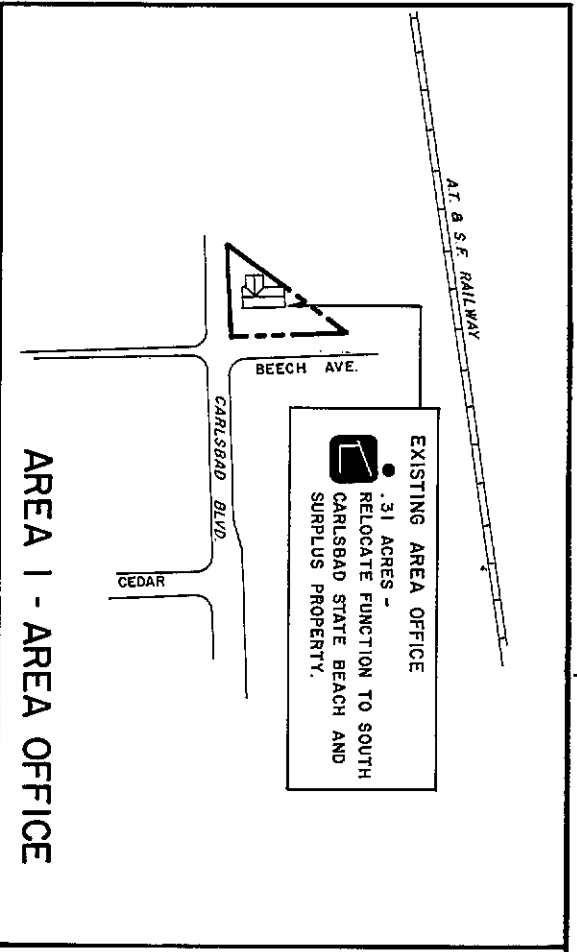


CARLSBAD STATE BEACH - AREAS 1 & 2

GENERAL PLAN

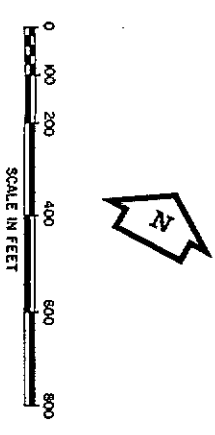
LEGEND

- STATE PARK OWNERSHIP BOUNDARY
- EXISTING AREA OFFICE
- EXISTING COMFORT STATION
- EXISTING AND PROPOSED CAR PARKING SPACES
- EXISTING RIP-RAP
- EXISTING AND PROPOSED PEDESTRIAN WALKS AND TRAILS
- EXISTING BEACH STAIR
- PROPOSED BEACH PROTECTION DEVICE (LONGARD TUBE OR EQUIVALENT)
- RECOMMENDED ACTIONS
- PROPOSED AREA OF BEACH SAND REPLENISHMENT (TO 10' CONTOURS)
- EXISTING CONTOURS (5' INTERVAL)



NOTE:
THE PURPOSE OF THIS PLAN IS TO DETERMINE LAND USE DESIGNATIONS ONLY. DESIGN DETAILS ARE SHOWN TO DEMONSTRATE FEASIBILITY AND ARE SUBJECT TO CHANGE.

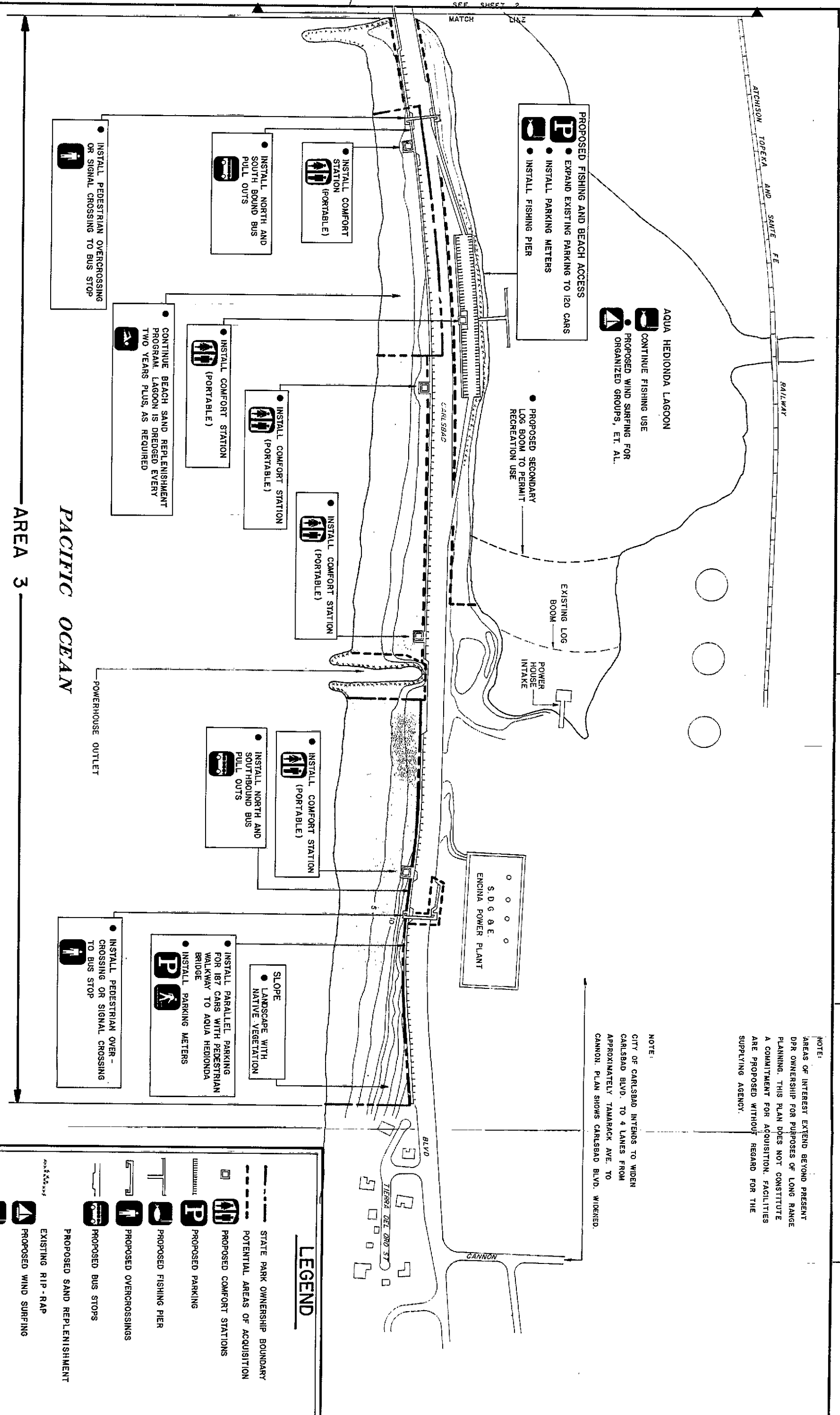
NOTE:
SOURCE OF OWNERSHIP INFORMATION:
D.P.R. DRAWING NO 17326 DATED FEB. 1990



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| CARLSBAD STATE BEACH SAN DIEGO COAST GENERAL PLAN CONCEPTUAL DETAIL - AREAS 1 & 2 | RESOURCES AGENCY OF CALIFORNIA DEPARTMENT OF PARKS AND RECREATION | | DESIGNED |
| | APPROVED _____ DATE _____ | REVISIONS | DRAWN |
| | DRAWING NO. 19147 | DATE | CHECKED |

CARLSBAD STATE BEACH - AREA 3

GENERAL PLAN



NOTE:
 AREAS OF INTEREST EXTEND BEYOND PRESENT DPR OWNERSHIP FOR PURPOSES OF LONG RANGE PLANNING. THIS PLAN DOES NOT CONSTITUTE A COMMITMENT FOR ACQUISITION. FACILITIES ARE PROPOSED WITHOUT REGARD FOR THE SUPPLYING AGENCY.

NOTE:
 CITY OF CARLSBAD INTENDS TO WIDEN CARLSBAD BLVD. TO 4 LANES FROM APPROXIMATELY TAMARACK AVE. TO CANNON. PLAN SHOWS CARLSBAD BLVD. WIDENED.

NOTE:
 THE PURPOSE OF THIS PLAN IS TO DETERMINE LAND USE DESIGNATIONS ONLY. DESIGN DETAILS ARE SHOWN TO DEMONSTRATE FEASIBILITY AND ARE SUBJECT TO CHANGE.

NOTE:
 SOURCE OF OWNERSHIP INFORMATION DPR DRAWING NO. 17326, DATED FEB. 1980

LEGEND

- STATE PARK OWNERSHIP BOUNDARY
- POTENTIAL AREAS OF ACQUISITION
- PROPOSED COMFORT STATIONS
- PROPOSED PARKING
- PROPOSED FISHING PIER
- PROPOSED OVERCROSSINGS
- PROPOSED BUS STOPS
- PROPOSED SAND REPLENISHMENT
- EXISTING RIP-RAP
- PROPOSED WIND SURFING
- PROPOSED FISHING
- EXISTING CONTOURS (5' INTERVAL)
- RECOMMENDED ACTIONS

| | | | | |
|---|---|--|----------|-----------|
| DRAWING NO. 19147 | CARLSBAD STATE BEACH SAN DIEGO COAST GENERAL PLAN CONCEPTUAL DETAIL - AREA 3 | RESOURCES AGENCY OF CALIFORNIA DEPARTMENT OF PARKS AND RECREATION | DESIGNED | DATE |
| SHEET NO. 6 OF 6 | APPROVED _____ DATE _____ | DRAWN | CHECKED | REVISIONS |

THE SAN DIEGO COASTAL STATE PARK SYSTEM GENERAL PLAN

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THE DEPARTMENT GRATEFULLY ACKNOWLEDGES THE ASSISTANCE OF

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- Individuals with various local, state, and federal agencies who cooperated with the authors.