

City of Seal Beach



Open Space/Recreation/ Conservation Element

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Purpose/Background

The Seal Beach Open Space/Recreation/Conservation Element is an expression of the City's goals and policies within these three topical areas. While it is not necessary for a General Plan to include a Recreation Element, the close relationship between open space and recreation lends itself to addressing the City's goal of providing resources to the community that enhance opportunities to experience the natural amenities and qualities of the area. Because open space, recreation and conservation are all closely related, it has been determined that these topics should be considered under a single element. The purpose of this Element is to (1) define open space and classify various types of open space uses, (2) describe those parcels or areas that are currently being used for open space/recreation and conservation purposes and discuss in concept future open space needs of the community, and (3) determine methods to ensure that the present and future needs of the community are met.

For purposes of this Element, *open space land* shall be defined as any parcel or area of land or water that is essentially unimproved or contains only minor improvements and is devoted to an open space use. *Open space use* shall be defined as land which is set aside for (1) outdoor recreation, (2) the preservation of natural resources, (3) managed production of resources, or (4) the safety and general welfare of the community. Open space is valued as a way to buffer neighborhoods from urban intrusions and to preserve areas to maintain a small beach town character.

Recreation land can be categorized as land developed for the use and enjoyment of the community, either as active land (sports fields, tot lots, swimming facilities) or passive land (greenbelts, open space, public beach). Conservation land is land for the conservation, enhancement, and utilization of natural resources. The ocean attracts nature lovers and sports enthusiasts. This topic concerns itself with the management of natural resources to prevent waste, habitat loss, destruction, or neglect.



Statutory Requirements

California *Government Code* §65302 requires preparation of a general plan which “. . . shall consist of a statement of development policies and shall include a diagram or diagrams and text setting forth objectives, principles, standards and plan proposals.”

Government Code §65302(e) requires that an open space element be included to ensure that open space plans are implemented by cities and counties to create a permanent network of open space. Section 65302(d) states, in part: “A conservation element for the conservation, development, and utilization of natural resources, including water and its hydraulic force, forests, soils, rivers and other waters, harbors, fisheries, wildlife, minerals and other natural resources” is required. The law also requires that “Every local open space plan shall contain an action program consisting of specific programs which the legislative body intends to pursue in implementing its open space plan.” (Gov. Code §65564)



Related Plans and Programs

A number of programs, plans, and policies are created by state, county and local action to promote and protect the resources included in open space/recreation/conservation. Where regional policies combine with city plans and policies, a comprehensive network of open space and attendant amenities can be created. Where appropriate, relevant policies and goals are incorporated into the Element to provide for the continued maintenance and conservation of these resources.

Other General Plan Elements

Two other elements of this General Plan provide support and policy for open space and natural resource management. The Land Use Element defines various uses for land throughout the city, including open space designations. The Circulation Element includes existing and planned paths and trails for bicycle and pedestrian use.

Local Coastal Program

Because of its proximity to the Pacific Ocean, Seal Beach is subject to a state-mandated Local Coastal Program and California Coastal Commission jurisdiction. The 1976 California Coastal Act, which provides protection for the natural and scenic resources of the coastal area, requires the preparation of a local coastal program for jurisdictions with land within the coastal zone. The policies defined by the Local Coastal Program (LCP) set the standards that preserve and conserve the community's coastal influenced resources. The City of Seal Beach Local Coastal Program policies are included by reference as part of the General Plan. The LCP is to be updated every five years.

County of Orange General Plan

The policies of the Recreation and Resources Elements of the Orange County General Plan will not be in conflict with this General Plan for the purposes of providing and maintaining all resources related to open space/recreation/conservation. The City will cooperate with the County to maintain consistency in planning for regional parks and trails.



Quimby Act

Government Code §66477, also known as the Quimby Act, provides for the dedication of parkland or the payment of in lieu fees by developers as a requirement for residential development. This section states that "... the dedication of land, or the payment of fees, or both, shall not exceed the proportionate amount necessary to provide 3 acres of park area per 1,000 persons residing within a subdivision subject to this section, unless the amount of existing neighborhood and community park area, as calculated pursuant to this subdivision, exceeds that limit, in which case the legislative body may adopt the calculated amount as a higher standard not to exceed 5 acres per 1,000 persons residing within a subdivision to this section."

Seal Beach Park Dedication Ordinance

The City's Municipal Code has established a goal of five acres of parkland per 1,000 population.



Definitions

Open space for outdoor recreation is defined as land that is set aside for neighborhood, community or regional parks, beaches, special use parks or facilities, greenbelts, and open space corridors. These areas provide a pleasant environment for active and passive recreational activities. Definitions of the various types of recreation/open space opportunities include the following:

Community Parks

Community parks are larger than neighborhood parks and are designed to serve the needs of a broader age group. They serve the entire City and are easily accessible via arterial roads, attracting people from outside the area in which they are located. Typically, these facilities contain tennis, volleyball, handball and basketball courts, picnic areas, and sports fields for seasonal sports such as baseball and football. Community parks generally range in size from approximately 5 to 30 acres.

Neighborhood Parks

Neighborhood parks are designed to meet the needs of individual residential developments within the City. While providing for the recreational needs of several age groups, the neighborhood park is primarily designed to meet the needs of the 5- to 14-year-old group. Children's play equipment and tennis and basketball courts are among the facilities often found at neighborhood parks. Other improvements might include senior centers, youth centers, and aquatic facilities. These parks vary in size from a single lot to parcels of approximately five acres.

View Park

View parks are smaller passive parks designed to take advantage of a significant view. They are often located on coastal bluffs to focus upon ocean or bay views. Most view parks are between one-half and three acres in size and serve the entire City. View parks are generally improved with landscaping, walkways, and benches.



Regional Beaches and Parks

Regional beaches and parks are designated to meet the needs of residents and non-residents and usually attract a large number of people from outside the immediate area. Generally these facilities are over 30 acres in size and appeal to all age groups. Natural surroundings and spaciousness are emphasized to a greater degree than in community parks. Regional facilities are often used for day-long outings.

The shoreline of Seal Beach is considered to be of regional significance. Recreational activities are associated with the ocean, the beach, and the pier. Primary recreational activities include swimming, wading, surfing, pier and sport fishing, sunbathing, jogging, volleyball, and some non-organized games. Seal Beach contains approximately 2 miles of beachfront.

It was proposed in the Master Plan of Regional Parks for Orange County that the area known as the Los Alamitos Basin (Hellman Ranch) become a regional park. The Hellman Ranch Specific Plan provides for passive parkland and open space. The Table of Parks and Open Space in this section provides acreage totals.

Sunset Marina Park (formerly Sunset Aquatic Park) lies within the City limits of Seal Beach and is operated by the County of Orange. The Aquatic Park contains 276 boat slips, as well as dry boat storage facilities, and comprises 19.2 acres for passive recreation.

Special Use Parks or Facilities

Special use parks or facilities are park-like places where a unique recreational activity is provided. The service areas and size of these facilities vary according to their principal use. These facilities generally have a neighborhood or community orientation.

Playgrounds at school sites are considered to be special use facilities that provide areas for recreational activities. It is estimated that 50% of the area of school sites is used as playgrounds or athletic fields.



Existing special use parks or facilities:

- 1) Zoeter Park – Coastal District (1.9 acres)
- 2) McGaugh Elementary School – Marina Hill (4.7 acres)
- 3) Gum Grove Nature Park – Marina Hill/Hellman Ranch (14.9 acres)
- 4) North Seal Beach Community Center – Rossmoor Center (1.2 acres)
- 5) Greenbelt, including library, senior center, and Red Car Museum (6.4 acres)

Bikeways

Backbone bikeways are major throughway trails that connect to regional trails. They are primarily on major roads and serve the functional and recreational cyclist. Secondary bikeways connect to backbone trails and serve cyclists and children riding to and from school.

Pedestrian Trails

Pedestrian trails include improved or unimproved walkways or sidewalks located within park, beach, greenbelt, or open space areas.

Greenbelts and Open Space Corridors

Greenbelts are recognizable expanses of undeveloped land that provide an attractive open space setting and a buffer between adjacent land uses. Recreational activities in these areas are usually limited to activities such as walking, picnicking, and some organized games.

Channels and transmission rights-of-way offer a unique opportunity for joint use of facilities. Because of their configuration, these corridors provide an excellent opportunity to incorporate as a secondary use such things as bicycle paths, equestrian trails, and hiking areas. The City should seek the cooperation of other public agencies and private utility companies to expand the uses of existing or proposed corridors under the control of these agencies or companies.



Existing greenbelt:

- 1) The Pacific Electric right-of-way (6.5 acres)
- 2) San Gabriel River Bicycle Trail (2.0 acres)
- 3) Schooner Park (0.8 acres)
- 4) Aster Park (0.6 acres)

Public/Private Recreational Facilities

Public/private recreational facilities may not be open to the general public but do provide open space and a service to the community that might otherwise not be provided. These facilities may be located within a residential development and be owned and maintained by the residents of the community, or they could consist of individually owned and operated commercial enterprises. Existing private recreational facilities include:

- 1) Leisure World Golf Course
- 2) Leisure World Club Houses
- 3) Old Ranch Country Club and Golf Course
- 4) Old Ranch Tennis Club (dedication to City pending)

Natural Resource Land

Areas within the City have been designated for the preservation of natural resources. Natural resource areas would include land set aside for the preservation of plant and animal life, areas required for ecological and other scientific study purposes, bays and estuaries and coastal beaches. Seal Beach National Wildlife Refuge habitats are typical of this category. A 100-acre portion of the Hellman Ranch Specific Plan area has been deed restricted for 25 years for sale at fair market value to a public agency for the purposes of wetlands restoration, open space, and environmental education purposes. The adjacent oil production property (approximately 50 acres) has been similarly restricted, although the 25-year period does not commence until cessation of the oil production activities.

Land for the Production of Resources

Certain parcels of land within the City are being used for agricultural production, principally within the Seal Beach Naval Weapons Station. This category also includes oil extraction facilities



Open Space/Recreation/Conservation Element

that are located within Planning Areas 2 and 5. These uses are discussed by planning area.

Parks/Open Space

Planning Area	Name	Acreage	Use Designation
PA 1	Eisenhower	1.4	NP
	Marina Center and Park	2.6	NP-RF/CC
	Zoeter Field	1.9	SU
	Schooner	0.8	G
	Windsurf	0.4	RB
	Pacific Electric	6.5	SU-G
	Sunset Marina	19.2*	RB
PA 2	Gum Grove Nature Park	14.9	SU
	McGaugh Gym, Pool/Park	4.7	SU
	Heron Pointe Park	0.2	NP
PA 3	Leisure World Golf Course/Rec Center	n/a	PF
PA 4	Edison Park and Gardens	25.9	CP
	Aster Park	0.6	G
	Arbor Park	7.7**	NP
	Bluebell Park	1.2	NP
	Heather Park	1.6	NP
	Almond Park	1.5	NP
	N. Seal Beach Community Center	1.2	RF/CC
	Old Ranch Country Club	146.4*	PF
	Old Ranch Neighborhood Park	2.2	NP
PA 5	Seal Beach National Wildlife Refuge	920*	OS
Misc.	San Gabriel River Greenbelt	2.0	G
Beaches		80.3*	RB
Total		77.3	

CP = Community Park

NP = Neighborhood Park

RB = Regional Beach/Park

SU = Special Use

G = Greenbelt

RF/CC = Recreational facility/community center

OS = Open Space

PF = Private facility

* acreage not included in total

** located in Los Alamitos; leased and operated by Seal Beach



The Quimby Act, enacted in 1965, requires the dedication of parkland or payment of in-lieu fees for new development. The acreage to be dedicated is based on 5 acres per 1,000 population as specified by the City's Municipal Code. The City of Seal Beach has not met the necessary acreage requirements because a significant portion of the City had been developed prior to the time the Act was passed. However, the City benefits from non-Quimby Act recreational amenities within its boundaries, including 80.3 acres of beaches, the 19.2-acre Sunset Marina Park, which is operated by the County, and the National Wildlife Refuge within the Seal Beach Naval Weapons Station, each of which provides unique regional recreational opportunities. It is anticipated that completion of the Hellman Ranch project will provide an additional opportunity to meet these goals through the expansion of Gum Grove Nature Park and restoration of the wetlands areas. In addition, the DWP Specific Plan will provide opportunities for open space and passive recreation along the San Gabriel River.



Issues

Open Space for Public Safety

One earthquake fault is known to exist within Seal Beach. This fault is referred to as the Newport-Inglewood Fault. The fault zone is located to the north of Marina Hill and parallels the coast. Marina Hill resulted from uplifting action of the fault.

The most recent movement of this fault, which caused damage in the Seal Beach area, occurred in 1952. The 1933 Long Beach Earthquake was also attributed to movement along this fault.

Prior to any development adjacent to the fault zone, careful study should be undertaken to ensure the safety of such development. The question of the safety of construction adjacent to this fault is addressed in the Safety Element. Certain property in the fault zone may be retained as open space in the public interest. The Hellman Ranch wetlands restoration area and the Seal Beach Naval Weapons Station are traversed by this identified fault.

Funding

In consideration of the preservation of open space as outlined in this Element, it is imperative that all sources of possible funding be explored. Federal and state assistance should be sought for projects under the revenue sharing program. In addition, other possible methods of financing would include allocations from the City's general fund, general obligation bonds, assessment districts, environmental reserve tax funds, park and recreation funds for subdivision and non-subdivision developments and, in restricted areas, redevelopment agency funds.



Goals, Objectives and Policies

Because undeveloped land is becoming scarce in the City, land for open space uses should be secured at the earliest possible time. As additional funds become available, these areas could be developed in accordance with this plan. It is important that land be dedicated for park space or fees be paid in lieu of dedication of land as residential development continues within the community. Land dedicated for park purposes should be strategically located within any proposed development to be of greatest benefit to the future residents and to the community as a whole.

The City has established a standard of five acres of local parks for each 1,000 residents. While this standard has not always been achieved, and considering the importance of open space and recreation as contributing factors to the community's welfare, the City will strive to attain this standard in areas that may be developed in the future.

Several concepts related to parks and open space are presented in the Land Use Element, which should be implemented if they are determined to be feasible.

In an attempt to preserve open space lands, the following recommendations are made:

- 1) The City should explore all sources of possible federal, state, and county funding for open space lands, and the conversion of surplus public lands to open space.
- 2) The City should make every attempt to secure joint use of open space corridors and lands set aside for seasonal use by other public agencies and private utility companies.
- 3) Zoning should be investigated as an alternative to preservation of open space lands. An open space zoning ordinance, which is consistent with this plan, has been adopted.



Planning Areas

The City has been divided into five Planning Areas for purposes of consistency and ease of reference within each of the General Plan Elements. Recreation and open space uses are discussed below by planning area as they relate to existing conditions and any future plans and goals. Exhibit OS-1 provides a map of existing parks, open space, and recreational areas.

Planning Area 1 – Old Town/Surfside

Existing Parks

- Eisenhower Park (1.4 acres)
- Marina Center and Park (2.6 acres)
- Zoeter Field (1.9 acres)
- Schooner Park (greenbelt) (0.8 acres)
- Windsurf Park (0.4 acres)
- Pacific Electric Park (includes special use centers of Mary Wilson Library and Senior Center and Pacific Electric Railway Red Car Museum) (6.5 acres)
- Sunset Marina Park (19.2 acres) (28.0 total including waterways)
- Public beaches (Seal Beach/Surfside Beach) (52 acres total)

This Planning Area contains the beach frontage, which is a resource of local and regional attraction for recreation. The City's two miles of coastal beaches are primarily wide, sandy beaches with minimal vegetation coverage.

Planning Area 2 – Hellman Ranch/Marina Hill/Boeing

Existing Parks

- Gum Grove Park Nature Park (14.9 acres)
- McGaugh Gym, Pool/Park (4.7 acres)
- Heron Pointe Park (0.2 acres)

Gum Grove Park contains a dense grove of over 800 eucalyptus trees. This park, which will be extended to Seal Beach Boulevard as part of the Hellman Ranch project, will be dedicated to the City for the enjoyment of the residents of the community.



The Hellman Ranch Specific Plan provides for potential additional recreation/open space areas that may be developed as part of the total planned community. These areas/uses include:

- Los Alamitos Retarding Basin – 34.7 acres retarding basin/open space
- Hellman Ranch Lowlands – 100 acres on Hellman Ranch for future restoration, open space, and environmental education purposes.
- Oil Production Acreage – approximately 50 acres on the Hellman Ranch that is currently used for oil production operations for future restoration, open space, and environmental education purposes upon the cessation of all mineral production activities.

A pedestrian trail is planned to link to the Class I San Gabriel River Trail through the Los Angeles Department of Water and Power property adjacent to the west boundary of the Specific Plan site.

Planning Area 3 – Leisure World

This Planning Area is restricted to use by the senior residents of that community. In addition to passive park areas within Leisure World, the Leisure World Golf Course and Clubhouse are available to residents and guests.

Planning Area 4 – College Park

Existing Parks

- Edison Park and Gardens (25.9 acres)
- Aster Park (greenbelt) (0.6 acres)
- Arbor Park (7.7 acres)
- Bluebell Park (1.2 acres)
- Heather Park (1.6 acres)
- Almond Park (1.5 acres)
- Old Ranch Neighborhood Park (2.2 acres)
- North Seal Beach Community Center (1.2 acres)

Public Facilities

- Old Ranch Country Club driving range

Private Facilities

- Old Ranch Country Club golf course (158 acres)



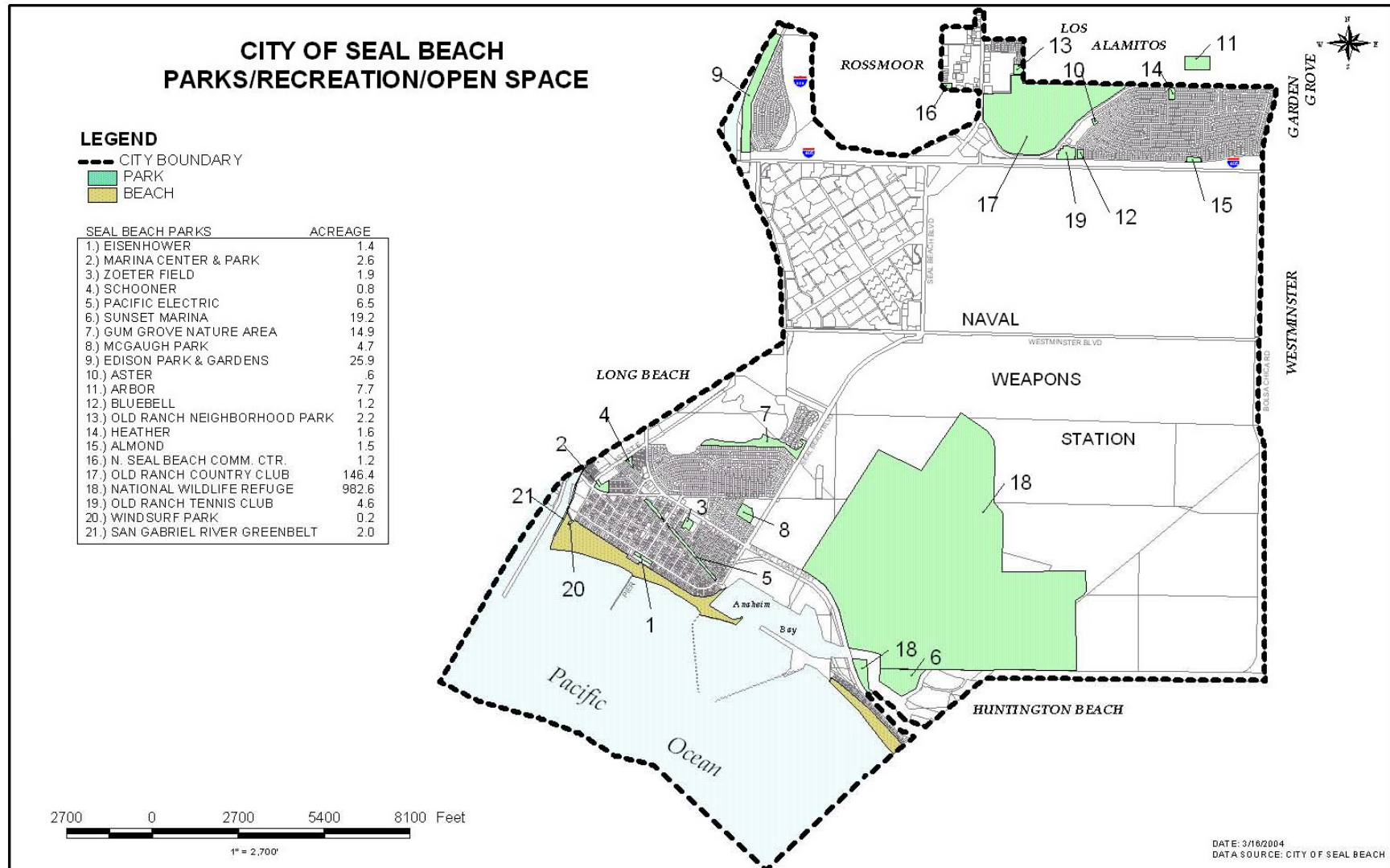


Figure OS-1 - Existing Parks, Recreation, and Open Space Areas



The North Seal Beach Community Center, a community special use facility that offers special programs for senior citizens, is also located in Planning Area 4. In addition, the City has the ability to accept the property dedication of Old Ranch Tennis Club prior to September 24, 2004. The dedication of the Old Ranch Tennis Club facility, approximately 6.74 acres, would be for an additional public recreational facility for the community. The City plans to accept the Old Ranch Tennis Club before the September 24, 2004, due date and will implement the re-use plan being finalized.

Planning Area 5 - Seal Beach U. S. Naval Weapons Station/Wildlife Refuge

This entire Planning Area consists of the U.S. Naval Weapons Station. The Seal Beach National Wildlife Refuge is located at the base of Anaheim Bay and within the Naval Weapons Station property. The refuge contains approximately 920 acres and provides a home for a number of species of fish and fowl, including several endangered species of birds. The marshlands serve as a nesting place for birds on their migrations and a spawning area for fish. The refuge contains large quantities of open space and provides variety within the predominantly urban setting.

Exhibit OS-2 provides a map of the Naval Weapons Station showing the portion that is designated as the National Wildlife Refuge.

Currently, commercial agricultural activities are restricted to the Seal Beach Naval Weapons Station. Approximately 2,000 acres of the base are currently used for the production of staple vegetable crops, such as carrots, beets, and corn. It appears that agricultural production will continue on the base for an indefinite period of time, since it has been determined that agriculture production is a compatible secondary use for a portion of the base.



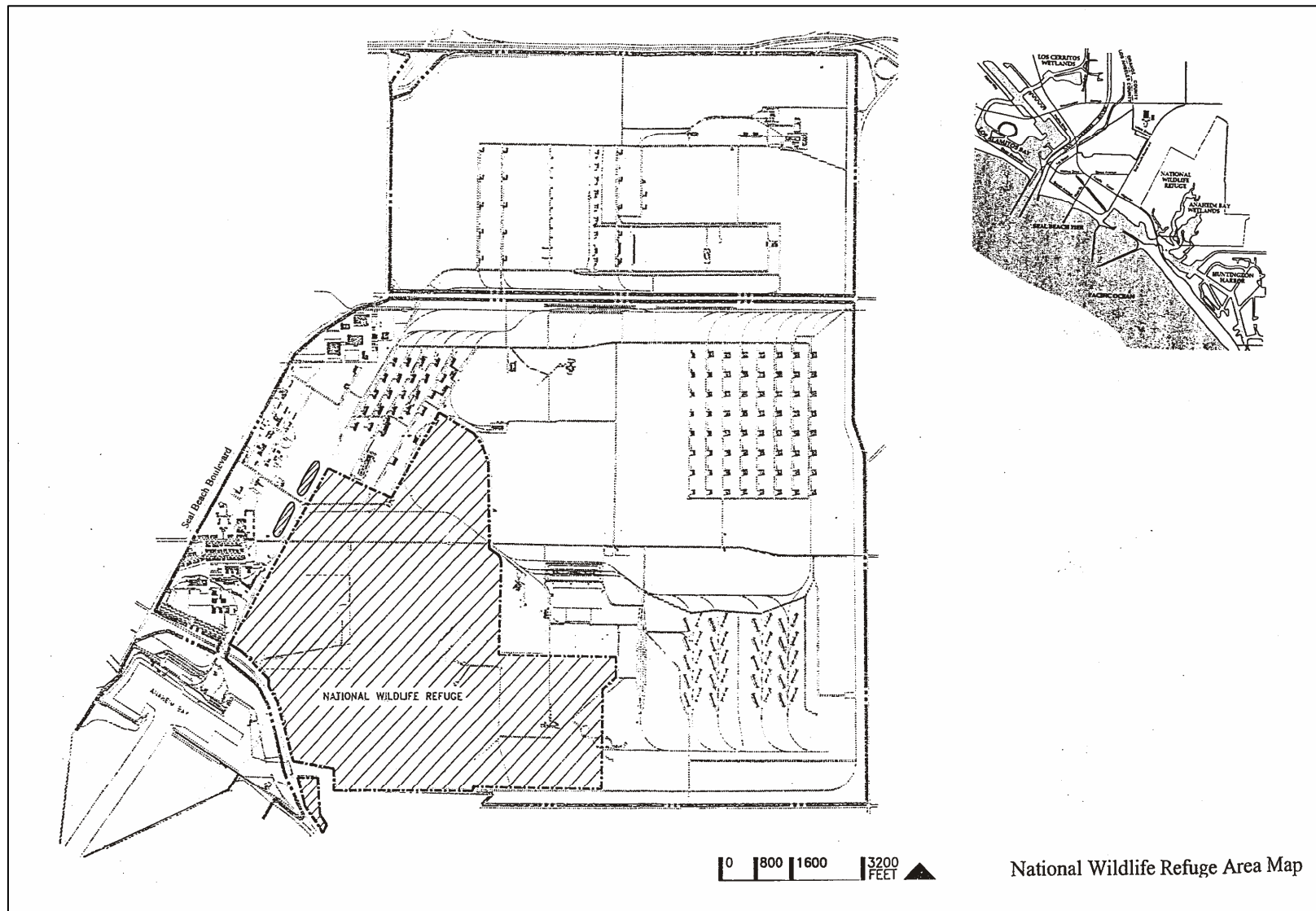


Figure OS-2 - National Wildlife Refuge Area Map



Conservation

This portion of the Element addresses the issues of conservation, development, and utilization of natural resources within the planning boundaries of the City of Seal Beach. The following topics are addressed within this section of the element:

- 1) Water and its hydraulic force/Water Quality
- 2) Flood Control
- 3) Beach Erosion
- 4) Harbors
- 5) Wildlife Refuge
- 6) Rivers
- 7) Soils
- 8) Forests
- 9) Minerals
- 10) Other Natural Resources

Water

The City of Seal Beach is included within the Orange County Water District. The District is responsible for replenishing the ground water basin, which serves an area from the base of the Santa Ana Mountains to the ocean. Colorado River water is percolated into the underground aquifers at settling basins located at the higher elevations at the base of the mountains. Pressure is created due to grade differential, which causes the underground water to be carried generally in a southwesterly direction. The groundwater is extracted from wells located throughout the District.

Each year the Board of Directors for the Water District determines a ratio of groundwater to imported water that will best serve the management needs of the District. Because of demands on the groundwater basin, approximately 60,000 acre feet of Colorado River water are percolated into the basin annually. Orange County Water District obtains this water through Metropolitan Water District.

In the past, the City has experienced some salt-water intrusion into the underground basin. Intrusion of salt water has occurred in an area beneath the San Gabriel River channel. As a result, barrier wells have been drilled that inject fresh water into those areas, which are referred to as “gaps.” The boost in water pressure created by the injection wells prevents salt-water intrusion



from recurring. The barrier wells in the greater Seal Beach area are located on the west side of the San Gabriel River, along Westminster Avenue and on the Boeing Integrated Defense Systems property within the City of Seal Beach, and are operated by the Los Angeles County Flood Control District. This conservation measure to protect the underground basin will continue indefinitely.

Seal Beach operates three domestic fresh water wells and periodically imports additional water through the Metropolitan Water District. The domestic wells supply water to all districts on a routine basis. Approximately 25% of Seal Beach's water is purchased from the Metropolitan Water District in order to guarantee availability of emergency supplies when the well water supply is short due to maintenance or breakdown. The City purchased the Surfside Colony water system from the City of Huntington Beach and has incorporated it into the citywide system.

The City currently has two reservoirs with a total storage capacity of 7 million gallons. A 4-million-gallon reservoir is located on Beverly Manor Road adjoining the San Diego freeway, and a 3-million-gallon reservoir is situated on the Naval Weapons Station adjacent to Marina Hill. On an average, 3.6 million gallons of water is issued each day within the community. Daily consumption varies between summer and winter usage. Even with the limited growth available to the City at this point, the City should give serious consideration to constructing a third reservoir. With the expanded storage capacity, the City would reduce the risk of a water shortage in an emergency situation.

Water Quality

Within the city limits of Seal Beach is the mouth of the San Gabriel River which drains an area of approximately 700 square miles within Los Angeles and Orange Counties, the Pacific oceanfront, and various wetland areas that are subject to various sources of pollution within the community. To protect public safety, as well as these natural resources, the water quality should be monitored and protected.

Goals and objectives include:

- Coordinate water quality, supply, and conservation programs with the responsible water agencies.
- Encourage the production and use of recycled water.
- Conserve and protect watershed areas.



Pollutants contained in stormwater runoff are referred to as “non-point” source pollution due to the diffuse origins of such pollutants, including metals, organic wastes, pesticides, and a variety of other pollutants. Other types of pollutants include those that result from disinfection of drinking water and the intrusion of salt water from the ocean into nearby groundwater aquifers. It is these “non-point” source pollutants that are addressed by the Open Space/Recreation/ Conservation Element in order to protect the receiving waters.

- The goal is to protect and enhance the quality of water in local rivers and wetlands from “non-point” source pollutants in order to maintain and enhance the quality of life valued by residents and visitors to the City. In order to accomplish this goal, the following should be encouraged as part of an ongoing effort to protect and maintain water quality:
 - Coordinate with other agencies in the watershed area to develop a public education program that will inform the public of the importance of water quality and actions that they can take to improve water quality.
 - Coordinate with existing public outreach programs and create additional programs to involve the community in addressing urban runoff pollution problems and raising awareness of how individuals’ activities contribute to runoff pollution, with resulting loss of marine biodiversity and beach closures.
 - Develop measures to promote proper disposal of pollutants to the sanitary sewer or hazardous waste facilities rather than to the storm drain system.
 - Encourage contractors to comply with accepted stormwater pollution prevention planning practices for all projects subject to erosion potential.
 - Establish requirements for installation and maintenance of stormwater structural controls to reduce peak discharges and to maximize pollutant removal from runoff.
 - Establish and coordinate good housekeeping procedures for all City departments to ensure that water quality objectives are not threatened by in-house operations, creating an example for the community.

The Federal Clean Water Act requires National Pollution Discharge Elimination System (NPDES) permits for stormwater discharges from municipal storm sewer systems to waters of the



United States. Each permit renewal requires the permittees to continue to implement ongoing stormwater quality management programs and develop additional programs in order to control pollutants in stormwater discharges.

Because water resources – both for domestic use and ocean-related use – are important to the City, efforts are needed to ensure availability and quality. The ocean waters have a significant natural, recreational, and economic importance to the City and the region. Control of pollution is imperative to the future quality of the area's living environment. Water conservation and quality should be encouraged by:

- Expanding the production of reclaimed water and developing new uses for reclaimed water;
- Requiring the use of drought resistant plant species with mulching and composting in landscaping for private and public areas, including parks;
- Establishing water conservation education programs;
- Requiring the incorporation of water conservation devices in new development, public projects and rehabilitation projects;
- Reducing urban pollutant runoff through National Pollution Discharge Elimination System (NPDES) programs; and
- Developing a Water Quality Management Plan (WQMP) for the City.

The City will cooperate with all federal, state, and local regulatory agencies to monitor water quality and provide infrastructure improvements as needed to achieve these goals.

Flood Control

Flood control measures have been implemented throughout the community. Major drainage channels within the City drain into the San Gabriel River, Anaheim Bay, and Huntington Harbor. The Orange County Flood Control District and the City are responsible for the flood control improvements within the community.

There are two flood control-retarding basins within the City. A 38-acre basin is located south of Westminster Avenue and west of Boeing's Seal Beach facility. This basin may be suitable for dual usage. These uses would consist of a floodwater retarding basin during the winter and a regional park during the drier por-



tions of the year. The Old Ranch Country Club golf course is used as a retarding basin for storm water run-off from College Park East and the Los Alamitos Naval Air Station during heavy rains.

In the future, the City should consider increasing the capacity of the northwest area storm drain system through a capital improvement project.

At the County level, the Orange County Flood Control District has developed a number of conservation techniques. These measures include the use of importing aqueducts, additional reservoirs, importing of spreading works and maintenance of open bottom designated channels.

Beach Erosion

Historically, the stability of the shoreline was dependent upon the delicate natural balance between the erosive forces of the wind, the surf, and the tide and the replenishment of beach-building materials brought down the Los Angeles and San Gabriel Rivers. Replenishment sands from rivers have been traditionally transported southeastward by the littoral (shoreline) currents. When the federal offshore breakwater, the First Street jetty, and the breakwaters at Anaheim Bay were constructed, the littoral currents in the general area were partially blocked and altered.

The Seal Beach shoreline erosion problem consists of three areas:

- 1) The west beach is the area between the San Gabriel River and the pier.
- 2) The east beach extends from the pier to the west jetty of Anaheim Bay.
- 3) Anaheim Bay and Surfside beaches are considered together and extend from Anaheim Bay to Anderson Street.

The jetties and the federal breakwater were built in the 1940s. The construction of these public improvements changed the littoral currents, affecting the east and west beaches. Instead of transporting material in a southeasterly direction, the shoreline currents were reversed and flowed in a northwesterly direction. In 1958-59 a groin was constructed at the base of the pier to restrict the erosion problem. The groin did not eliminate the ero-



sion problem, and it has been estimated that 20,000 cubic yards of sand are lost each year from the east beach. This sand is carried away through the Navy harbor and west breakwater and around the end of the groin to the west beach. In addition, the San Gabriel River adds sand to the west beach. Because of the changes in the shoreline currents, this sand collects as a delta at the mouth of the river.

Because the littoral currents have been altered, the problem of beach erosion will continue indefinitely. While the Corps of Engineers replenishes sand at Surfside, the City must assume full responsibility for redistribution of sand from the west to the east beach. The City should continue to seek assistance from state and federal agencies in order that the City might be relieved of a portion of the burden and expense of maintaining this facility of regional significance.

Artificial means must be used in order to replenish sand to the east beach. Since 1970, an average of 100,000 cubic yards of sand have been redistributed on a five-year cycle from the west beach to the east beach. However, history has shown that a five-year project of sand replacement may not be adequate due to the multiple offshore storms that can occur during that timeframe. The City has a continuing redistribution program during the winter months to provide protection from flooding due to high tides.

Due to changes in littoral currents, the beach at Surfside erodes at a rate of about 70 lineal feet per year. In 2001, the U. S. Army Corps of Engineers replenished the Surfside and Sunset Beach beaches with 2.2 million cubic yards of sand pumped from Anaheim Bay. This project was designed to fulfill the replenishment needs of these beaches until 2006.

Harbors

Anaheim Bay is located in the Seal Beach Naval Weapons Station between the Coastal District and Surfside Colony. The Bay was first used as a commercial harbor in the 1860s. Cargo was shipped inland to the Santa Ana valley. Anaheim Bay served the interior of Orange County for 15 years. In the mid-1870s rail lines were extended into Orange County, and the commercial activity at the Bay declined.

In the 1920s, the strand at Anaheim Bay took on a residential character. In the early 1940s the federal government purchased



Anaheim Bay and the adjacent land developed the Seal Beach Naval Weapons Station. The configuration of the bay was modified to accommodate the Navy's needs, and in 1944 two jetties were constructed into the ocean to form a harbor entrance. A 1000'-long wharf was constructed to service naval vessels.

The Weapons Station handles approximately 80 military ships per year, down from a high of approximately 600 ships per year. Anaheim Bay also provides a channel entrance to Sunset Marina Park and Huntington Harbor. Currently, there are approximately 276 boat slips in Sunset Marina Harbor. It is anticipated that harbor expansion will be limited because of the possible adverse effects on the National Wildlife Refuge located on the Weapons Station. In addition to limiting the number of boat slips, the configuration of the park facility was altered to lessen its impact on the marshlands to the west.

Anaheim Bay links the salt marshlands with the ocean. The Bay provides access to the marshlands for fish and because of tidal fluctuations, circulates water throughout the marsh.

Wildlife Refuge

In 1972, the United States Congress established the Seal Beach National Wildlife Refuge on the Seal Beach Naval Weapons Station. The refuge contains 920 acres of marshland and 560 acres outside the slough area, which were restored to their natural condition. The Wildlife Refuge has an international designation under the Ramsar Convention as a "Wetlands of International Importance," as well as an "International Important Birding Area" under the International Migratory Bird Treaty, and is a Federal Marine Protected Area.

More than 200 species of birds are found within the boundaries of the refuge during the course of a year. The marshland is primarily used as a roosting area for birds. During peak migration in December over 10,000 birds use the marshlands. Five species of birds that are currently on the state and/or federal lists of endangered species habituate the marshlands. These endangered species are the light-footed clapper rail, the California brown pelican, the peregrine falcon, the California least tern, and Belding's savannah sparrow.

In addition to the birds, 61 species of fish have been identified in Anaheim Bay, the tidal channels of the marshlands. These



species spend at least a portion of their life cycle in the marsh estuarine system.

The Naval Weapons Station has developed a wildlife management program that includes the development and implementation of a wildlife management and conservation plan. The plan relies on available Navy and non-Navy resources, as well as close coordination with resource agencies and the public. This will allow seamless management across jurisdictions for the benefit of healthy and sustainable land use, habitat conservation and improvement, and the protection of populations of endangered, threatened and “management focus” species, consistent with long-term sustainability of the Base’s military mission. This will be accomplished by employing an ecosystem management approach that considers the station’s natural and cultural resources, surrounding community issues, current and emerging technology, and military readiness. Specific goals and objectives will be established based upon this ecosystem management approach that will also consider how the Weapons Station’s natural resources fit into the larger area of regional ecosystem management. These goals and objectives are being developed and improved upon by working groups comprised of a broad range of regulatory agencies, technical professionals, and local community representation.

Rivers

The San Gabriel River is located on the western boundary of the City. The river, which originates in Los Angeles County, empties into the ocean at Seal Beach. The river transports sands that aid in the replenishment of beach sands. Sand transport has been severely reduced due to upstream damming for water conservation and flood protection purposes. In addition, the river provides an outlet for flood control basins and channels within the City.

The river is also a major source of ocean contamination immediately after storm events due to the washing of upstream pollutants and trash into the ocean. The City is responsible for removal of this debris when it eventually washes on shore. The City plans to take an active role in reducing the amount of debris reaching the City beaches by joining and working with the San Gabriel River and Mountains Conservancy.



Soils

Within the City of Seal Beach, soils are generally considered good for agricultural purposes. Prior to the rapid urban development in western Orange County, much of the land was used for growing crops.

Today, the greatest majority of the land is developed with the exception of the Seal Beach Naval Weapons Station. The Navy leases 2,000 acres of land for truck farming. The soils on the Station are fertile and subject to few limitations with a low risk of damage when cultivated. As long as farming does not interfere with the primary mission of the Weapons Station, crops will continue to be grown as a secondary use of the land.

Forests

The Gum Grove Nature Park is an urban forest in west Orange County. Its first human inhabitants were the Tongva Indians, who used this area as a viewpoint over the surrounding wetlands. In the early 1900s, Hellman Ranch employees planted blue and red gum eucalyptus trees that were used for cooking and heating. Since then, the second and third growth forest of approximately 500 trees has become a natural resource area that is now used for passive recreation. The Gum Grove Nature Park will be dedicated to the City as part of the development outlined in the Hellman Ranch Specific Plan.

The Gum Grove Nature Park houses a variety of wildlife such as skunks, opossums, ground squirrels, toads, salamanders, tree frogs, and coyotes native to this area. In the fall and winter months, Monarch butterflies cover a cluster of trees during their migratory stopovers. This ecosystem, including seasonal ponds, supports great blue herons, snowy egrets, great egrets, and at least two birds of prey (the American kestrel and the red tailed hawk). Over 50 other bird species are known to be inhabitants or visitors in this area.

The Gum Grove Nature Park Group, formed by local citizens, is establishing a management and conservation program in cooperation with the California Department of Forestry and the City of Seal Beach. The vision for the entire Gum Grove Nature Park is a two-phase transformation from a neglected habitat to one that will support an increasing number of insect, bird, animal, and plant species that have long been native to this area. Phase One is to plant the five acres being added to the park with



native plant and tree species only. Phase Two, occurring over many years, will be native species replacement as disease continues to claim the non-native eucalyptus. These efforts and ongoing maintenance will include archaeological sensitivity and cultural remembrance of the original Tongva Indian residents.

The Gum Grove Nature Park is the central component of a wildlife corridor that connects eastward with the Seal Beach National Wildlife Refuge located on the Seal Beach Naval Weapons Station and westward with the Hellman Wetlands, which are designated for future restoration. The two-phase Gum Grove Plan, in conjunction with future Hellman Wetlands restoration, will provide a management and conservation program that will bring back to life a severely degraded corridor. Planting of native grasses, plants, and tree species will provide for the habitat and foraging needs of birds and animals that live and migrate through this region.

Minerals

One oil extraction site is maintained within the tidelands area of Seal Beach. This site is known as Esther Island. Oil extraction operations are also conducted along the Newport-Inglewood Fault on the Hellman Ranch property and on an oil lease site in the National Wildlife Refuge on the Seal Beach Weapons Station.

Currently, it appears that the oil fields within the City boundaries will continue in operation. If oil extraction activities are proposed under the City's jurisdiction, existing ordinances would regulate the operations to ensure compatibility with other types of surrounding land uses.

Cultural Resources

The Cultural Resources Element of the City's General Plan describes methods for protecting archaeological and historical resources. The element also includes local policies to guide implementation of cultural resource preservation beyond the protection afforded by applicable federal, state, and local laws. Future development within the City will be subject to these policies and laws to preserve known and unknown sites and properties of a cultural and historic nature.



Wetlands

A 100-acre portion of the Hellman Ranch Specific Plan area has been deed restricted for 25 years for sale at fair market value to a public agency for the purposes of wetlands restoration, open space, and environmental education purposes. The adjacent oil production property (approximately 50 acres) has been similarly restricted, although the 25-year deed-restricted time period does not commence until cessation of the oil production activities.

It is the intent and goal of the City to address future uses for these areas and cooperate with the property owner, state, local, and private agencies, as well as the community, to provide the means to accomplish this goal.



