

# ENVIRONMENTAL IMPACT ELEMENT



SAN MATEO COAST  
DRAFT ENVIRONMENTAL IMPACT ELEMENT

INTRODUCTION

Pursuant to SB 1892, Chapter 615, this General Plan (including the Environmental Impact Element) constitutes a report on a project, for the purposes of the California Environmental Quality Act. The plan lists the management policies and development plans proposed for the San Mateo Coast units of the State Park System. The draft Environmental Impact Element (Environmental Impact Report) analyzes the potential environmental impact of these policies, objectives, and plans.

These units of the State Park System are located along the Pacific Ocean and State Highway 1 in San Mateo County. San Mateo County is in the Central Coast area of California (see location mapping, figure 1).

The purpose of the Environmental Impact Element of the San Mateo Coast General Plan is to assess and report the impacts of the proposed development and management plans on the environment. Because the Resource Element, Land Use and Facilities Element, and Operations Element are broad master plans, the Draft EIE is a broad, general assessment.

The Environmental Impact Element is a general analysis of environmental impacts. Should specific plans become budgeted and proposed for implementation, more detailed environmental assessments will be prepared, and documentation pursuant to the California Environmental Quality Act will be formulated. The degree of specificity of this Environmental Impact Element corresponds to the degree of specificity 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. Additional descriptions of existing environmental conditions, and effects 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.

The Inventory of Features is an inventory of the natural, cultural and recreational resources in the State Park System unit. This inventory is critically analyzed in terms of the purpose, philosophy, and objectives of the unit; specific policies for management of the unit's resources are formulated. The inventories of features are on file at the department's Resource Preservation and Interpretation Division, in Sacramento. Park System planners now work within the framework of this Resource Element developing

appropriate park system unit plans. Therefore, the character of the development proposed for these units reflects the policies set forth in the Resource Element of the General Plan. User facilities are selected that 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 which promulgate mitigating measures such as decreasing use intensity. The mitigating measures are designed into the original plan. consequently, this plan is inceptually designed to provide recreational opportunities that will complement and preserve the valuable resources of the area.

## DESCRIPTION OF THE ENVIRONMENTAL SETTING

### General

#### Coastal Zone - Project Area

The San Mateo coast is located in the Coast Range geomorphic province. Geologic factors for each of the State Park System units are specified in the Inventory of Features, and include detailed information concerning geologic formations, bedrock, fossil content of the bedrock, seismicity, and surface stability (specifically explaining the present and potential landsliding propensity).

The principal geologic feature in the area is the San Andreas Fault. Regional strain deformation is known to occur across the San Andreas Fault at an average rate of 2 inches per year. The exact locations of the strain deformation is unknown, but is believed to be occurring in the Stanford Foothill and San Bruno areas. In any seismically active area, earthquakes must be anticipated and planned for. Future earthquake magnitude cannot be predicted, but estimations based on previous intensities can be made. The magnitude of the largest anticipated earthquake for the San Andreas Fault within the subject area is 8+ Richter Scale. The magnitudes of the largest anticipated earthquakes for the Seal Cove and San Gregorio Faults are 6.8 and 7.1 Richter Scale, respectively. Seismic structural designs have been developed which provide nominal damage risk.

Soil factors for each unit are specified in the Inventory of Features. Since blowing sand covers much of the coastal area, soil development is often limited and soil fertility is often low. Quite commonly, the soil cover is very thin, and typically sandy or silt clay. On Coast Range mountain slopes, rock fragments of the Franciscan group are common. Respective soils are relatively more fertile.

Climate and weather factors are mentioned in each Inventory of Features, and include detailed information regarding climate, weather, temperature, and precipitation. The climate is generally mild throughout the year, with moist, cool winters and foggy summers. The average annual temperature is 14°C. (57°F.) with a low average monthly temperature of 10°C. (50°F.) and a high average monthly temperature of 17°C. (62°F.). The average annual precipitation for the San Mateo Coast is 55 cm (22 inches). The directions and extent of wind patterns vary seasonally. Cold ocean upwelling and marine air cause the commonly occurring spring and summer fog.

Hydrologic factors are mentioned in each Inventory of Features. Although there is no permanent source of surface water in the San Mateo coast units, water runoff occurs following periods of rainy weather. Severe erosion is associated with this runoff. Common sources of water for the San Mateo coast are importation, well water, and stream reservoirs.

A 1945-1970 analysis by D.A. Webster, USGS, Department of the Interior, indicates marginal to adequate well water yields for stock or single family domestic use; 0.5 to 5 gpm. No data were available on regional groundwater quality. The San Francisco Bay Basin No. 2 Water Quality Control Plan shows no general data for groundwater quality.

Flora in each unit are specified in each Inventory of Features, and include the following plant communities: coastal strand, riparian woodland, freshwater marsh, coastal scrub, introduced annual grassland, and chaparral. All the communities are significantly modified by a great percentage of introduced exotic species.

Coastal strand consists of the vegetation of sandy beaches and coastal sand dunes. The beach is the sandy area between the mean tide and the foredune. The beach is characterized by a maritime climate, high exposure to salt spray, and sand blast and shifting sand, with low water-holding capacity and low organic matter content. Dunes are sandy, open habitat, extending from the foredune to vegetation on stabilized soil. Introduced European beach grass has been widely planted, and has become naturalized all along the Pacific coast. The coastal strand is relatively continuous from the Golden Gate Bridge to the Pajaro River, except in areas where sheer cliffs cascade into the ocean. Areas of dunes are found all along the San Mateo coast, particularly from Pillar Point to Tunitas Creek and San Gregorio Creek to Pescadero Creek and Ano Nuevo Point.

Riparian communities consist of hydrophytic plants growing along coastal drainages. The coastal drainages usually contain willow shrubs (Salix lasiolepis and S. lasiandra), blackberries (Rubus ursinus), hemlock (Conium maculatum), horsetail (Equisetum spp.), Pacific silverwood (Potentilla egudu var. grandis), sedges (Carex spp.), and rushes (Juncus spp.). Pampas grass (Cortaderia spp.) and cattails (Typha spp.) grow around creeks and in creek bottoms.

The freshwater marshes and riparian areas occur along the lake edges, ponds, and streams, particularly San Gregorio, Pomponio, Pescadero, Whitehouse, and Cascade creeks. The lower portions of some marshes are brackish, and support both fresh and salt water marsh flora.

The coastal scrub is low vegetative cover occurring on coastal bluffs, hills, and summits. Coastal scrub is usually less than six feet tall, and is subject to fog and strong winds.

A grassland consisting of annual grasses and weedy forbs occurs along many of the terraces behind the beach areas. Many of these grassland areas are best described as fallow agricultural fields, once cleared of the coastal scrub and vegetation. Common weeds include bristly ox-tongue (Picris echioides), wild mustard (Brassica spp.), willow dock (Rumex salicifolius) and thistle (Carduus spp.), and California poppy (Eschscholzia californica).

The areas of chaparral occur on the slopes of high ridges, particularly on the properties east of Highway 1.

The beach strawberry (Frageria chiloensis) is recognized as a unique plant species, having special significance in San Mateo County. The beach strawberry occurs in numerous locations along the San Mateo coast. The habitat of this strawberry extends along the coast from Oregon to Santa Barbara. The beach strawberry is unique, because of its importance as one of the parents of the domestic strawberry varieties. It occurs in sporadic colonies on coastal terraces, bluffs, and stabilized dunes.

Because of the rocky bottom, red, brown, and green algae abound in the intertidal zone. Common algae include rock week (Fucus furcatus), sea lettuce (Ulra latuca), and red seaweek (Botryoglossum). Giant kelp (Macrocystis pyrifera) and Bull kelp (Nereocystis leutkeana) grow in the sub-littoral zone.

Descriptions of fauna in each unit are specified in each Inventory of Features. The abundance, variety, and distribution of animal life in an area is usually dependent on the types of available habitat. Floristic communities have associated animal species. Animal groups include marine fish (intertidal, littoral, and pelagic invertebrates), mammals, birds, amphibians, and reptiles.

Marine life, including the intertidal zone, is diverse with respect to availability of habitat and numbers of species. A major factor contributing to the relatively low habitat availability and species numbers along most portions of the coast is illegal over-collection. For example, the lack of diversity of invertebrate life in the intertidal rocks is a consequence of illegal removal and over-collection of these species.

Well over 200 species of invertebrates have been identified in the intertidal and littoral waters off certain portions of the coast. Common invertebrates include: limpets, shore crabs (Hemigrapsus spp.), sea anemones (Anthopleura spp.), snails, beach hoppers, isopods, chitons, barnacles, and mussels (Mytilus californius). Associated with the rocky intertidal zone are ruddy turnstones (Arenaria interepres), black turnstones (Arenaria melanocephala), black oyster-catchers (Haematopus bachmani), spotted sandpipers (Actitis macularia), and wandering tattlers (Heteroscelus incanus). Birds such as the whimbrel (Numenius phaeopus), willet (Catoptrophorus semipalmatus), marbled godwit (Limosa fedoa) and sanderlings (Calidris alba) pursue the invertebrates in the sandy areas of the surf zone.

The pinniped rookery on Ano Nuevo State Reserve is an outstanding feature of animal life along the San Mateo Coast. The main rookery area is reported to be one of the most concentrated breeding grounds in the world for seals and sea lions. At present, Ano Nuevo SR is the only place in the world with a northern elephant seal rookery on the mainland.

The three pinniped species that use Ano Nuevo SR as a rookery are the northern elephant seal (Mirounga angustirostis), the harbor seal (Phoca vitulina), and the stellar sea lion (Eumetopias jubata). The California sea lions (Zalophus californianus) observed at the reserve have been mostly young adult males.

Other pelagic mammals common to this coastal area include the California gray whale (Eschrichtui gibbosus), fin-back whale (Balaenoptera physalus), Baird dolphin (Delphinus delphis bairdi), Pacific pilot whale (Globicephala scammoni), Pacific white-sided dolphin

(Lagenochynchus obliquidens), killer whale (Orcinus orca), harbor porpoise (Phocoena phocoena), dall porpoise (Phocoenoides dalli), Bairds beaked whale (Berardius bairdii), and sea otter (Enhydra eutris).

Some of the more common fish of this coastal area include skates (Raja spp.), striped bass (Roccus saxatilis), white croakers (Genyonemus lineatus), flat fish, flounder, sole, barred surfperch (Amphistichus argenteus), rock pool blenny (Hypsoblennius gilberti), blue rockfish (Sebastes mystinus), lingcod (Ophiodon elongatus), black rockfish (Sebastes melanops), canary rockfish (Sebastes pinniger), copper rockfish (Sebastes caurinus), and brown rockfish (Sebastes auriculatus).

The bird population throughout the San Mateo Coast units of the State Park System is varied and extensive. Common species include Anna's hummingbird (Calypte anna), Say's phoebe (Sayornis sava), common bushtit (Psaltriparus minimus), bewick wren (Thyromanes bewicki), house finch (Carpodacus mexicanus), lesser goldfinch (Spinus psaltria), song sparrow (Melospiza melodia), white crown sparrow (Zonotrichia leucophrys), red-shafted flicker (Colaptes auratus cafer), vireos (Vireo spp.), warblers (Dendroica spp.), gulls (Larus spp.), loon (Garva immer), Western grebe (Aechmophorus occidentalis), Brant's cormorant (Phalacrocorax penicillatus), red-breasted merganser (Mergus serrator), common murre (Uria aalge) and forster's tern (Sterna forsteri). Also, several raptors such as the American kestrel (Falco sparverius) and red-tailed hawk (Buteo jamaicensis) soar in the area. The brown pelican (Pelecanus occidentalis californicus) and the California least tern (Sterna albifrons browni) are two birds on the endangered species list that have been observed in the area.

Terrestrial animals common to the California coastline include the deer mouse (Peromyscus maniculatus), California meadow mouse (Microtus californicus), mule deer (Odocoileus hemionus), pocket gopher (Thomomys bottae), raccoon (Procyon lotor), gray fox (Urocyon cinereoagenteus), long-tailed weasel (Mustela frenata), spotted skunk (Spilogale gracilis), coyote (Canis latrans), bobcat (Lynx rufus), brush rabbit (Sylvilagus bachmani), and California ground squirrel (Citellus beecheyi).

Common reptiles and amphibians include the northern alligator lizard (Gerrhonotus coeruleus principis), western garter snake (Thamnophis elegans), San Francisco garter snake (Thamnophis sirtalis tetrataenia), northwestern fence lizard (Sceloporus occidentalis), California horned lizard (Phrynosoma coronatum frontale), gopher snake (Pituophis spp.), California toad (Bufo boras halophilus), and Pacific tree frog (Hyla regilla).

Because the San Mateo Coast units are close to urban areas, and are limited by the types of available habitat, the number of animals found on-site is variable, but relatively low.

The ambient air quality of any area is a function of meteorology and pollution sources. The primary pollutants in the San Mateo coast state beaches area are those emitted from motor vehicles: carbon monoxide, hydrocarbons, nitrogen oxides, and particulants (mainly lead). Hydrocarbons and nitrogen oxides combine in a photochemical process, forming smog. Oxidant and carbon monoxide levels are considered adequate indicators of ambient air quality.

Air quality statistics from the Bay Area Air Pollution Control District, stationed in Burlingame will not be cited in this report, because the ambient pollutant levels

measured there are not representative of the coast area. Differences of topography, meteorology, and urbanization account for the unrepresentative statistics. Burlingame statistics are influenced by South San Francisco industry, the San Francisco International Airport, and many roadways serving the residential communities along Highway 101. The San Mateo coast enjoys less industrial/commercial activity, and a more moderating marine influence.

In 1974, the U.S. Department of Transportation, Federal Highway Administration and the State of California, Department of Transportation, prepared a Draft Environmental Impact Statement concerning a proposed road linkage between State Highway 1 and State Highway 280. For the purposes of that highway project, air quality was monitored at a residential community in Sharp Park very close to Highway 1. Since this area more closely congrues with the State Park System units of the San Mateo Coast, air quality measurements should more closely represent the ambience levels.

The station at Sharp Park, in October 1973, recorded a high hour carbon monoxide measurement of 3 ppm. All the carbon monoxide measurements are well below federal and state standards. Oxidant levels monitored by the County of San Mateo have not exceeded federal and state standards along State Highway 1. In the area between Burlingame and the San Francisco International Airport, federal and state standards were exceeded for 18 days, between the months of July and December 1973.

The noise element of the San Mateo County General Plan has not yet been officially adopted. However, predicted noise levels and existing ambient contours are available from the County of San Mateo and the California Department of Transportation (see attachment 2). Noise levels are well within all safety limit standards, and aesthetically pleasing.

Despite overcrowding and maintenance problems, the San Mateo Coast remains a scenic and aesthetically pleasing area. The major forms of recreation include sunbathing, walking, jogging, dog-walking, picnicking, fishing, and wading. Swimming is hazardous because of the strong ocean current, undertow, riptides, and cold water.

The San Mateo Coast area is zoned RM (Resource Management District), promulgating the policies and objectives of the Open Space and Conservation Elements of the San Mateo County General Plan. Maximum development and type of use are listed in attachment 1 (page 225).

The 1950, 1960, and 1970 U.S. Census indicate a slower growth rate for San Mateo County from 1960 to 1970 than from 1950 to 1960. The 1950 county population was 235,700. The 1960 population was 444,000. This represents an 88 percent change between 1950 and 1960. The 1970 county population was 556,234. This represents a 26 percent change between 1960 and 1970. Population growth between 1956 and 1969 was 54 percent; an increase from 357,600 persons to 550,400 persons.

In 1970, San Mateo County's population was 556,234--4.7 percent black; 11.3 percent Spanish; 84.0 percent other. The median age of the population was 30.0 years. In 1969, the median family income was \$13,222; only 4.2 percent of all families had an income below the poverty level, and 71.2 percent of persons 25 years or older were high school graduates.

Growth figures for motor vehicles between 1956 and 1969 represented a 107 percent increase, from 167,457 vehicles to 348,270 vehicles, at a time when population growth increased by 54 percent. Current fuel supply and demand, changes in federal and state funding allocations to state highways, changing public attitudes toward highway growth, travel and automobile ownership, and development of alternative means of transportation can be expected to reduce the projected motor vehicle growth rate.

However, the decentralized nature of coastal development and the natural topography of the San Mateo coast area has resulted in community development dependent on use of private vehicles. Additionally, limited local public transportation and limited local shopping centers have created a situation in which comparatively few houses are without private vehicles.

In the 1970 census, the county contained 190,147 year-round dwelling units, of which 71.3 percent were one unit structures. The average persons per unit of all occupied dwellings was 3.0. Thirty-five percent of the dwelling units were built before 1950.

In 1970, San Mateo County housed 12 percent of the Bay Area residents, and provided 11.3 percent of the jobs. San Francisco County housed 15.4 percent of the Bay Area residents, and provided 25.5 percent of the jobs. The ratio of employed residents to persons employed in the Bay Area is 1.00; in the County of San Mateo, the ratio is 1.17; in the County of San Francisco, it is 0.64.

Employment in the Bay Area is expected to increase by 1,300,000 from 1970 to 2000, according to county employment projections. This represents an employment growth of 64 percent. San Mateo County is estimated to have an employment growth of 56 percent between 1970 and 2000.

The California Department of Parks and Recreation has studied the issues of traffic patterning and congestion. The findings are discussed in the General Plan on page 138. Figure 30, "Traffic and Parking Investigation", summarizes the pertinent data.

Visitor use of the San Mateo Coast State Park System units fluctuates from an average attendance of 1,400,000 during the summer (June 16 to September 15) to an average attendance of 800,000 during the winter (December 1 to March 31). Weekend use is often heavy throughout the whole year.

All major access roads in the study area experience traffic volumes near road capacity approximately 4 to 10 hours per day, on busy weekends and holidays. On peak days, an estimated 4,000+ vehicles are parked legally or illegally on publicly and privately owned lands, to gain access to these units of the State Park System.

The California Department of Parks and Recreation has studied the issues of water availability and sewage disposal. The findings are discussed in the General Plan on page 140. Figure 32, "Domestic Water Availability Investigation", depicts the existing San Mateo County coastside water districts' boundaries, and the groundwater basin status of sea water intrusion.

For a description of the area's history, see "Historical Background," page 5.

Cultural resources are specified in each Inventory of Features. Three archeological surveys have been completed for the San Mateo coast. Of the estimated 200 Native American sites in San Mateo County, about one-half that number have been destroyed by vandalism, agriculture, and/or urban development. None of the cultural deposits existing on the coast have been systematically examined through archeological excavation. Typical cultural deposits are an accumulation of ash, mortars, pestles, projectile points, shell beads, and ornaments. Organic debris of the Bay Area cultural deposits are approximately 3,000 to 4,000 years old.

The natural beauty and recreational potential of the San Mateo coast has caused this area to develop into a vacation and resort area. This interest continues today.

As a result of World War II, military installations such as Army posts, mobile units, and training facilities were established on the San Mateo coast. Post-war demands for housing caused escalating urbanization.

### Specifics

#### Thornton State Beach

A general description is contained in each Inventory of Features. It specifies the geomorphic, edaphic, hydrologic, and biotic resources at Thornton State Beach. Only those resources and/or factors that may cause a potentially adverse change in the environment will be addressed in this assessment.

Thornton State Beach is underlain by the Merced formation, dating to the Plio-Pleistocene age. A small exposure of the Colma formation exists at this state beach.

The bluffs are gullied from storm water runoff. Often, severe erosion is associated with this runoff. Ground moisture and water runoff are correlated with landsliding. During times of prolonged and/or heavy rains, this area's unstable geologic features become saturated, and are more likely to move.

On-site water is supplied by the Daly City Municipal Water District. The Daly City Municipal Water District has a reservoir capacity of 20 million gallons, of which about 7+ gallons are pumped per day. The source of this water is the San Francisco Water District and seven local wells.

The Northern San Mateo County Sanitation District serves Thornton State Beach via a lift system from the beach area restrooms. The district's treatment plant has an 8 million gallon per day capacity, and operates at a 3 to 5-million gallon per day average.

No rare and/or endangered species are known to occur at Thornton State Beach. One rare plant is reported to occur north of this unit--the San Francisco wallflower (Erysimum franciscanum var. franciscanum).

The flora of Thornton State Beach are predominantly non-diverse, and characteristic of the coastal strand and coastal scrub California Floristic Province communities. The specific floristic features of this unit are listed in figure 2.

At Thornton State Beach, the beach strawberry occurs along the ridge portion of the George R. Stewart Nature Trail.

The predominant animal habitats are the coastal scrub and sandy beach/stabilized dunes community. Because Thornton State Beach is surrounded by a highly urbanized area, and because the type and availability of habitat is very limited, the relative number of animals found and/or observed at this unit is low. Perhaps 150 species of birds, 27 species of terrestrial mammals, and 6 species of reptiles and amphibians have been observed.

The primary air pollutants in the Thornton State Beach area are those emitted by motor vehicles. Carbon monoxide measurements at a station in Sharp Park were well below federal and state ambient air standards. For the purposes of this General Plan project (CAC Section 15147), the Sharp Park area and recorded statistics are indicative of the quality of the Thornton State Beach ambience.

Noise level statistics are included in attachment 2. Statistics from Daly City's Eastmont area measure 60.0 CNEL. This level decreases westerly to the coast; consequently, Thornton State Beach experiences a CNEL less than 60.0; a level of decreasing traffic noise and increasing wave/surf noise.

No Native American sites have been recorded at Thornton State Beach.

Thornton State Beach differs from the other San Mateo coast state beaches with respect to location, types of visitors, and amount of visitor use. Thornton State Beach receives the least amount of visitation because of the foggy climate, day use fees, location, and lack of signs.

Existing facilities at Thornton State Beach include: a 150-car paved parking area; a paved entrance road; a paved beach ramp; an entrance kiosk; two restroom facilities; picnic tables with stoves; a self-guided nature trail; and sewage, water and electrical systems.

#### Gray Whale Cove and Montara State Beaches

A general description of the area is contained in the Inventory of Features. This document specifies the geomorphic, edaphic, hydrologic, and biotic resources at Montana State Beach. Only those resources and/or factors that may cause a potentially adverse change in the environment will be addressed here.

Montara Mountain consists of granitic rocks. In the state beach there are also marine sediment deposits from the Pleistocene Epoch, and Holocene alluvium, which originated from the erosive forces of water, wave, and wind action. This deposit includes sand, silt, and gravel.

An active fault passes directly through Montara State Beach. Montara Mountain has been the site of numerous debris avalanches (Smith, 1976, an unpublished manuscript), caused by minor faulting and earthquakes.

Due to the drainage runoff from Highway 1, the cliff and access road to the beach and parking lot are eroding. Also, erosion has occurred down the bluffs and terraces, where

visitors have made trails to the beach. Off-highway vehicle use is another problem at Montara Mountain.

Green Valley and Martini Creeks are the main drainages. These intermittent streams drain from Montara Mountain, and flow across the state beach.

Water is supplied by the Citizen Utilities Company of California. The present reservoir capacity for the Montara area is 710,000 gallons, of which approximately 326,000 gallons per day are pumped. The source of this water is five wells and a spring in the Montara area. Since the addition of a reservoir, with an approximate 425,000 gallon capacity, there have been no water outages due to lack of available water.

The restroom facilities at Montara State Beach have a 1,000-gallon holding tank. The effluent from these facilities is hauled to the Half Moon Bay City Sanitation Department facilities for treatment. (Please refer to the existing conditions at Half Moon Bay State Beach for information on sewage treatment at Half Moon Bay.)

Because of the unit's limited size and topographic variety, the abundance and diversity of species is relatively small.

There are no rare or endangered plant species at Montara State Beach. Coastal strand, northern coastal scrub, introduced annual grassland, and riparian communities exist at Montara State Beach. Upper Mountain, in the area known as McNee Ranch, contains extensive strands of the significant Montara manzanita (Arctosphylos montaraensis) and beach strawberry (Fragaria chiloensis). Montara State Beach also contains the Pacific stone crop (Sedum spathulifolium), the only host plant for the rare San Bruno Mountain elfin butterfly (Callophrys mossii bayensis).

The predominant animal habitats are the introduced annual grassland, riparian, near-shore waters/coastal beach, coastal scrub, and chaparral environs. No rare animal species are known to exist. The endangered California brown pelican (Pelecanus occidentalis californicus) and the California least tern (Sterna albifrons browni) may migrate through the area.

The primary air pollutants at Montara State Beach are those emitted by motor vehicles. ADT levels at Montara are less than levels at Sharp Park. Since the carbon monoxide measurements at Sharp Park, with higher ADT levels, are well below federal and state ambient air standards, it is reasonable to assume that the ambient air standards at Montara State Beach are less than those statistics cited for Sharp Park. Carbon monoxide measurements at Montara State Beach, therefore, must be well below federal and state ambient air standards.

Noise level statistics are included in attachment 2. Statistics from Montara State Beach and Highway 1 measure 70.0 CNEL. The beach itself measures a CNEL of 60.0. The transportation noise from Highway 1, which runs along Montara State Beach, creates CNEL readings along the eastern border of the state beach above 60.0.

Three Native American sites are located at Montara. There is a zone of extreme cultural resource sensitivity on the bluffs of Montara State Beach.

There is now a sewer hook-up moratorium and a water hook-up moratorium at Montara.

Existing facilities at Montara State Beach consist of two low-flow flush toilets and a graded ramp to the beach.

#### Half Moon Bay State Beach

A general description of the area is contained in the Inventory of Features. This report specifies the geomorphic, edaphic, hydrologic, and biotic resources at Half Moon Bay State Beach. Only those resources and/or factors that may cause a potentially adverse change in the environment will be addressed here.

At Half Moon Bay State Beach, erosive forces of water, wave, and wind have created Holocene alluvium. Alluvial deposits of various ages and beach sands are the only geologic units exposed at Half Moon Bay State Beach.

At various times, wave action at the beach removes great quantities of sand, which exposes sea cliffs. Consequently, these sands are subject to severe settling.

The Seal Cove-San Gregorio fault zone parallels the coast 1.6 to 3.2 km (1 to 2 mi.) off-shore from Half Moon Bay State Beach. The San Andreas Fault lies about 6 miles east of the beach.

Tsunamis can be expected about once every 200 years (Ritter and Dupre 1972). These waves displace the water from about 1.8 m (6 ft.) to 6 m (20 ft.) higher.

Sea cliff erosion is another geologic hazard. The cliffs can collapse during heavy storms or major earthquakes. As mentioned previously, the area has several active faults, so earthquakes are to be expected. Landslides along the cliffs now occur, and are also expected. Rock falls may be expected.

Although all of the San Mateo state park units are zoned RM by the County, much of Half Moon Bay State Beach is also zoned "green belt" by the City of Half Moon Bay. The purpose of this GB-2 designation is to provide for future public use and beach development, such as parking, parkways, and related beach activities and facilities (see appendix A, page 225).

Water is supplied by the Coastside County Water District. The district has a reservoir capacity of 8-1/2 million gallons, of which approximately 1-1/2 to 2-1/2 million gallons are pumped per day. The source of this water is 15 wells, several creek reservoirs, and importation. Without the purchase of water from the San Francisco Water District, water resources for the Half Moon Bay area may not be adequate.

Effluent is stored at the restroom facilities at Half Moon Bay State Beach, then hauled to the Half Moon Bay City Sanitation Department facilities at Half Moon Bay. The treatment plant now operating for Half Moon Bay has a one million gallon per day capacity, and operates at a 0.45-million gallon per day average.

A sub-regional sewage plant has been proposed for Half Moon Bay, El Granada, and Montara State Beaches. The proposed sub-regional treatment plant would have a

2 million gallon per day capacity, with a 1 million gallon per day allotment to the Half Moon Bay area.

The present treatment plant is actually an interim facility. The proposed sub-regional plant would be built on the land that the present interim plant is on, and would incorporate the present interim plant in its operation.

The present 1 million gallon per day capacity adequately handles the Half Moon Bay sewage.

As yet, no known rare or endangered plant or animal species have been recorded at Half Moon Bay State Beach. However, the endangered California brown pelican (*Pelecanis occidentalis californicus*) and the California least tern (*Sterna albifrons browni*) may migrate through the area. The endangered San Francisco garter snake may inhabit freshwater pools on Frenchmans Creek and Pilarcitos Creek.

The flora of Half Moon Bay State Beach are not diverse, and are characteristic of the riparian, Coastal Strand, and Introduced Annual Grassland California Floristic Province communities.

At Half Moon Bay State Beach, no vegetation has been recognized as unique, rare, or endangered.

Major animal habitats are coastal scrub, riparian/marsh, near-shore water/coastal beach, and marine communities. The coastal scrub community is the largest terrestrial habitat at Half Moon Bay State Beach. The state beach is within the Pacific Coast Wildlife Region, which is restricted to the coastal slope of the Coast Range mountains in California.

The primary air pollutants in Half Moon Bay are those emitted by motor vehicles. ADT levels at Half Moon Bay are less than the levels at Sharp Park. Since the carbon monoxide measurements at Sharp Park, with higher ADT levels, are well below federal and state ambient air standards, it is reasonable to assume that the ambient air standards at Half Moon Bay are less than those statistics cited for Sharp Park. The carbon monoxide measurements at Half Moon Bay State Beach, therefore, must be well below federal and state ambient air standards.

Noise level statistics are included in attachment 2. Statistics from Pillar Point, located approximately 2 miles northwest of Half Moon Bay, measure 59.0 CNEL. Statistics from Eel Rock, located approximately 2 miles south of Half Moon Bay, measure 55.0 CNEL. Highway 1 north and south of Half Moon Bay experiences a CNEL greater than 60.0. However, Half Moon Bay State Beach experiences a CNEL less than 60.0.

Two prehistoric Native American sites have been recorded at Half Moon Bay State Beach. The two sites, labeled CA-SMa:138 and CA-SMa:139, are located near Frenchmans Creek. CA-SMa:138, a cultural deposit 60 by 20 meters in area, is located on the north bank of Frenchmans Creek, about 215 meters from the ocean; CA-SMa:139, a cultural area about 90 by 30 meters, is located on the south side of Frenchmans Creek, directly opposite CA-SMa:138. Both sites have been plowed.

Half Moon Bay State Beach differs from the other San Mateo coast state beaches in that it is the only state beach along the San Mateo coast which now provides overnight camping. The campground is heavily used.

Half Moon Bay State Beach is divided into several sub-units--Miramar; Naples (Roosevelt); Dunes; Venice; Francis; and the Sweetwood and El Mar areas. Naples and Dunes beaches have access from Highway 1 via Young Avenue. Venice Beach has access from Highway 1 via Venice Avenue. The Sweetwood area has access directly, via Highway 1. Francis beach has access via Kelley Avenue. Miramar beach has no vehicular access.

The parking facilities for each sub-unit include: Naples, 70-vehicle dirt parking lot; Dunes, 150-vehicle gravel parking lot; Sweetwood, 8-vehicle parking lot; Venice, 50-vehicle gravel parking lot; Francis, 220-vehicle paved parking lot. Miramar beach has no parking facilities.

Three of the Half Moon Bay State Beach sub-units have low-flush toilets with vaults--Naples and Venice beaches, and the Sweetwood area. Dunes and Francis beaches have regular flush toilets. Miramar has no public facilities.

The Sweetwood area has a group camp accommodating 50 persons; Francis has an improved 50-unit campground, as well as a sanitation dump station, three restrooms, three beach ramps, a beach access stairway, a picnic area, an entrance kiosk, an area office, and a service yard. Miramar is a beach area without improvements.

#### San Gregorio-Pomponio State Beaches

A general description of the area is contained in the Inventory of Features. This document specifies the geomorphic, pedologic, hydrologic, and biotic resources at San Gregorio/Pomponio State Beach. Only those resources and/or factors that may cause a potentially adverse change in the environment will be addressed here.

The geologic features common to San Gregorio and Pomponio State Beaches are the Purisima formations, marine terrace deposits, holocene alluvium (originating from the erosive forces of water, wave, and wind action), landslide deposits, beach sand, and aeolian and marine sand deposits.

The coastal bluff and upland terrace soils are highly prone to slippage and erosion caused by runoff from Highway 1. Seacliffs are eroding and sea caves are forming as a result of wave inundation.

Because no planned or officially maintained trails exist to control access to and use of these units, many sporadic and unplanned trails have been created. These trails accelerate erosion, and cause indiscriminate use of the areas.

Since the San Gregorio-Seal Cove fault underlies both these parks, earthquakes are likely to occur. Flooding of low-lying areas can be expected. Also, a 20-foot tsunami can be expected approximately every 200 years.

The San Gregorio Creek and the Pomponio Creek are the significant drainages. There are no facilities for water storage at either state beach. There are no facilities for water at San Gregorio/Pomponio State Beaches.

The effluent at San Gregorio/Pomponio State Beaches, from six chemical toilets and one vault toilet, is hauled to the Half Moon Bay City Sanitation Department facilities for treatment. (Please refer to the existing conditions at Half Moon Bay State Beach for information on sewage treatment at Half Moon Bay.)

San Gregorio has a greater species diversity, because of a varying topography and riparian corridor along San Gregorio Creek. The five native plant communities represented are riparian, coastal strand, northern coastal scrub, annual grassland, and freshwater marsh. Although no rare or endangered species exist, according to records of the California Native Plant Society (1974; 1978), exotic species, as well as the native beach strawberry (Fragaria chiloensis), occur.

The predominant habitats are marine, coastal beach/nearshore waters, riparian marsh, coastal scrub, and introduced annual grassland. Although the endangered San Francisco garter snake (Thamnophis sirtalis tetrataenia) has been sighted east of San Gregorio State Beach and four miles upstream on Pomponio Creek, the existence of the snake within the state beach is uncertain.

The endangered California brown pelican (Pelecanus occidentalis) and the least tern (Sterna albifrons browni) migrate through the area. The marine invertebrate life at both beaches is minimal.

The primary air pollutants at San Gregorio State Beach are those emitted by motor vehicles. ADT levels at San Gregorio-Pomponio are less than levels at Sharp Park. Since the carbon monoxide measurements at Sharp Park, with higher ADT levels, are well below federal and state ambient air standards, it is reasonable to assume that the ambient air standards at San Gregorio-Pomponio are less than those cited for Sharp Park. Carbon monoxide measurements at San Gregorio/Pomponio State Beaches, therefore, must be, well below federal and state ambient air standards.

Noise level statistics are included in attachment 2. Statistics from San Gregorio/Pomponio State Beaches show a CNEL level above 60.4. Transportation noise from Highway 1, which runs through San Gregorio-Pomponio State Beaches, combined with increasing wave/surf noise, is probably responsible for the 60.4+ CNEL level. Transportation noise from Highway 1 is the probable cause of the 60.4 CNEL level, because CNEL levels in San Gregorio City (inland from Highway 1) are less than 60.0, and CNEL levels along Highway 1 are greater than 60.0.

San Gregorio/Pomponio State Beaches have zones of extreme cultural sensitivity. A Native American site exists at San Gregorio, and a Native American site and historic buildings exist at Caughey Ranch.

Both beaches receive heavy use during the late summer and early fall.

Existing facilities at San Gregorio include: a large paved parking lot for 230 vehicles, chemical toilets, and a concessionaire-operated catering truck. At Pomponio, there is a paved lot for 80 vehicles.

## Pescadero State Beach

A general description of the area is contained in the Inventory of Features. This document specifies the geomorphic, pedologic, hydrologic, and biotic resources at Pescadero State Beach. Only those resources and/or factors that may cause a potentially adverse change in the environment will be addressed here.

A small section of the Pigeon Point formation, which consists of interbedded sandstone, siltstone, and conglomerate, exists at Pescadero State Beach. There are also a volcanic unit of Mindego basalt, marine terrace deposits, the Purisima formation, and Holocene alluvium. Where there are rocky bluffs, rockfalls can be expected.

Earthquakes along the seacliff and landslide failures can be expected in this area. Erosion is a problem, especially when soils are wet. These fragile soils experience accelerated erosion caused by human activity, overgrazing, and cultivation.

A tsunami with a 6 meter runup can be expected about once every 200 years.

No water service or facilities exist for Pescadero State Beach.

The chemical vault toilets at Pescadero State Beach have a 1,000-gallon holding capacity. The effluent from Pescadero State Beach is hauled to the Half Moon Bay City Sanitation Department facilities for treatment. (Please refer to the existing conditions at Half Moon Bay State Beach for information on sewage treatment at Half Moon Bay.)

The Butano and Pescadero Creeks are the two major drainages. Although a dam exists on Pescadero Creek near Loma Mar, no water storage facilities exist.

There is great species diversity at Pescadero State Beach, because of the extensive dune system, the coastal strand plant community, and the freshwater marsh--the most extensive freshwater marsh on the San Francisco Peninsula.

Four plant communities lie within this region. They are coastal strand, northern coastal scrub, riparian, and freshwater marsh.

According to the California Native Plant Society (1974; 1978), no rare or endangered plant species exist in this region.

The six animal habitats in this region are the coastal beach/dune, marsh/lagoon, coastal scrub, marine, agricultural land, and eucalyptus grove. Three endangered species are present in this area: the San Francisco garter snake (Thamnophis Sirtalis tetrataenia); the brown pelican (Pelecanus occidentalis Californicus); and the least tern (Sterna albifrons browni). The rare black rail (Laterallus jamaicensis) has been seen in the marsh area.

The primary air pollutants at Pescadero State Beach are those emitted by motor vehicles. ADT levels at Pescadero are less than levels at Sharp Park. Since the carbon monoxide measurements at Sharp Park, with higher ADT levels, are well below federal and state ambient air standards, it is reasonable to assume that the ambient air standards at Pescadero are less than those statistics cited for Sharp Park. The carbon monoxide measurements at the Pescadero State Beach, therefore, must be, well below federal and state ambient air standards.

Noise level statistics are included in attachment 2. Statistics for Pescadero State Beach show CNEL levels greater than 60.0. Transportation noise from Highway 1, which runs through Pescadero State Beach, compounded with wave/surf noise, is probably responsible for the 60.0+ level. Transportation noise from Highway 1 is the probable cause of the 60.0+ level. CNEL levels in Pescadero City (inland of Highway 1) are below 60.0, while CNEL levels all along Highway 1 are above 60.0.

There are no known Native American sites at Pescadero State Beach.

Pescadero Marsh Natural Preserve is an area of high natural value, because it is one of the few relatively undisturbed wetlands along the central California coast. Only passive activities such as photography and nature walks are allowed in the marsh.

Existing facilities at Pescadero State Beach consist of one dirt, one gravel, and one paved parking lot, with a combined capacity for 288 vehicles, and chemical vault toilets.

#### Bean Hollow State Beach

A general description of the area is contained in the Inventory of Features. This document specifies the geomorphic, pedologic, hydrologic, and biotic resources at Bean Hollow State Beach. Only those resources and/or factors that may cause a potentially adverse change in the environment will be addressed here.

Bean Hollow State Beach contains the Pigeon Point formation, marine sediments deposited during the Cretaceous period. A small exposure of the Pigeon Point formation exists in Bean Hollow State Beach today. In addition, marine sediments, primarily composed of sand and gravel, were deposited by the sea about 500,000 to 1 million years ago.

Wave action has eroded great quantities of sand from the seacliffs at Bean Hollow State Beach. Consequently, remaining sands are subject to severe settling problems and a high water table.

Tsunamis with approximately 1.8 meter to 6.0 meter water displacement are expected about once every two hundred years (Ritter and Dupree 1972).

The seacliffs that are slowly being eroded by the surf present a severe geologic hazard, because the cliffs are subject to increasing landslides.

Additional geologic hazards include the Seal Cove-San Gregorio fault, which lies about 4 km (2.4 mi.) east, and the San Andreas fault, which lies about 10 km (6 mi.) east of Bean Hollow State Beach.

Monterey and Purisima formations, which underlie Bean Hollow State Beach, have been found to be prime bearers of petroleum. There have been previous extraction activities conducted in the area for commercial use.

No potable water is available at Bean Hollow State Beach. A brackish well supplies water for visitors to wash sand off their feet, etc.

One restroom (with salt water flush toilets and chemical toilets), has a 1,500 gallon holding capacity. The effluent from these facilities is taken to the Half Moon Bay City Sanitation Department facilities for treatment. (Please refer to the existing conditions at Half Moon Bay State Beach for information on sewage treatment and capacities at Half Moon Bay.)

No rare and/or endangered plant species are known to occur at Bean Hollow State Beach. The beach strawberry occurs in a notable colony, approximately 400 m (1,300 ft.) south of the parking area at Pebble Beach (field observation, Inventory of Features).

Plant species at Bean Hollow State Beach are not abundant or diverse. The beach flora are characteristic of the coastal strand, northern coastal scrub, and riparian California Floristic Province communities.

The endangered California brown pelican (Pelicanus occidentalis californicus), and the California least tern (Sterna albifrons browni), which migrate through the area, may be found in the Bean Hollow State Beach area. No rare animals have been identified in this unit.

The fauna of Bean Hollow State Beach are specified in Figure 21. Animal species associated with the north coastal scrub, nearshore waters and coastal beach, marine, riparian, and grassland communities inhabit the area. Many of the observed 150 bird, 10 amphibian and reptile, and 34 mammal species are transient.

The primary air pollutants at Bean Hollow are those emitted by motor vehicles. ADT levels at Pebble Beach Road are less than the levels at Sharp Park. Since the carbon monoxide measurements at Sharp Park with higher ADT levels are well below federal and state ambient air standards, it is reasonable to assume that the ambient air standards at Pebble Beach Road are less than those statistics cited for Sharp Park. The carbon monoxide measurement at Pebble Beach Road, therefore, must be well below federal and state ambient air standards. Pebble Beach Road is very near Bean Hollow State Beach.

Noise level statistics are shown in Attachment 2. Statistics from Pescadero Point along the coastline of Bean Hollow State Beach measure a CNEL greater than 60.0. Highway 1, which runs along Bean Hollow State Beach, and by increasing wave-surf noise, are probable causes of the 60.0+ CNEL level for Bean Hollow State Beach.

Three Native American sites, labeled CA-SMC:2, CA-SMa:118, and CA-SMa:117, have been located at Bean Hollow State Beach. CA-SMC:2 is a cultural deposit located on the coastal bluff north of the Bean Hollow beach area. The site is about 76 by 10 meters. CA-SMa:118 is located on the bluff areas above the beach. This site is about 12 by 8 meters. The site has been disturbed by a heavily traveled footpath that crosses the site. CA-SMa:117 is located on a bluff at the southern corner of Bean Hollow State Beach. Overgrowth of ice plant (Carpobrotus spp.) and foot traffic compaction create a problem of defining the actual site area. The actual area of the site has not been determined.

A unique feature at Bean Hollow State Beach is Pebble Beach. The polished stones of Pebble Beach have attracted rock collectors for many years.

Currently, the stones are being over-collected, and the beach resources are being vandalized as a result of lack of staffing to protect these resources, the lack of public awareness of the resources' value, and the lack of designated uses for the area.

Facilities at Bean Hollow State Beach consist of two parking areas with a combined capacity for 50 vehicles, one saltwater flush toilet facility, and chemical toilets.

#### Ano Nuevo State Reserve

A general description of the area is contained in the Inventory of Features. This report specifies the geomorphic, pedologic, hydrologic, and biotic resources at Ano Nuevo State Reserve. Only those resources and/or factors that may cause a potentially adverse change in the environment will be addressed here.

Ano Nuevo State Reserve was established as a unit of the State Park System to provide protection for the natural resources. State reserves consist of areas with outstanding natural and/or scenic characteristics of statewide significance, and areas primarily protected for their scientific and natural values. The purpose of a state reserve is to preserve the native ecological association(s), unique faunal or floral characteristic(s), geological features, and scenic qualities, in an undisturbed condition. Allowable activities, public uses, and visitor facilities are restricted in state reserves, although the public is usually permitted access.

This unit, or a portion, must be reclassified to allow for overnight use.

Formations occurring at Ano Nuevo State Reserve are the Pigeon Point, Vaquero, Purissima, Monterey, Santa Cruz mudstone, marine terrace deposits, and Holocene alluvium.

The area in and around Ano Nuevo State Reserve is considered to be seismically active, with the San Gregorio fault and other smaller faults passing through the reserve. This area has the potential for severe earthquakes. Earthquakes and human activity have increased landslides and erosion of the seacliffs and bluffs.

Native American chert processing zones in the dune area are of a larger magnitude than any others now known on the California coast. Chert processing areas are delicate, non-renewable resources, of which little is known. Further research could reveal an unknown Costanoan economic resource based on chert trading.

Four major reservoirs exist in Ano Nuevo State Reserve--two on Green Oaks Creek, one north of Ano Nuevo Creek, and one on Cascade Creek.

Although two wells exist in Ano Nuevo State Reserve, there are no public potable water facilities available.

The effluent from the low-flow flush and chemical toilets is hauled to the Half Moon Bay City Sanitation Department facilities for treatment. (Please refer to the existing conditions at Half Moon Bay State Beach for information on sewage treatment at Half Moon Bay.)

Plant habitats include pelagic, intertidal, and littoral areas; sand dune, coastal sage scrub, and riparian communities; and agricultural lands. Some of the agricultural/pasture lands have reverted to coastal sage scrub.

One endangered plant, Gairdner's yampah (Perideridia gairdneri ssp. taircheri), reportedly grows on the wet, heavy soil of the area. The dunes also support the beach strawberry (Fragaria chiloensis), which is of local importance.

Some exotic species have been introduced to stabilize the dunes.

Wildlife populations of statewide, national, and international significance intermittently inhabit Ano Nuevo State Reserve, specifically pinnipeds. They are: the northern elephant seal, harbor seal (Phoca bitulina), Steller sea lion (Eumetoplas jubata), and California sea lion (Zalophus californicus). The Steller rookery is the largest breeding area south of Alaska.

Ano Nuevo State Reserve is the only place in the world where the Northern elephant seal (Mirouga angustirostris) can be regularly seen on the mainland. Because the population of seals has increased over the past few years, Ano Nuevo island and portions of the mainland have become crowded. The mainland has now become a major part of the rookery area. Land acquisition and controlled human activity are necessary to protect pinniped populations and habitat areas.

The California Department of Fish and Game has voiced some concern about controlling the numbers of visitors to the area, so the pinnipeds do not lose their inherent fear of humans. Losing their fear of humans makes them vulnerable when venturing into areas not protected by a state reserve or other designation.

In addition to the pinniped populations, the bird populations at Ano Nuevo State Reserve are abundant and diverse. Two endangered species of birds, the California brown pelican (Pelecanus occidentalis californicus) and the California least tern (Sterna albifrons browni), may migrate through the reserve. One endangered species of reptile, the San Francisco garter snake, inhabits the reserve.

The primary air pollutants at Ano Nuevo State Reserve are those emitted by motor vehicles. ADT levels at the reserve are considerably less than levels at Sharp Park. Since the carbon monoxide measurements at Sharp Park, with higher ADT levels, are well below federal and state ambient air standards, it is reasonable to assume that the ambient air standards at the reserve are considerably less than those statistics cited for Sharp Park. The carbon monoxide measurements at the reserve, therefore, must be well below federal and state ambient air standards.

Noise level statistics are included in attachment 2. Statistics for Ano Nuevo State Reserve show CNEL levels of less than 60.0. Transportation noise from Highway 1, which runs along the eastern border of the reserve, combined with wave and surf noise, is responsible for the CNEL level.

Ano Nuevo State Reserve is an area of prehistoric importance. Dune systems at both Ano Nuevo and Franklin Points are each considered a single Native American site, with

numerous use areas. No excavations have been carried out on this portion of the California coast.

In 1976, 39 Native American sites in the Ano Nuevo Dunes were recorded. However, due to the covering and exposure of sites by wind action, the entire dune area may be considered a whole site.

Historically important structures at Ano Nuevo State Reserve include the Lighthouse complex, the Waddell Wharf and Landing, the Public Works bridge on Old Highway 1, and the Steele Ranch, once the second largest dairy ranch in California.

Ano Nuevo State Reserve has great scenic values and esthetic quality. The California Water Resources Control Board recognizes the reserve as an area of special biological significance. The California Natural Areas Coordinating Council believes the reserve is an area worthy of great resource protection.

Existing facilities at Ano Nuevo State Reserve consist of gravel parking for 100 vehicles, low-flow flush toilets, and chemical toilets.

## ENVIRONMENTAL IMPACTS OF THE PROPOSED PROJECT

### Significant Environmental Effects

There are two major adverse environmental impacts possible as a result of project implementation. An increase of vehicular traffic on Coast Highway 1 is possible, and proposed development may be curtailed as a result of lack of water.

Serious transportation problems already exist in and around the San Mateo Coast area. Highway 1, especially over Devil's Slide, is currently unable to meet peak hour, peak season demands. If there are increases in traffic, a significant adverse environmental effect will result. Although development is based on redistributing, rather than increasing allowable visitor use (which should not significantly increase traffic flow), it has been locally assumed that any state park development will increase traffic flow and congestion.

It is impossible to estimate the possible increase in recreation use resulting from the added inducement of new state park development. However, it is probable that recreational demand will increase at least proportionally to population increases. If so, the San Mateo Coast state park units can expect an eight to ten percent increase in annual attendance; this represents an increase of 19,000 vehicles per year.

Through the millenia, quantities of water have slowly accumulated underground. The level at which water below the ground stands in a well is called the water table, and represents the amount of available groundwater. The San Mateo Coast area's water needs are supplied by importation, wells, and stream reservoirs.

Throughout the area, water is not abundant, and is considered a limiting factor for every type of development.

The lack of available water has a major environmental impact on the proposed development, which is predicated on the eventual availability of water. This issue will be discussed in the Local Coastal Plan, now being prepared by San Mateo County.

If water availability does not increase, alternative development proposals will be necessary.

Environmental impacts caused by construction and removal activities, and increased concentration of people in certain areas of the units, will be minimal.

Project implementation will cause environmental impacts attributable to proposed buildings, parking areas, roadways, campgrounds, picnic areas, trails, sanitary facilities, construction and removal activities, concentrations of people, and vehicles.

#### Effects on Geology

Since the area is so close to the San Andreas fault, development will be affected by any fault movement and earthquakes. Since the area is subject to the various erosional forces previously described, development will be affected by moderate landslides and rockfalls.

#### Effects on Soils

The impact on soils will be minimal. Placement of buildings, roadways, and parking areas will require covering of the soil with asphalt, concrete, or near permeable material. This covering will decrease the amount of oxygen available to soil organisms, which may alter their population density and composition. Asphalt work will cause the addition of some chemicals to the soil, which may alter or eliminate populations of soil organisms. During construction, gasoline and diesel byproducts will also enter the soil.

The impermeable covering of soils will alter the normal nutrient recycling process, and will increase soil moisture. Although evapotranspiration rates may not change, the amount of moisture lost through evaporation will decrease. Edge areas of roadways and parking areas will become more moist, from absorbing precipitation runoff from the impermeable surface. The degree of increased moisture is dependent on the size, the slope, and the drainage system of the impermeable surface.

Soil profiles will be altered by placement of buildings and roadways. The relationships between other soil properties, such as horizons and textures, will also be altered by displacement of soil.

Construction activities will compact soils during the development phase. Vehicular traffic on unpaved areas will compact soils. Compacted soils are less permeable, permit less percolation and surface moisture, reduce groundwater recharge, and inhibit the penetration of plant root systems.

Trampled vegetation and compacted soil increase surface water runoff, which accelerates the erosion potential. The typically sandy soils further increase this potential.

Construction activities will increase erosion on exposed soils, until revegetation occurs. Reestablishment of weedy plants and coastal scrub is likely.

#### Effects on Vegetation

The direct effects on vegetation are minimal. Construction of buildings, roadways, accessways, and/or parking areas will cause removal of all vegetation from the areas to be occupied by the facilities and will cause trampling or cutting of vegetation in surrounding areas. Foot traffic to and around facilities will trample vegetation, and compact soil. Vegetation may be thinned for campsite construction.

The indirect effects on vegetation are minimal. Facilities will alter light and surface moisture, affecting growth and species composition. Trampling and soil compaction will affect vegetation reproduction and species composition.

No rare or endangered floristic species will be affected by project implementation. The beach strawberry, which is considered significant in the County of San Mateo, may be affected by trails and visitor use on inland and upper slopes of the property.

#### Effects on Wildlife

The impact on wildlife is directly associated with habitat disturbance. Removal and restoration of vegetation affects both primary and predatory species that inhabit the altered area. Additionally, species tolerant of human developments and activity will be less affected.

Except for facilities at Half Moon Bay State Beach and Ano Nuevo State Reserve, project implementation will minimally alter these habitats, and will affect tolerant species only.

The endangered San Francisco garter snake inhabits freshwater pools on Cascade Creek and Whitehorse Creek (Ano Nuevo State Reserve), and Pescadero Marsh (Pescadero State Beach). In addition, the San Francisco garter snake may inhabit the riparian areas at Montara, Half Moon Bay, San Gregorio, and Pomponio State Beaches; this snake has been located in adjacent areas.

Since the San Francisco garter snake is an animal not tolerant of human development and activity, even minimal disturbance of suspected habitat areas will significantly affect this species. The camping and parking (between Cascade and White House Creeks) proposed for Ano Nuevo State Reserve, and the unit office proposed for Half Moon Bay State Beach, may be located in areas close enough to affect the snake's habitat.

#### Effects on Air Quality

Air quality in the San Mateo Coast area is almost exclusively affected by vehicular exhaust emissions. If an increase of traffic is generated by project implementation, then the amount of vehicular exhaust emissions will increase proportionately. The possible vehicular exhaust emissions increases will minimally affect air quality in this coastal area.

### Effects on Land Use

Since the San Mateo Coast state units are zoned by the County for resource management, project implementation is not contrary to county land use designation. Since Half Moon Bay State Beach is zoned by the City of Half Moon Bay as a "green belt," project implementation is not contrary to that city's land use designation. This General Plan, and the City of Half Moon Bay's General Plan, are consistent with the San Mateo County General Plan, but conflicts with the California Department of Transportation's Highway Bypass project proposed for the Devil's Slide/McNee Ranch area. At this time, it is unknown whether this plan will conflict with the Local Coastal Plan now being prepared.

### Effects on Human Community Factors and Public Services

Since most changes in the proposed recreational facilities in the San Mateo coast units are not designed to cause major changes in recreational demand, the impact on the socio-economy of the area is minimal.

Minimal public service demands and benefits may result from project implementation. Proposed development will necessitate appropriate placement of signs along Coast Highway 1. Safe access and deceleration lanes will be planned. On-site construction may require local labor and employment. The sale of incidentals and beverages at local grocery stores may increase.

This document does not propose acquisition of additional land for the State Park System. Should any land not currently owned by the Department of Parks and Recreation, but depicted in the General Plan for long-range planning purposes, be proposed for acquisition, those lands will be removed from the county tax base, and will be restricted from commercial, industrial, and residential development.

### Effects on Cultural Resources

There are no direct impacts on cultural resources.

Possible indirect impacts on Native American resources involve alteration of the distribution and stratification of artifacts. Paving of roadways and parking areas will temporarily seal such resources, and will protect them from further damage; however, construction activities before paving, and the weight of the bedding and paving materials, will alter the original site conditions, possibly to a maximum depth of three meters.

### Effects on Aesthetics

Any alteration of the environment that improves or detracts from the enjoyment of the coastal scenery is considered to be an impact on aesthetic quality. Examples of aesthetic detractors are human structures and vehicles in the foreground or background of a vista, unnatural noises, congested or chaotic developed areas, and unnatural vegetational patterns.

This General Plan proposes to increase aesthetic quality by reducing existing aesthetic detractors (such as the area headquarters and maintenance facilities on Kelly Drive at Half Moon Bay State Beach), and developing enjoyable yet unobtrusive facilities.

The impacts of revegetation and facilities removal have similar and comparable short-term impacts as construction activities. The long-term impact can be considered beneficial.

Detracting sights and sounds will occur throughout the state park units during construction and restoration phases. Removal of many existing facilities will enhance opportunities for enjoyment of the natural setting.

### Specific Impacts as a Result of Project Implementation

#### Thornton State Beach

The proposed development on the bluff will be screened from the highway, but will remain visible to the neighboring residential community. Since the bluff has a very unstable edge, development, specifically the increase of impervious surface, will increase water runoff, which accentuates erosion. Increased water runoff and associated erosion accelerates landslides and slippage.

#### Montara State Beach

The beach strawberry may be affected by the proposed equestrian and hiking trails. The proposed camping facilities may be affected by the Martini Creek drainage system, which causes damp and high surface water conditions. The walk-in camps are located in areas of relatively little topsoil, so development and trampling will accelerate erosion, which increases slippage and landslides.

The 60 vehicle/bus loading zone development at Montara State Beach will disturb the artifacts of a recorded Native American site. This is considered a secondary impact, because the site is next to the proposed parking area and is already disturbed, and proposed mitigation should ameliorate the adverse effects. (See mitigation no. 3, page 216.) Project implementation does not affect any prime agricultural land.

#### Half Moon Bay State Beach

Similar to the cultural resource problem discussed at Montara State Beach, the proposed entrance road paving along Frenchmans Creek may impact a recorded Native American site. The impact on this site is considered minimal, because the site is disturbed, and is next to, not on, the road. The proposed area headquarters development may be an intrusion of the viewshed, visible from the dunes, beach, and ocean.

Frenchmans Creek may be a habitat of the San Francisco garter snake. Any disturbance of freshwater pool environs of the creek may affect this endangered species.

Development on coastal or dune sands, or which would cause increased use of the dunes by visitors, will cause some accelerated erosion, intensifying problems of dune stabilization.

If this state beach is fenced off (although this is not proposed), local residents will lose their convenient and unrestricted access to the beach area.

Kelley Drive will remain the access to Francis Beach. No change will occur in the existing impacts of this access. The road through the Sweetwood area will become the access to the proposed park headquarters and group camp. This development is located in the eucalyptus grove; the City of Half Moon Bay prefers that this area remain undeveloped.

Removal of the existing headquarters and maintenance facilities will cause temporary construction impacts discussed earlier. Portions of the proposed interior road cross prime agricultural lands.

#### San Gregorio-Pomponio State Beaches

The hiking and equestrian trails, the contact station, and the campground facilities are located on agricultural and pasture lands. Major cut/fill and grading will be required for the access road to the proposed interior development. The interior developments are in an area of moderate fire hazard. The coastal trail will accelerate the cliff area erosion potential, and may cause liability problems.

#### Pescadero State Beach

The proposed 100-vehicle parking area, the natural interpretive facility, and the 30-vehicle/5-bus contact station developments will be located on prime agricultural land. At present, 40 acres of sweet peas are being grown. Of that 40 acres, approximately 3 acres will be used for these developments.

The access road to the proposed unit office, residence, maintenance facility, orientation center, and 15-vehicle/5-bus developments is currently a public road, located between two artichoke fields. Intrusion into these fields may result with increased use of this road.

A beneficial impact of decreasing erosion will result from eliminating the parking along Highway 1 south of the Pescadero Road intersection.

#### Bean Hollow State Beach

Road alteration to allow one-way access to existing facilities will have a beneficial safety effect.

Project implementation that provides for increased staffing to (1) protect the resources; (2) increase public awareness of the resources; and (3) specifically designate and enforce use of the beach area, may minimize the existing problems of over-collection, unplanned trails, and vandalism.

#### Ano Nuevo State Reserve

The development proposed for the area located between Whitehouse and Cascade Creeks may introduce human activity and habitat disturbance, affecting a San Francisco garter snake habitat and a pinniped rookery. The San Francisco garter snake may inhabit freshwater pools on Whitehouse and Cascade Creeks. The pinnipeds are currently expanding their rookery area upcoast.

## MITIGATION MEASURES PROPOSED TO ELIMINATE OR MINIMIZE EFFECTS

1. Once parking facilities are available, rangers will emphasize their authority to ticket illegally parked vehicles. With help from the California Highway Patrol, the Half Moon Bay Police Department, and the local sheriff's department, much of the uncontrolled use and resulting traffic congestion of areas along Highway 1 can be eliminated.
2. Adequate fencing, signing, and surveillance by staff will discourage visitors from disturbing natural/cultural resources in the reserve, and on private lands.
3. When development is proposed, a cultural survey will be done before or during any land alteration. Should this survey expose potential Native American artifacts or sites, additional research and action will be taken to protect and preserve the resources.
4. Facilities will be designed to maximize public enjoyment without greatly intruding on the natural environment.
5. Public facilities and access roads will be constructed and upgraded with a minimum of paving. Turf stone will be used whenever feasible, to minimize erosion.
6. All facilities such as campgrounds, parking areas, and buildings will be constructed to minimize visual intrusion. These facilities will also be screened and landscaped.
7. Strict enforcement of rules by a staff committed to protecting the unit's natural and cultural resources will greatly decrease the misuse and vandalism of these resources by visitors to units of the San Mateo Coast.
8. Trails will be designed and constructed to minimize the effects of visitation and erosion.
9. Detailed energy conservation measures concerning building design and construction will be an integral part of every budgeted phase of the overall plan.
10. Development will be restricted from prime agricultural land, unless other alternatives prove infeasible.
11. The staff will monitor dune movements, and when necessary, will initiate dune stabilization practices.
12. Access to beach areas will be organized to minimize impactation to dunes and bluffs.
13. Fire presuppression work will be done as appropriate.
14. This document does not propose acquisition of land as an addition to the State Park System. Should any land not currently owned by the Department of Parks and Recreation, but depicted in the General Plan for long-range planning purposes, be proposed for acquisition, conservation easements and leaseback agreements will be considered whenever feasible, and documentation pursuant to the California Environmental Quality Act will be prepared.

15. Necessary staffing to manage and protect the natural resources of the units, as well as necessary staffing to manage and protect the developed facilities, will be budgeted for.

#### Specific Mitigation Measures As A Result Of Project Implementation

1. Development on the bluffs at Thornton State Beach will be recessed from the edge, to alleviate some of the erosion potential.
2. The parking facility at Montara State Beach will be designed to protect cultural resources by surface collecting the site, fencing the parking lot, and providing controlled, single access to the beach.
3. Walk-in camps at Montara State Beach will be located to minimize drainage problems, soil compaction, and erosion.
4. Only low intensity use of Pescadero Marsh will be planned for and allowed.

#### Unavoidable Environmental Effects

The significant environmental effects outlined in this element represent environmental effects which cannot be avoided if the General Plan is implemented as proposed. Whenever possible, mitigation measures have been designed into the planning phase of the General Plan, to ameliorate significant adverse impacts.

Having inventoried and analyzed the existing resources, determined present and future recreational needs, and studied various alternatives, the department feels that the benefits to be gained from the proposed project outweigh the environmental impacts resulting from implementation of this plan.

#### Alternatives To The Proposed Project

##### No Development

This alternative will allow continuation of the current uses and existing facilities.

##### Increasing/Decreasing Intensity of Development

Increasing development will provide for greater public access and intensity of use, but will cause greater resource damage and impact. Decreasing development will provide for greater resource protection, but less public access and intensity of use. Increasing or decreasing the development proposed in this General Plan will not allow for maximum public access and enjoyment of the area, and will not provide for moderate protection of the natural resources.

##### Location of Facilities

The arrangement of specific day use facilities could vary from the proposed plan. All potential sites, however, have been considered for each proposed land use. Site selection

was based on maximizing benefits for visitors, and minimizing impacts on the environment.

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

The current short-term use of the San Mateo coast units is for enjoyment of the open space/coastal scenery, and beach-oriented recreation. Additional short-term use of the area, if it were not within the State Park System, might include agricultural cultivation, grazing, and commercial and residential development.

The General Plan continues the current short-term use of the San Mateo coast units. Proposed development should not alter the existing use, but should organize, control, and thereby enhance the quality of the use.

The General Plan will not alter this area's potential for long-term productivity. The relationship between the short-term use and the long-term productivity of the San Mateo coast units area is complementary; one in which the proposed short-term use retains and expands the environment's long-term productivity.

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

Some renewable natural resources, such as wildlife and vegetation, will be lost or displaced as a result of development and human activity. Some non-renewable resources, such as oil, gasoline, and construction materials, will be used to complete the proposed General Plan.

If future demands or environmental priorities change, and this area is deemed more suitable for some other use, the area and its resources will not have been significantly altered by project implementation.

#### Growth-Inducing Impacts of the Proposed Project

There may be some indirect growth-inducing impacts associated with the proposed development. Project implementation may generate some flow of money into the local economy through salaries to local laborers, purchase of construction materials, and commercial services such as gasoline, food, and incidentals.

If future acquisition of land as an addition to the State Park System occurs, it will curtail residential and commercial development. In this respect, the project has a growth-restricting impact.

#### Effects Found Not to be Significant

This project will have no significant effects on climate and weather, noise quality, population density, community development, or sewage.

ORGANIZATIONS AND REFERENCES CONSULTED IN PREPARING THIS REPORT

California Department of Parks and Recreation  
Resource Preservation and Interpretation Division  
Development Division  
Operations Division  
Administrative Services Office  
California Department of Water Resources  
California Department of Transportation  
Project Development Division  
California Department of Conservation  
Division of Mines and Geology  
County of San Mateo  
Department of Environmental Management  
Assessor's Office  
City of Half Moon Bay  
Sanitation Department  
Planning Department  
Coastside County Water District  
Citizens Utilities Company of California  
Daly City Municipal Water District  
Northern San Mateo County Sanitation District

## SELECTED REFERENCES

- Association of Bay Area Governments (ABAG)/Metro Transit Corp. (MTC). San Mateo Coast Corridor Evaluation. 1975.
- California Coastal Zone Conservation Commission. California Coastal Plan. San Francisco, 1975.
- California Department of Parks and Recreation. "Año Nuevo State Reserve Inventory of Features." On file with Resource Preservation and Interpretation Division, California Department of Parks and Recreation. Sacramento, 1978.
- \_\_\_\_\_. "San Mateo Coast Beaches Inventory of Features." On file with Resource Preservation and Interpretation Division, California Department of Parks and Recreation. Sacramento, 1979.
- California Department of Transportation. 1977 Traffic Volumes on California State Highways. Sacramento, 1977.
- California Department of Water Resources. California's Groundwater: Department of Water Resources Bulletin No. 118. Sacramento, 1975.
- \_\_\_\_\_. North Coastal Hydrographic Area: Department of Water Resources Bulletin No. 1421. Sacramento, 1965.
- City of Half Moon Bay. City of Half Moon Bay General Plan (Map). Half Moon Bay, 1970.
- Coastside County Water District. Water Distribution System Northern and Southern Area Maps. Half Moon Bay, 1975.
- \_\_\_\_\_. Water Supply, Storage and Transmission System Map. Half Moon Bay, 1975.
- County of San Mateo Department of Environmental Management, Planning Division. County of San Mateo General Plan: Conservation and Open Space Element. San Mateo, 1970.
- \_\_\_\_\_. "Resource Conservation Area Density Matrix." In County of San Mateo General Plan: Conservation and Open Space Element. San Mateo, 1970.
- \_\_\_\_\_. Solid Waste Disposal Plan. San Mateo, n.d.
- \_\_\_\_\_. Working Program of the Local Coastal Plan. San Mateo, forthcoming.
- County of San Mateo Planning Division. County of San Mateo Groundwater Investigation. San Mateo, n.d.
- \_\_\_\_\_. County of San Mateo Resource Management Zone Ordinance. San Mateo, 1964.
- Koretsky King Associates. Combined Agriculture/Domestic Water Supply Plan for the Pescadero Region. 1977.

- \_\_\_\_\_. Community Water Plan for the Town of Pescadero. 1976.
- LeBoeuf, Burney J. and Panken, Kathy J. Elephant seals breeding on the mainland in California. Proceedings of the California Academy of Science 51(9):267-280.
- Leeds, Hill, and Jewett, Inc. County of San Mateo Comprehensive Water Resource Management Plan. 1977.
- McDonald and Smart, Inc. San Mateo County Coastside Economic Study. San Mateo, 1976.
- Mason, Herbert L. "The scenic, scientific and educational values of the natural landscape of California." Ms. on file with Resource Preservation and Interpretation Division, California Department of Parks and Recreation. Sacramento, 1970.
- Orr, Robert T. and Thomas C. Poulter. The pinniped population of Ano Nuevo Island, California. Proceedings of the California Academy of Science 32(13):377-404.
- United States Department of Agriculture, Soil Conservation Service. National Soils Handbook (with Amendments). Washington, D.C.: U.S. Government Printing Office, 1974.
- United States Department of Transportation and California Department of Transportation. "Route 380, Portola Freeway and Alternatives: Draft Environmental Impact Statement." On file with the California State Clearinghouse (Document 74061711). Sacramento, 1974.

# Appendixes



APPENDIX A

Attachment One

County of San Mateo: Excerpt from  
Open Space and Conservation Element,  
General Plan

Section 6315. PERMITTED USES. The following uses only shall be permitted in the RM District, except those subject to the provisions of Section 6500 which require a Use Permit.

- a) Agricultural uses and accessory structures; on-site sales of agricultural products
- b) Nurseries and greenhouses
- \*c) Temporary trailer parks and other housing for farm laborers
- d) Livestock raising and grazing
- e) Dairies
- <sup>1</sup>f) Dog kennels and breeding facilities
- <sup>2</sup>g) Timber harvesting and commercial wood lots
- <sup>3</sup>h) Quarries and waste disposal sites
  - i) Single-family residences
  - j) Multi-family residences
- \*k) Hotels, motels and restaurants
- \*l) Churches
- \*m) Schools
- \*n) Fire stations
- \*o) Public and private clubs
- \*p) Public recreation
- \*q) Commercial recreation, including but not limited to stables and riding academies, golf courses, campgrounds, dude ranches; and motorcycle parks in accordance with adopted policies on motorcycle parks and related facilities

- 4r) Oil and gas exploration, production and storage
- s) Home occupations
- t) Wineries; provided that the annual storage capacity shall not exceed 10,000 gallons, the annual fermentation capacity shall not exceed 5,000 gallons, and the annual bottling shall not exceed 2,500 cases of wine; the only retail sales permitted will be those of wines produced on the premises.

Section 6317. MAXIMUM DENSITY OF DEVELOPMENT. In the RM District, for purposes of determining the maximum total number of dwelling units permissible on any parcel, the following system shall be used:

The total parcel shall be compared against the criteria of this Section in the order listed. Any segment of a parcel to which a criterion first applies shall be allowed a maximum accumulation of that density. Once considered under a criterion, a segment of the parcel shall not be considered under subsequent criteria. When the applicable criteria have been determined for each of the areas, any portion of the parcel which has not yet been assigned a maximum density accumulation shall be assigned a density of 1 dwelling unit per 5 acres.

The sum of densities accrued under all applicable categories shall constitute the maximum density of development permissible under this section. If the fractional portion of the number of dwelling units allowed is equal to or greater than .5, the total number of dwelling units allowed shall be rounded up to the next whole dwelling unit. If the fraction is less than .5, the fractional unit shall be deleted.

The provisions of this Section will not apply to farm labor housing or other structures considered to be accessory to agriculture under the same ownership.

(a) On lands falling within a 100 year Flood Plain as defined by USGS, dwelling units may be accumulated at a maximum of one unit per 40 acres. Where previous actions have eliminated such flood areas, the provisions of this subsection shall not apply.

(b) For remote lands, defined as those lands over one mile from an existing all-weather through public road, density accumulation shall be limited to one dwelling unit per 40 acres.

- \*Uses allowed subject to a use permit
- 1 Allowed subject to kennel permit
- 2 Allowed subject to timber harvesting permit
- 3 Allowed subject to quarry permit
- 4 Allowed subject to oil well permit

Attachment Two

NOISE MEASUREMENT LOCATION STREET ADDRESSES

<u>24 Hour Site</u>	<u>Location</u>	<u>CNEL</u>
A	End of Larchmont Drive, Daly City	60
B	252 Alta Vista Drive, South San Francisco	67
C	102 Fey Drive, Burlingame	60
D	625 Vue DeMar, Moss Beach	54
E	End of Hillsdale Way, Redwood City	52
F	Runnymede and Cooley, East Palo Alto	62
G	End of Durazno Way, Ladera	51
H	Recreation Drive, La Honda	52
I	9th Avenue and Lorne Lane, Redwood City	59
J	End of Stage Road South of Pescadero Road	54

  

<u>15 Minute Site</u>	<u>Location</u>	<u>CNEL</u>
1	Portola & Francisco St., El Granada	55
2	6th & Farrallone Avenues, Montara	56
3	Vermont Avenue & Etheldore St., Moss Beach	56
4	140 Tiptoe Lane, Burlingame	59
5	2918 Adeline Dr., Burlingame	60
6	Coyote Point, Near Castaway Restaurant, San Mateo	61
7	863 Larchmont Drive, Daly City	60
8	1535 Sweetwood Drive, Daly City	59
9	Radio Road, 4 mi. from Guadalupe Parkway	59
10	AMFAC Parking Lot; Crocker Industrial Park	55
11	Grove & Randolph Avenues, S.S.F.	60
12	248 Alta Vista Drive, S.S.F.	72
13	East End of Avalon Drive, S.S.F.	68
14	End of Terrace Drive, next to Serra Park, Millbrae	55
15	End of Albright Way, San Bruno	56
16	End of Park Avenue, Moss Beach	50
17	California & Ellendale, Moss Beach	59
18	End of Bridgeport Drive, El Granada	52
19	Yale between Columbia & Vassar, Princeton	59
20	End of Baranca Rd, El Granada Mobile Home Park	54
21	Allegheny Way & Lexington Avenue, San Mateo	51
22	End of Lundy's Lane, San Mateo	42
23	End of Rainbow Drive, San Mateo	46
24	351 Chesham Avenue, San Carlos	49
25	End of Hubbard Avenue, San Carlos	52
26	End of Summit Way, Woodside	51
27	2670 Marlborough Avenue, Redwood City	58
28	Sequoia Trailer Park, Redwood City	54
29	Entrada Way near Berkeley, Menlo Park	53
30	West end O'Connor Street, East Palo Alto	57

31	End of Temple Court, East Palo Alto	54
32	324 Lilac Lane, East Palo Alto	52
33	End of Marion Drive, Atherton	52
34	End of Trudy Lane, Menlo Park	50
35	End of Andeta Way, Laders	54
36	Swett Road, School Parking Lot, off Skyline Blvd.	45
37	County & Ridge Roads, off Skyline Blvd.	47
38	1044 Los Trancos Road, Portola Valley	48
39	Sears Ranch Road, Church Parking Lot, La Honda	44
40	230 Portola State Park Road	43
41	Tunitas Creek Road, 2 mi. East of Highway 1	44
42	La Honda & Stage Roads, San Gregorio	56
43	North St., next to high school, Pescadero	46
44	Butano Road, near Pescadero	46
45	Canyon Road, near Butano State Park	42