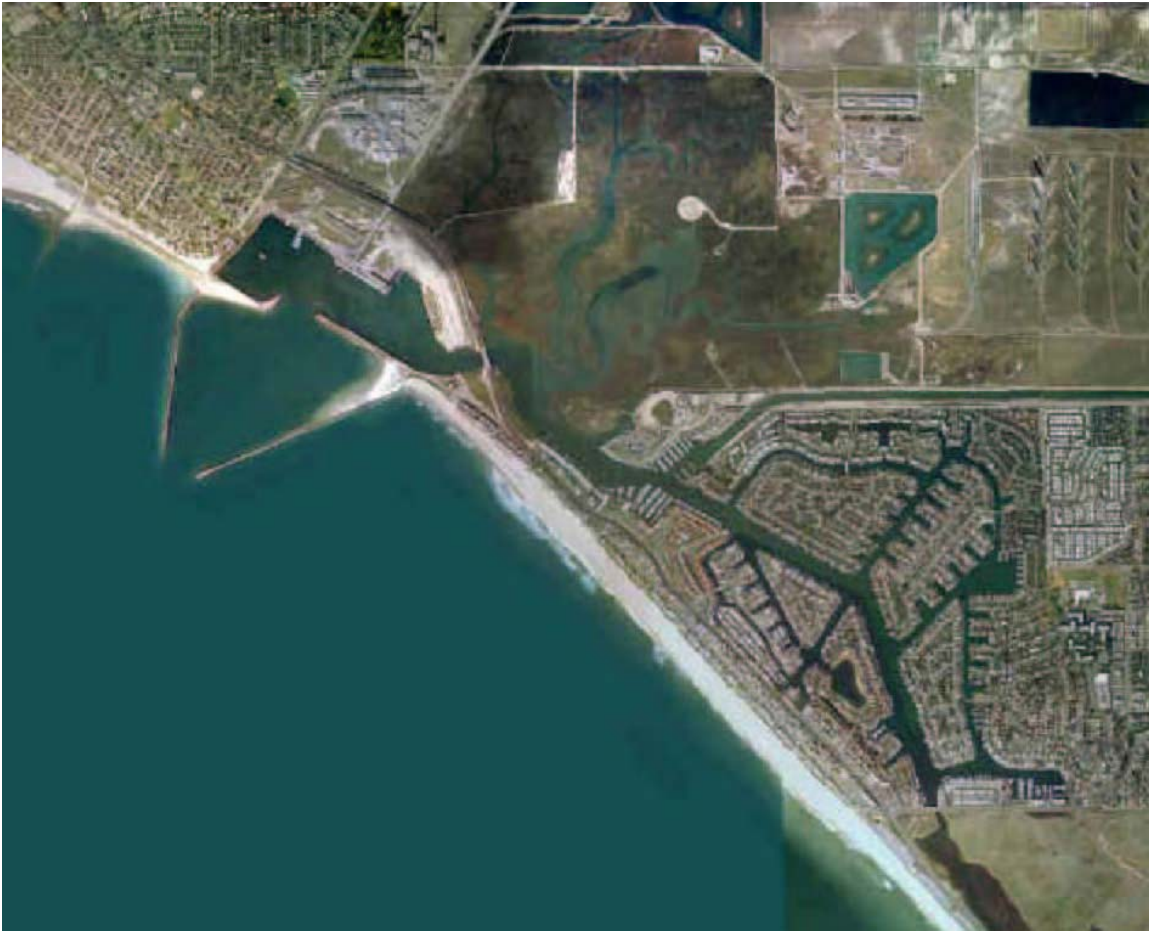


**Huntington Harbour  
Huntington Beach, California  
905(b) Reconnaissance Report**



**U.S. Army Corps of Engineers,  
Los Angeles District  
November 2003**

## Huntington Harbour SECTION 905(b) (WRDA 86) ANALYSIS

### 1. STUDY AUTHORITY

- a. This Section 905(b) (WRDA) Analysis was prepared as an initial response to:
  - i. Section 208 of the 1965 Flood Control Act, which reads as follows:

*“The Secretary of the Army is hereby authorized and directed to cause surveys for flood control and allied purposes, including channel and major drainage improvements, and floods aggravated by or due to wind or tidal effects, to be made under the direction of the Chief of Engineers, in drainage areas of the United States and its territorial possessions, which include the localities named in this section. After the regular or formal reports made on any survey authorized by this section are submitted to Congress, no supplemental or additional report or estimate shall be made unless authorized by law except that the Secretary of the Army may cause a review of any examination or survey to be made and a report thereon submitted to Congress, if such review is required by the national defense or by changed physical or economic conditions... Coasts of Washington, Oregon, and California to derive advisability of protection work against storm or tidal waves.”*

- ii. U.S. House of Representative, Committee on Transportation and Infrastructure, Resolution Docket 2584 Adopted October 9, 1998, which reads as follows:

*“Resolved by the Committee on Transportation and Infrastructure of the United States House of Representatives, that, in accordance with section 110 of the River and Harbor Act of 1962, the Secretary of the Army, in consultation with the Secretary of the Navy, is requested to review the feasibility of providing immediate and long term shore protection improvements from the mouth of the San Gabriel River to the entrance of Newport Bay, California in the interest of storm damage reduction, beach erosion control and related purposes, with particular attention to the influence on shoreline erosion of the Seal Beach Naval Weapons Station ocean entrance jetties.”*

b. Funds in the amount of \$100,000 were appropriated in fiscal year 2003 to conduct the reconnaissance phase of the study, under the title, Huntington Harbour Dredging. The Senate Report associated with this appropriation states: *“the Senate Committee recommends including \$100,000 for a reconnaissance study for ecosystem restoration of Huntington Harbour.”*

## 2. STUDY PURPOSE

The purpose of the reconnaissance phase study is to determine if there is a Federal (Corps) interest in participating in a cost shared feasibility phase study. In regard to the Senate Report language, initial meetings with the local sponsor indicated interests in addition to ecosystem restoration. Therefore, this 905(b) addresses all water resource related concerns expressed by the local sponsor with respect to Huntington Harbour.

Accordingly, this 905(b) report investigates a multiple purpose project to improve navigation access to and within Huntington Harbour, navigation safety and security to the Seal Beach Naval Weapons Station, and restoration of the surrounding ecosystem within the Anaheim Bay-Huntington Harbour complex, which includes the Seal Beach National Wildlife Refuge. The study focus includes (1) restoring and improving navigation channels and support features at Huntington Harbour; (2) improving safety and national security for the Seal Beach Naval Weapons Station; (3) restoring ecology at Huntington Harbour and surrounding areas, including the Seal Beach National Wildlife Refuge; and (4) improve water quality in the surrounding waters of the Anaheim Bay-Huntington Harbour complex. As part of developing plans for the above purposes, the study would consider adjusting designs of project features to provide incidental benefits by (5) increasing storm damage protection to Surfside Colony, located adjacent to the existing south jetty of Anaheim Bay and (6) providing incidental storm damage protection along Seal Beach, located adjacent to the existing north jetty of Anaheim Bay. In response to the study authority, the reconnaissance study was initiated on 30 July 2003. The reconnaissance study has resulted in the finding that there is a Federal interest in continuing the study into the feasibility phase. The purpose of this Section 905(b) Analysis is to document the basis for this finding and establish the scope of the feasibility phase. As the document that establishes the scope of the feasibility study, the Section 905(b) Analysis is used as the chapter of the project management plan that presents the reconnaissance overview and formulation rationale.

## 3. LOCATION OF STUDY, NON-FEDERAL SPONSOR AND CONGRESSIONAL DISTRICTS

a. **Location.** The study area includes the Anaheim Bay – Huntington Harbour complex within the City limits of Seal Beach and Huntington Beach in Orange County, California (Figure 1A). The study area boundaries are defined as follows: starting from Seal Beach Boulevard to the Northwest of Huntington Harbour including portions of Anaheim Bay, Seal Beach National Wildlife Refuge, and Sunset Beach, from Huntington Harbour North to Edinger Avenue including portions of the U.S. Naval Weapons Station; East to Bolsa Chica Street, Southeast to the East Garden Grove Wintersburg Channel including the Bolsa Chica Ecological Reserve corridor that feeds into Huntington Harbour; and Southwest to Sunset Beach ( See Figure 1B).



Figure 1A –Study Area Location



Figure 1B – Study Area

**b. Local Sponsors.** The primary non-Federal sponsor for the feasibility phase of the study is the State of California Department of Boating and Waterways. The local sponsor has expressed support for the study and understands the two-phase planning process and is willing to participate in 50-50 cost sharing of the feasibility phase study.

**c. Congressional Interests.** The study area lies within the jurisdiction of Congressional District 46, CA represented by Dana Rohrabacher. United States Senators representing California, Barbara Boxer and Diane Feinstein, are also interested in this study.

#### 4. PRIOR REPORTS AND EXISTING PROJECTS

**a. Prior Studies and Reports:** Numerous reports concerning Anaheim Bay- Huntington Harbour were reviewed as part of this study.

- 1) "Huntington Harbour Bathymetric Survey Report." Prepared by Tetra Tech, Inc. for the City of Huntington Beach, May 2000.
- 2) "Huntington Harbour Waterways Committee Summary Report." Prepared by Ron Hagan, Special Projects Manager, August 2003.
- 3) "Westminster Reconnaissance Study Section 905 (b) (WRDA) Analysis", USACE, Los Angeles, June 2001

4) "California Wetlands Information System-Anaheim Bay" at web site [ceres.ca.gov/wetlands/geo\\_info/so\\_cal/Anaheim](http://ceres.ca.gov/wetlands/geo_info/so_cal/Anaheim).

5) Several preliminary studies have been initiated by the Navy, but not completed regarding the construction of a second entrance channel to Huntington Harbour.

**b. Related Projects.** The study includes investigating modifications to existing Federal projects as follows:

1) **Surfside- Sunset to Newport Beach.** The existing Federal shore protection project from the Surfside-Sunset to Newport Bay extends along 17 miles of the Orange County coast from Anaheim Bay down coast to the Newport Bay Harbor entrance. Ten stages of construction have been completed, including groins and beachfill to restore and maintain the shoreline down coast of Anaheim Bay. A feeder beach along Surfside Colony, adjacent to the southern jetty at the Anaheim Bay entrance, receives approximately 1.8 million cubic yards of sand every 5 years at a cost of about \$10 million. Modifications that may be considered in the Huntington Harbour study relate to construction of new jetties to construct the second entrance channel. The design of these jetties could consider alignments or other adjustments to reduce wave action along Surfside Colony and to reduce the rapid erosion of the feeder beach material along Surfside Colony.

2) **Anaheim Bay (City of Seal Beach).** The existing Federal shore protection project for the City of Seal Beach included placement of beach fill and construction of one erosion control groin near Seal Beach Pier. Periodic nourishment is the responsibility of the City of Seal Beach. The Seal Beach area continues to experience erosion of the protective beach causing backshore development to be vulnerable to wave attack during coastal storms. The Huntington Harbour Study could consider modifications to the northern jetty to reduce strong rip currents that increase erosion of beach material as well as disposing some of the material dredged to create a 2<sup>nd</sup> entrance channel to restore the City of Seal Beach protective beaches.

**c. Current Corps of Engineers Studies that may relate to the Huntington Harbour Study.**

1) **San Gabriel to Newport Shoreline Feasibility Study.** A 905 (b) Analysis Report for the San Gabriel to Newport Bay Shoreline Reconnaissance was completed in February 2001. The report recommended a cost-shared feasibility study be undertaken to provide protection to the Surfside Colony area from coastal storm damage. HQUSACE approved the 905(b) Analysis report and recommendation in March 2001. The Feasibility Cost-Sharing Agreement was executed in September 2002. This study is examining several measures to reduce wave attack to backshore development along the Surfside Colony. These measures include modifying the existing south jetty to reduce rip currents that cause rapid erosion of the feeder beach that also provides protection to Surfside Colony. Other measures such as revetment, offshore breakwaters, and groins are also being considered to provide protection. There is some potential that improvements found feasible for constructing a second entrance may also benefit protecting Surfside Colony. If it is found that proposed protective features are common to both projects, consideration will be given to combining the study efforts.

2) **Westminister Flood Control and Watershed Feasibility Study.** A 905 (b) Analysis Report examining the watersheds draining the City of Westminister and surrounding areas was completed by Los Angeles District and approved by Headquarters in July of 2001.

The report recommends proceeding with two independent comprehensive watershed management studies for Westminster (East Garden Grove) Flood Control and Watershed Study and a Watershed Study for the Carbon and Coyote Creek watersheds. Feasibility Study cost-sharing agreements were executed for these two studies in September 2003. These studies may result in measures to reduce flooding, restore ecosystem features, control sediment erosion and deposition, and improve water quality. The findings and recommendation of this study could include measures to reduce sediments and improve sediment and water quality that drain into Huntington Harbour and the Seal Beach National Wildlife Refuge. The study findings will be considered in the Huntington Harbour Study, as available and appropriate.

## 5. PLAN FORMULATION

During a study, six planning steps that are set forth in the Water Resource Council's Principles and Guidelines are repeated to focus the planning effort and eventually to select and recommend a plan for authorization. The six planning steps are: 1) specify problems and opportunities, 2) inventory and forecast conditions, 3) formulate alternative plans, 4) evaluate effects of alternative plans, 5) compare alternative plans, and 6) select a recommended plan. The iterations of the planning steps typically differ in the emphasis that is placed on each of the steps. In the early iterations, those conducted during the reconnaissance phase, the step of specifying problems and opportunities is emphasized. That is not to say, however, that the other steps are ignored since the initial screening of preliminary plans that results from the other steps is very important to the scoping of the follow-on feasibility phase studies. The sub-paragraphs that follow present the results of the initial iterations of the planning steps that were conducted during the reconnaissance phase. This information will be refined in future iterations of the planning steps that will be accomplished during the feasibility phase.

### a. National Objectives

1) The national or Federal objective of water and related land resources planning is to contribute to national economic development consistent with protecting the nation's environment, pursuant to national environmental statutes, applicable executive orders, and other Federal planning requirements. Contributions to National Economic Development (NED) are increases in the net value of the national output of goods and services, expressed in monetary units. Contributions to NED are the direct net benefits that accrue in the planning area and the rest of the nation.

2) The Corps has added a second national objective for Ecosystem Restoration in response to legislation and administration policy. This objective is to contribute to the nation's ecosystems through ecosystem restoration, with contributions measured by changes in the amounts and values of habitat.

**b. Public Concerns:** A number of public concerns have been identified during the discussions with the potential Sponsors, the County of Orange, and City of Huntington Beach. Coordination was also conducted with Navy representatives from the Seal Beach Naval Weapons Station, and the Seal Beach National Marine Refuge. The public concerns that are related to the establishment of planning objectives and planning constraints are:

- (1) Shoaling within the Huntington Harbour navigation channels and marina areas is impacting access, and use of marina slips and launch ramps;



- (2) Boating from Huntington Harbour is frequently restricted through the Anaheim Bay entrance channel due to ordnance handling operations at the Seal Beach Naval Weapons Station;
- (3) The U.S. Naval Weapons Station at Seal Beach has indicated interest in improving the safety and security of their shipping activities through the Anaheim Bay entrance channel by constructing a second entrance channel to separate the recreational boat traffic originating from Huntington Harbour.
- (4) Water and sediment quality is impaired due to polluted runoff through facilities draining surrounding watersheds. These contaminants are adversely impacting shoaling and area ecosystems including the Seal Beach National Wildlife Refuge.
- (5) The materials to be dredged from Huntington Harbour are likely to be contaminated with metals from urbanized regional sources of pollutants and will require special disposal methods.
- (6) There is a limited water circulation and tidal flushing due to the restricted entrance channel and restrictions of surrounding drainages caused by tide gates and other features.
- (7) The flood control function of the three major flood control channels that feed into Huntington Harbour must be preserved.
- (8) Eelgrass, a protected plant, is spreading in shallow areas within Huntington Harbour. Any dredging of the Harbour must consider minimizing adverse impacts to this species.
- (9) Invasive plant species (i.e. *Caulerpa taxifolia*) have been found in two backwater lagoons in Huntington Harbour and a nearby navigation channel. It is thought that these patches have been eradicated, but it is possible that this easily spreading species is relocated elsewhere.
- (10) The City of Seal Beach is interested in increasing coastal storm damage protection to backshore development located up coast (Seal Beach area) and down coast (Surfside Colony area) of Anaheim Bay. Both areas experience erosion of protective beaches.

**c. Problems and Opportunities:** The evaluation of public concerns often reflects a range of needs, which are perceived by the public. This section describes these needs in the context of problems and opportunities that can be addressed through water and related land resource management. For each problem and opportunity, the existing conditions and the expected future conditions are described, as follows:

(1) **Huntington Harbour Shoaling Problems.** Huntington Harbour first opened its facilities in 1969. Prior to that the area was an undeveloped natural waterway adjacent to the huge wildlife area that is still untouched. The Harbour includes 64 acres that was surplus and given to the Harbour District by the Naval Weapons Station in Seal Beach for use as a public park for recreation purposes. At the time of purchase the property consisted of tidal marshlands that were completely covered by water at high tide. Additional acreage of about 31 acres consisting of State



tidelands was also leased for the project. . Channel design depth was -10 feet MLLW to provide adequate navigation depths. The material from dredging the channels and from additional deepening was used in the development of five islands. There are four local beach areas located within the Harbour.

Huntington Harbour (Figure 2) includes Sunset Marina Park as well as 2 public marinas, Huntington Marina HOA and Peter's Landing Marina. Sunset Marina Park includes a 276 slip marina and a public boat launch ramp with multiple lanes, boat, and trailer parking, car parking areas, a boat repair yard and public picnic areas. Most of the Harbour consists of privately held slips adjacent to residences. There are a total of about 3,000 boats in the Harbour. There are about 30 sport fishing or charter boats that operate from Huntington Harbour and one commercial diving boat. The City 's Marine Safety Division maintains 3 boats out of the Harbour. Entrance is through Anaheim Bay and between the Naval Weapons Station and Huntington Harbour and under the Pacific Coast Highway Bridge. Boats pass through the Seal Beach National Wildlife refuge.

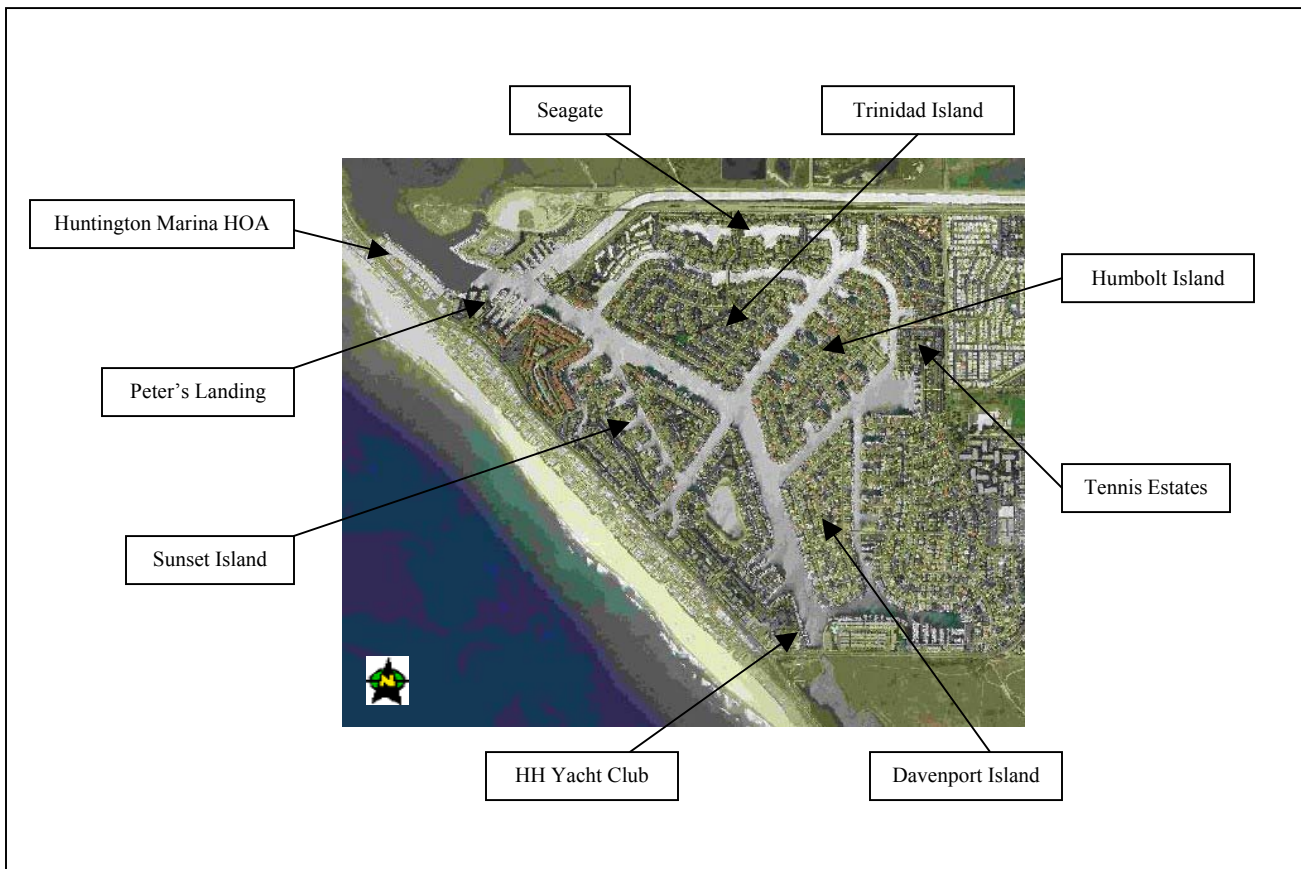


Figure 2 – Development within Huntington Harbour

Huntington Harbour is the closes mainland stopover point from Catalina Island. Boating includes sport fishing, private charters, boat rentals, and other recreation boating activities. The marina also offers complimentary two-hour guest slips for boaters who want to enjoy dining and shopping on the waterway's boardwalk. Kayak enthusiasts frequent the Harbour to take advantage of the abundant wildlife and calm waters.

Future development within Huntington Harbour is expected to include a campground, wildlife observation areas, additional boat slips and boat storage areas. It is expected that sediments from surrounding watersheds will continue to cause shoaling of the channels and navigation facilities, resulting in greater restrictions of their use.

Sediment from surrounding watersheds is causing shoaling within Huntington Harbour navigation channels, and marina's creating channel navigation restrictions, and impairing the use of launch ramps, and public and private boat slips. A Bathymetric Survey of Huntington Harbour in May 2000 estimates that approximately 34,000 cubic yards of silt needs to be dredged from 10 channels. The survey also shows that eelgrass was present at two of ten proposed dredging areas. The last dredging episodes conducted at Huntington Harbour were prior to 1988. However, it is noted that many of the channels, launch areas, and slips were dredged beyond -10 feet MLLW for fill material to create the islands. Consequently, sediment deposition has not reached elevations to cause any channel constrictions. However, it is likely that the deeper areas are now filling to a point where more and more shoaling problems may surface.

Surveys completed in 2000 show much of the sediment that shoals the navigation facilities originate from urbanized flood control channel, and other drainage outlets, such as the Wintersburg, Sunset (i.e. Hiel), and Edinger (i.e. Bolsa Chica) Flood Control Channels. There are insufficient diversion systems, sediment/silt traps or catch basin mechanisms to filter and remove silt and other trash and debris from these channels. This problem is exacerbated by erosion of the beaches within the Harbour. The City participates in sand replenishment programs to insure access to the public beaches. Due to tidal changes, the replenished sand ends up in the center of the channels.

The watershed that drains into Huntington Harbour is enormous and heavily urbanized. Once in the main channel, polluted water, sediments, trash and debris become trapped within Huntington Harbour, which lacks the tidal influences needed for circulation. Serious environmental problems affecting Huntington Harbour include impaired water quality, silt/sediment loading, and protected/invasive plant species. In June 2003, the Federal government added Huntington Harbour to its list of impaired water bodies after the Environmental Protection Agency (EPA) found unacceptable levels of polychlorinated biphenyls (PCBs) and dieldrin. Since much of the shoaling identified in 2000 was located near drainage outlets, there is concern that the silt buildup might be so contaminated with toxic metals, pesticides, and PCB's that special dredging and other management measures will be required for disposal of the sediments.

**(2) Degradation of Ecosystem within Anaheim Bay-Huntington Harbour Complex.** Drainage of the watersheds surrounding and emptying into the Anaheim Bay-Huntington Harbour complex contain poor water and sediment quality that is adversely impacting on the areas ecosystem, including the Seal Beach National Wildlife Refuge. According to the Santa Ana Regional Water Quality Control Board, current problems include metals and pesticides from urban runoff and non-point source pollutants. Tidewaters are also restricted from entering the inner bay by the 600 foot wide shipping channel connecting the outer and inner harbors and the constriction at the Pacific Coast Highway Bridge. Culverts and tide gates further restrict tidal flow into the wildlife refuge area, such that tidal action in the upper reaches of the marsh is muted.

Anaheim Bay was undisturbed until 1868 when a commercial pier was built at the Landings. In 1944, the U.S. Navy acquired 5,000 acres of Anaheim Bay and established the

Seal Beach Naval Weapons Station, including construction of the protected bay entrance. Huntington Harbour was developed in the southern part of the bay in the 1960's. In 1972, the Seal Beach National Wildlife Refuge was created within the borders of the Naval Weapons Station. The refuge was established to protect the endangered California least tern, light-footed clapper rail, and to provide quality habitat for California brown pelican, peregrine falcon, and Belding's savannah sparrow. The refuge provides critical stopover and winter habitat for migratory waterfowl, raptors, and shorebirds along the Pacific Flyway. The 920-acre refuge includes about 220 acres of open estuarine water, 566 acres of salt marsh, 151 acres of tidal and non-tidal estuarine flats, 2 acres of coastal brackish/freshwater marsh, and 17 acres of riparian willow and sycamore habitat. Upland areas include 303 acres of principally agricultural lands to the north and east and levees, and oil production sites.

The Seal Beach Naval Weapons Station and the U.S. Fish and Wildlife Service provide for the management of the refuge, and both have taken actions to preserve and improve on the refuge resources. As mitigation for construction of a 147 acre-landfill that was included in the Federal navigation project to deepen the Port of Long Beach, the Port of Long Beach restored about 116 acres of wetlands adjacent to the Seal Beach National Wildlife Refuge. Completed in 1990, the mitigation project restored four areas of uplands and former wetlands.

As indicated earlier, the Regional Water Quality Control Board has noted current problems with water and sediment quality that drain into the Anaheim Bay-Huntington Harbour Complex. If no action is taken to remove and control these contaminants, they will further degrade ecosystem quality within Huntington Harbour as well as having the potential to be carried further into pristine areas of the National Wildlife Refuge.

**(3) Restrictions to Boating Access to Huntington Harbour.** The Seal Beach Naval Weapons Station enforces restrictions to boaters transiting through the Anaheim Bay entrance channel as part of their operations. The frequency and duration of these closures are dependent on the operation at the Naval Station. In general, the entrance is closed to traffic for approximately 20 minutes during transit of Navy vessels, and this occurs on the average of once a week, but often occurs on a daily basis during periods of high activity at the Weapons Station. The entrance is also closed for training and security reasons, which last on the average of a half-hour to an hour. The longest being four hours. Following 9/11, the entrance was closed to harbor traffic from late September through December. During this time, the entrance was completely closed for a period of two weeks, and then opened for a limited time in the morning and afternoon for fisherman to go in and out, with a Navy escort. In late December 2001, the entrance was reopened. Currently the entrance is open 24 hours, 7 days a week but is monitored by the Navy. The Orange County Sheriff Department estimates that the number of boats impacted by the closures ranges from about 5 boats a day on a light week day to more than 30 boats a day on a peak weekend.

**(4) Safety and Security at the Seal Beach Naval Weapons Station.** The Seal Beach Naval Weapons Station's concern with the safety and security of their operations began with the opening of the Huntington Harbour boating facilities. This interest in separating boating traffic from Naval operations via a second entrance channel was following the October 2000 small boat attack on the USS Cole in Yemen, and was reinforced following the catastrophic events of September 11, 2001.

The U.S. Navy completed construction of Anaheim Bay Harbor in 1944 and currently utilizes Anaheim Bay to transfer ordnance between naval ships and the U.S. Naval Weapons Station at Seal Beach. In 1973, the U.S. Navy commissioned the U.S. Army Corps of

Engineers to study the concept of expanding the Naval Weapons Station facility at Seal Beach to expand their operations and availability to other Navy vessels. The results of this study entailed a recommendation to construct an offshore breakwater and mooring, along with constructing a second entrance channel to Anaheim Bay between the East Jetty and Surfside Colony. Following completion of the study, the U.S. Navy opted to not go forward with the plan at that time, therefore the proposed plan was placed on hold. The Navy has considered the need for a 2<sup>nd</sup> entrance several times since the original study, but action to complete these studies and move forward with a project has been deferred.

Several meetings were recently held with Navy officials at the Seal Beach Naval Weapons Station. They have expressed interest in modifying the Weapons Station ship basin to accommodate larger class naval vessels, which would also require separating the Navy traffic from Huntington Harbour's boating traffic. The benefits of the 2<sup>nd</sup> entrance also provide added and permanent security measures for the U.S. Naval Weapons Station, Seal Beach against possible sea based attacks to moored Naval combatants and munitions barges by foreign and domestic forces hostile to the people and government of the United States. A second entrance also provides public safety to recreational boaters and the surrounding communities by diverting small craft maritime traffic originating from Huntington Harbour away from the ordnance handling operations at the U.S. Naval Weapons Station, Seal Beach. The Navy is interested in Corps of Engineers involvement in the 2<sup>nd</sup> entrance channel since the Corps of Engineers historic mission includes constructing access and facilities for small craft harbors.

**(5) Coastal Storm Damage Problems along Surfside Colony.** The jetties that were constructed to establish Anaheim Bay and the Seal Beach Naval Weapons Station in 1944 interfere with the movement of sand to the down coast beaches. Because of detrimental impacts to the down coast beaches, Congress authorized the U.S. Army Corps of Engineers, under the River and Harbor Act of 1962, to take corrective actions, in the form of constructing a series of down coast groins and implementation of a feeder beach along Surfside Colony. This project includes providing periodic beach nourishment through the feeder beach, which occurs on the average of every five years at a cost of over \$10 million per cycle. The feeder beach material experiences rapid erosion caused by waves and currents reflecting off the south jetty at Anaheim Bay. Consequently, the protective beach created by the feeder beach may be seriously reduced prior to the next nourishment cycle, resulting in backshore development being vulnerable to coastal storms. This has occurred many times over the last several decades, resulting in wave damage to the backshore residential development and causing Orange County and local residents to spend considerable funds in emergency protection measures. There is also concern that the cost of periodic nourishment will significantly increase in the future. As nearby sources of nourishment are depleted, material will be obtained from distant sources at much higher cost. A cost-shared feasibility study is underway with the City of Seal Beach to determine if measures can be taken to improve protection to Surfside Colony development. If a 2<sup>nd</sup> entrance channel study is approved, the combining of this study with the Huntington Harbour Study may be warranted.

**(6) Coastal Storm Damage Problems along the City of Seal Beach.** The jetties that were constructed at Anaheim Bay also cause impacts to the up coast area along Seal Beach. The waves and currents reflecting off the north jetty cause erosion of material along the beach area immediately adjacent to the jetty. This continues to lead to narrowing of the protective beach and exposing backshore development to flooding during coastal storms. A Federal shore protection project was completed in the 1970's by the Corps of Engineers and the City of Seal Beach. The project involved the construction of a groin and placement of beach material, with a requirement for the City of Seal Beach to place periodic nourishment on the beach, as needed.

The City has been trucking material that has moved up coast to the impacted area and has provided nourishment from other sources. However, erosion of this beach and exposure of the backshore development continues to be a problem.

d. **Planning Objectives.** The national objectives of National Economic Development and National Ecosystem Restoration are general statements and not specific enough for direct use in plan formulation. The water and related land resource problems and opportunities identified in this study are stated as specific planning objectives to provide focus for the formulation of alternatives. These planning objectives reflect the problems and opportunities and represent desired positive changes in the without project conditions. The planning objectives are specified as follows:

- 1) Improve the navigable use of channels and associated launch areas and slips at Huntington Harbour;
- 2) Restore and preserve ecosystem qualities by controlling and improving impaired sediments and water quality, at the Anaheim Bay-Huntington Harbour complex, including the Seal Beach National Wildlife Refuge.
- 3) Provide for unrestricted navigation channel access to Huntington Harbour;
- 4) Improve the security and safety of navigation use of Anaheim Bay for operations of the Seal Beach Naval Weapons Station;
- 5) Reduce the potential for coastal storm damages to backshore development down coast of Anaheim Bay along Surfside Colony;
- 6) Improve the efficiency of periodic nourishment for the Surfside- Sunset to Newport Beach Federal project;
- 7) Reduce the potential for coastal storm damages to backshore development up coast of Anaheim Bay along the City of Seal Beach;
- 8) Provide or improve additional habitat within the Anaheim Bay-Huntington Harbour complex, particularly for endangered and threatened species; and
- 9) Beneficial uses for economic and environmental purposes will also be considered for the disposal of any dredged material that may be required to implement a project.

e. **Planning Constraints:** Unlike planning objectives that represent desired positive changes, planning constraints represent restrictions that should not be violated. The planning constraints identified in this study include provisions established by Federal, State and local regulatory laws, some of which are as follows:

- 1) No actions will be considered that would compromise the safety and security of the Seal Beach Naval Weapons Station;
- 2) No action will be considered that will adversely impact the ecosystem quality of the Seal Beach National Wildlife Refuge;

- 3) No actions will be taken that will cause any long term adverse impacts to water or air quality;
- 4) No actions will be taken that would cause increases in erosion of adjacent beach areas;
- 5) No actions will be taken to adversely impact endangered and threatened Federal species;
- 6) No action will be taken that will increase flood damage potential in surrounding communities; and
- 7) Other restrictions required by regulatory agencies such as noise, traffic, and other local ordinances will be recognized.

f. **Measures to Address Identified Planning Objectives.** A management measure is a feature or activity at a site, which address one or more of the planning objectives. A wide variety of measures were considered, some of which were found to be infeasible due to technical, economic, or environmental constraints. Each measure was assessed and a determination made regarding whether it should be retained in the formulation of alternative plans. The descriptions and results of the evaluations of the measures considered for each planning objective established for this study are presented below:

1) **No Action.** The Corps is required to consider the option of “No Action” as one of the alternatives in order to comply with the requirements of the National Environmental Policy Act (NEPA). No Action assumes that no project would be implemented by the Federal Government or by local interests to achieve the planning objectives. No Action, which is synonymous with the Without Project Condition, forms the basis from which all other alternative plans are measured.

2) **Improving navigable use of channels and associated facilities at Huntington Harbour.** There are no non-structural measures that would contribute positively to this objective. The only structural measure that would improve this condition is to remove the shoaled areas by dredging sediments. Other structural measures considered relate to reducing future shoaling problems. These include sediment traps or diversions and controlling erosion of materials in upstream watershed areas. The Huntington Harbour Study will focus on sediment control measures to trap or divert sediments before it causes shoaling in the Huntington Harbour navigation areas. The Westminister Watershed Management Plan will be examining erosion and sediment transport within the watershed area, and upstream measures may be suggested that reduce the frequency of clearing out sediment traps developed for the harbour area.

There are various environmental restoration opportunities that can be implemented to improve the ambient water and sediment quality within Huntington Harbour. One opportunity entails diverting dry-season runoff from the county flood control channels (i.e. contributions from the Bolsa Chica and Westminister Channels) into a sustainable wetland that would filter and desilt the water before being released into Huntington Harbour. An ideal location for the creation of such a wetland environment would be on a portion of land currently owned by the U.S. Navy adjacent to the Edinger Channel at the confluence of the Bolsa Chica and Westminister Channels. It is worth mentioning that this opportunity, if implemented, would not be able to handle the enormous flows of runoff during the rainy seasons. The second restoration opportunity entails a modification of the corridor in the Bolsa Chica Ecological Reserve located between the terminus



of the East Garden Grove-Wintersburg Flood Control Channel and Huntington Harbour. The modification would consist of creating a connection between this corridor and the Pacific Ocean to increase the tidal influence into the Bolsa Chica Ecological reserve. This connection would also help enhance the water and sediment quality being introduced into Huntington Harbour. (Figure 3)



Figure 3 – Environmental Restoration Opportunities

From a cost and benefit standpoint, the dredging of 34,000 cubic yards of contaminated sediment could range from \$10 per cubic yard, if ocean disposal is acceptable, to over a \$100 per cubic yard and over \$3 million if very restricted disposal is required at a Class III site, the closest being in Utah. It is likely the material is somewhat contaminated and costly disposal options will be required. At this time, shoaling has restricted channel widths in some areas, but access is still available through all channels. The launch ramp at Peter's Landing is completely shoaled and boaters must use alternative ramps. However, if shoaling continues to occur, there is potential for over 3,000 boaters to be impacted, including about 30 sport fishing/charter operators. The impacts of continued shoaling will also have serious environmental impacts, causing further degradation of the ecology. These adverse impacts on the ecology could also migrate to the Seal Beach National Wildlife Refuge, resulting in losses of critical habitat areas. In regard to providing measures such as sediment traps or diversions, there is insufficient information available at this time to provide estimates of the costs of such measures or the benefits, which essentially would be savings in the cost of frequent harbour maintenance dredging.



The removal of existing shoals by dredging and providing sediment traps or diversions warrant further consideration in the feasibility phase, based on the large number of boaters that may be impacted as well as significance of the ecology to be preserved at the National Wildlife Refuge.

**3) Providing for unrestricted navigation channel access to Huntington Harbour.**

There are no non-structural measures that would contribute positively to this objective. The only structural measure involves providing an alternate access to Harbour facilities that do not conflict with the Naval Weapons Station or its operations. This is discussed further below.

**4) Improve the security and safety of navigation use for operations at the Seal Beach Naval Weapons Station.** Non-structural measures could continue to be applied to maintain the safety and security of the Naval Weapons Station to the detriment of restricting access through the entrance channel by Huntington Harbour boaters. The structural measures that can contribute to this objective focuses on creating a 2<sup>nd</sup> entrance channel to Huntington Harbour. Past studies by the Navy considered several options to create a 2<sup>nd</sup> entrance as shown below (Figure 4).



Figure 4 – Proposed 2<sup>nd</sup> Entrance Channel at Anaheim Bay

The costs of these plans have been estimated in the ballpark of about \$80 million. This probably does not include cost of any mitigation measures that may be necessary. The benefits of constructing a 2<sup>nd</sup> entrance channel are many. The benefits for increasing national security and safety at the Seal Beach Naval Weapons Station are difficult to place a dollar estimate, particularly since one incident involving ordinance could be catastrophic. This is somewhat reflected in current operations, where the harbor is closed during naval operations. A 2<sup>nd</sup> entrance channel would have some savings in Navy operations related to closing or restricting access to the harbor. However, a greater benefit to the Navy is associated with their being able to expand their operations to allow larger vessels into the harbor. Discussions with Navy staff have

indicated that a second entrance channel would be necessary as part of any expansion project. By constructing the second entrance, the Navy will have the flexibility of bringing in larger ships to the Seal Beach Station at any time.

In regard to benefits to boaters, it is noted that closing the harbor does impact from about 5 to 30 boats a day, depending on which day the harbor is closed. The boaters impacted include sport fishing and charter operators, a commercial diving boat, and recreational boaters. The frequency of such closures is dependent on Navy activities and the seriousness of threat alerts. In view of the 9/11 events, there is potential for access through the entrance channel being restricted for long periods of time. Accordingly, benefits for such closures could be considerable.

The construction of a 2<sup>nd</sup> entrance could also have environmental benefits associated with increasing tidal prism and circulation in the Anaheim Bay-Huntington Harbour complex, including the Seal Beach National Wildlife Refuge. The impacts of an increase in tidal prism need to be carefully evaluated to assure that the type of changes in the refuge are beneficial and that, undesirable impacts do not occur, without appropriate mitigation.

Other benefits that could arise from constructing an entrance are incidental in nature from cost and benefit standpoints. The design of any new structures could be adjusted to provide increased storm damage benefits to the Surfside Colony area, and also reduce erosion rates of the feeder beach. Material from dredging a new entrance can be used to nourish protective beaches at Surfside Colony and Seal Beach, and perhaps other areas.

Adverse impacts related to constructing a 2<sup>nd</sup> entrance would be primarily associated with temporary construction impacts. There may be a loss of properties and perhaps habitat areas that would need to be mitigated. There also may be concerns related to the residents of Surfside Colony that need to be addressed in a project, depending on entrance feature requirements and configurations.

In general, it appears that a second entrance channel would have substantial benefits to justify the costs, and consideration in a feasibility study is warranted.

**5) Reducing the potential for storm damage to backshore development.** Non-structural measures that would contribute to this objective are limited to flood proofing of the residential properties along Surfside Colony shoreline. Local residents have in effect taken these actions by sandbagging and shoring low lying areas at times when the areas are vulnerable and coastal storms are eminent. Structural measures include seawalls, revetment, maintaining the protective beach, and offshore breakwaters. The ongoing San Gabriel to Newport Bay Feasibility Study is considering these measures to improve protection to the Surfside Colony. However, if a second entrance channel is pursued in the Huntington Harbour Study, measures such as adjusting the alignment of the new jetty or attaching wave deflecting structures to a new jetty could be considered to increase coastal storm protection. In addition, material from dredging a new 2<sup>nd</sup> entrance channel could be used to nourish protective beaches.

The cost for any modifications to the jetty will likely be minimal as compared to the possible reduction in storm damage potential. Accordingly, this measure should be carried forward to the feasibility phase as part of proceeding with the 2<sup>nd</sup> entrance channel study.

**6) Improving the efficiency of periodic nourishment for the feeder beach at Surfside-Colony.** The alignment of new jetties designed for a second entrance channel or addition of wave deflecting structures to the jetties could reduce the rapid erosion of material

placed at the feeder beach. The cost of implementing this measure is dependent on what modifications would be needed to 2<sup>nd</sup> entrance structures, which could include an alignment change or adding stub groin or breakwater wave deflector type of structures to the jetties. The benefits of this feature could be significant. It has been costing about \$10 million every 5 years to nourish the feeder beach at Surfside Colony. The sources of this nourishment have been in relatively nearby offshore locations. It is likely that future nourishment cycles will require material from more distant sources, which could significantly increase nourishment costs. The addition of features to reduce the erosion rate of the feeder beach could result in significant savings to future nourishment projects.

The cost for any modifications to the jetty will likely be minimal as compared to the possible savings in renourishment costs. Accordingly, this measure should be carried forward to the feasibility phase as part of proceeding with the 2<sup>nd</sup> entrance channel study.

7) **Reducing coastal storm damage at Seal Beach.** Since this objective is associated only with proceeding with a 2<sup>nd</sup> entrance channel project, the only measure considered to meet this objective is using material dredged from construction of a 2<sup>nd</sup> entrance channel to renourish the protective beaches located up coast of Anaheim Bay. The cost of this placement should be relatively minimal, and the benefits to protect backshore development will be considerable. Therefore, carrying this measure forward to the feasibility phase is dependent on proceeding with the 2<sup>nd</sup> entrance study.

8) **Beneficial uses of dredged material.** In addition to use as nourishment for protective beaches, material dredged to create a second entrance could be used for landfill, wetland creation and other economic and environmental purposes. This will be further explored with local sponsors as the needs for material are identified during the study.

g. **Preliminary Plans.** Preliminary plans are comprised of one or more management measures that survived the initial screening. The descriptions and results of the preliminary plans that were considered in this study result in proceeding with three fundamental plans to be carried forward into the Feasibility Study as follows:

1) **Dredging of Huntington Harbour navigation channels and associated facilities.** This plan is comprised of dredging shoaled areas within Huntington Harbour. The volume of material to be dredged as well as disposal requirements will be dependent on current surveys, examination of the quality of dredged material, and the need for advanced maintenance dredging. This plan will also consider dredging those areas where contaminated sediments are causing degradation of area ecology.

2) **Construction of sediment control facilities.** Plans will be considered to reduce shoaling of the navigation channels and to protect habitat areas. In general the plan will involve sediment traps or diversions, which could be combined with wetland features to filter out contaminants, particularly during low flow conditions. The benefits of this plan could limit the extent of area impacted by continued deposition of contaminated sediments.

3) **Construction of a 2<sup>nd</sup> entrance channel.** This plan will provide for improving the safety and security of the Naval Weapons Station facilities and their operations as well as reducing restrictions to boating transit to and from Huntington Harbour. Incidental measures will be considered to increase coastal storm damage protection to down coast and up coast areas as well as improving the efficiency of the Surfside feeder beach.

**h. Conclusions of the Preliminary Screening:** The preliminary screening indicates that alternatives that involve dredging of the shoaled areas at Huntington Harbour, controlling of contaminated sediments that cause shoaling of navigation facilities, and degradation of habitats, and the construction of a 2<sup>nd</sup> entrance channel warrant further consideration in a feasibility study and have the greatest potential for implementation. The potential magnitude and types of benefits are associated with over 3,000 boats associated with Huntington Harbour, the preservation of the Seal Beach National Wildlife Refuge, and the increased security and safety of the Seal Beach Naval Weapons facilities and their operations as well as their ability to rapidly expand operations in the future for larger vessels. Although there is no major information to estimate the costs and benefits of the plans at this time, the magnitude of the number of vessels that could be impacted by shoaling as well as restrictions in the entrance channel, and the value of the surrounding habitat as reflected in its designation as a National Wildlife Refuge, justify proceeding with this study to the feasibility phase.

**i. Establishment of a Plan Formulation Rationale:** The conclusions from the preliminary screening form the basis for the next iteration of the planning steps that will be conducted in the feasibility phase. The likely array of alternatives that will be considered in the next iteration includes the fundamental plans indicated in 5g above. Future screening and reformulation will be based on the following factors:

- 1) Determination of the characteristics of sediment to be dredged in the shoaled areas. Although the need for dredging the shoaled areas will not change, the disposal of the material may be a challenge if highly contaminated as expected.
- 2) Further examination of shoaling patterns and volumes in the harbour and the number of boats impacted could limit the areas to be dredged. In addition, an examination of habitat areas impacted by contaminated sediments may increase areas to be dredged.
- 3) Further analysis will be conducted on the sources of sediments and contaminants to better define measures and locations to control sediments that impact harbour and environmental habitat.
- 4) Further analysis will be made on the number and frequency of boaters impacted by Navy restrictions in using the harbor entrance. The continuation of non-structural regulation by the Navy may be the best action if impacts are minimal.
- 5) Further development of 2<sup>nd</sup> entrance options may be dependent upon future use of the Naval Weapons Station including possible expansion for larger vessels. This may place constraints on some of the options considered in the past for creating the 2<sup>nd</sup> entrance.
- 6) The cost and benefits (economic and environmental) of final alternatives will be developed during the feasibility phase to decide on whether there is sufficient justification to proceed with any plan. The evaluation of alternatives and decisions will also consider environmental impacts, mitigation requirements, and whether there is agency and public support for the projects.

## 6. FEDERAL INTEREST

The review of Federal interest in proceeding with a Huntington Harbour Feasibility Study considered the following points related to current Corps of Engineers policy.

- a. Improvements for restoration of ecosystem are within the Corps mission and considered high priority.
- b. Navigation improvements for the purpose of recreation boating are within the Corps mission but are low budget priority.
- c. The dredging of contaminated material within Huntington Harbour and other areas is necessary to improve the areas ecology including preserving the quality of the Seal Beach National Wildlife Refuge. Any navigation benefits resulting from this dredging could be incidental.
- d. The need for a 2<sup>nd</sup> entrance channel is associated with accommodating the commercial and recreational boating associated with Huntington Harbour. The design and construction of such facilities has been traditionally the responsibility of the U.S. Army, Corps of Engineers. Other precedents for these relationships where the Navy and public harbors share navigation features include projects planned and constructed at Oceanside Harbor, Port Hueneme, and San Diego Harbor. In all these cases, the accommodation of non-military boating operations has been lead by the Corps of Engineers.
- e. The Navy is responsible for assuring the safety and security of the Seal Beach Navy Weapons Station facilities and its operations.

Based on the points raised above, the Federal interest in proceeding with the Huntington Harbour Feasibility Study is supported by the need to create a 2<sup>nd</sup> entrance to improve national safety and security for the Seal Beach Naval Weapons Station, which is a high national priority. The Corps of Engineers is traditionally the lead agency to provide facilities for small craft harbors, and accordingly should be the lead Federal agency for planning the 2<sup>nd</sup> entrance to accommodate Huntington Harbour boaters, in cooperation with the U.S. Navy. Proceeding with the study is further supported by the high priority outputs that are associated with the need to remove and control future movement of future contaminated sediments that are degrading quality of the Anaheim Bay-Huntington Harbour complex ecosystem, which includes the Seal Beach National Wildlife Refuge.

## 7. PRELIMINARY FINANCIAL ANALYSIS

The California Department of Boating and Waterways will be the lead agency and serve as the primary local sponsor for the Study. The County of Orange and the City of Huntington Beach will be cooperating agencies during the study. The California Department of Boating and Waterways is aware that they are required to provide 50 percent of the cost of the feasibility phase. They are also aware of the cost-sharing requirements for potential project implementation. A letter of intent from the California Department of Boating and Waterways stating their willingness to pursue the feasibility study and share in its cost, and an understanding of the cost sharing that is required for project construction is included as Attachment 1. The Orange County

and City of Huntington Beach may also be contributing to this study. Arrangements for these contributions will be made by California Department of Boating and Waterways.

The Study will include close coordination with the Seal Beach Navy Weapons Station, although they are not a sponsor for this study at this time. Information will be sought from the Navy that is available from past studies conducted by the Navy and the Corps on a second entrance channel at Anaheim Bay. The Navy will be requested to actively participate in the development of the Project Management Plan and perhaps they will agree to perform some of the work required for the study, such as safety and security analysis. The cost of the work performed by the Navy will not be included as a Study cost.

The U.S. Fish and Wildlife Service (Service) also actively manages the Anaheim Bay National Wildlife Refuge with cooperation from the Naval Weapons Station. The Study will be closely coordinated with the Service to consider potential measures related to this Study that can be taken to benefit the Refuge as well as avoiding any adverse impacts. The Service and other interests will be requested to provide available information and cooperate in providing any of their ongoing biological surveys that can be used for this study. The cost for these efforts will not be included as a Study cost.

## 8. ASSUMPTIONS AND EXCEPTIONS

a. **Feasibility Phase Assumptions:** The following critical assumptions will provide a basis for the feasibility study:

1) The existing ownership and operations of the Seal Beach Navy Weapons Station will not change.

2) The design of jetties and other features required to create a 2<sup>nd</sup> entrance to Huntington Harbour will consider ways that could reduce erosion and provide protection to development along Surfside Colony. However, consideration will be given to combining this study with the San Gabriel to Newport Beach Study at such time that it can be decided that feasible project features are common to both studies. It is expected that this could occur at the earliest at the F3 Feasibility Review Conference for both studies.

3) The development of project benefits will consider potential security, safety and related issues associated with the operations of the Naval Weapons station and the use of Anaheim Bay entrance channel by recreation boaters. The approach to analyzing these benefits will be worked out with the Navy Weapons Station as part of preparing the Project Management Plan. Based on these benefits, special cost sharing of project construction and operation and maintenance costs may be appropriate. This will be considered during the study and coordinated with Headquarters either as part of the checkpoint conferences or as a separate issue resolution conference.

4) The shoaling of Huntington Harbour is assumed to primarily relate to sediments coming from channels and other drainage facilities emptying into waters surrounding the harbour. It is likely that these sediments are somewhat contaminated and are causing problems not only from shoaling but also to the areas ecosystem, that includes the Seal Beach National Wildlife Refuge. Accordingly, benefits from dredging the harbour and controlling sediments will consider ecosystem benefits as well as recreation boating benefits.

b. **Policy Exceptions and Streamlining Initiatives:** The study will be conducted in accordance with the Principles and Guidelines and the Corps of Engineers regulations. No exceptions to established guidance have been identified at this time.

c. **Other Approvals Required.** During development of the Project Management Plan, consideration will be given to using various hydraulic and coastal estuary models in analyzing existing and future conditions in the harbour, as well as developing designs and evaluating impacts of alternative plans. Approvals to use those models will be requested from Headquarters, in accordance with Engineering Regulations, as part of completing the Project Management Plan. Any questionnaires required to complete surveys for socio-economic studies or other purposes will also be submitted to HQ for approval by OMB as necessary during the Feasibility Study.

## 9. FEASIBILITY PHASE MILESTONES

A Preliminary Schedule for completing the Feasibility Study is 47 months to reach the Division Engineers Public Notice, and another 8 months for Washington Review leading to the Assistant Secretary of the Army for Civil Works submitting the report to Congress for authorization of a project in a Water Resources Development Act. Traditionally, the Water Resource Development Acts occur every two years on an even year. Accordingly, authorization of a project could occur as early as 2009 or if tradition is followed in 2010. It is noted that after submission of the Division Engineer’s Public Notice, the District and local sponsor can initiate the Pre-construction Engineering and Design phase. This allows for seamless continuation of the final project design while waiting for completion of the Washington review process and authorization of project construction.

The schedule to complete the Feasibility Report will be further developed in detail during preparation of the Project Management Plan. The schedule will be based on further consideration of the details of the work effort and review of available information. It is pointed out that the length of the study reflects the complexity of the problems and needs in the area, the alternatives that need to be developed, and the evaluation of impacts and mitigation requirements.

Milestone	Description	Duration (mo)	Cumulative (mo)	
Milestone F1	Initiate Study	0	0	Jan-05
Milestone F2	Public Workshop/Scoping	3	3	Apr-05
Milestone F3	Feasibility Scoping Meeting	15	18	Sep-06
Milestone F4	Alternative Review Conference	12	30	Aug-07
Milestone F4A	Alternative Formulation Briefing	5	35	Jan-08
Milestone F5	Draft Feasibility Report	5	40	Jun-08
Milestone F6	Final Public Meeting	2	42	Aug-08
Milestone F7	Feasibility Review Conference	1	43	Sep-08
Milestone F8	Final Report to SPD	3	46	Dec-08
Milestone F9	DE’s Public Notice	1	47	Jan-09
-	Chief’s Report	4	51	May-09
-	Project Authorization	4	55	Sep-09



## 10. FEASIBILITY PHASE COST ESTIMATE

A preliminary estimate indicates the study could cost about \$7.8 million. It is noted that the study costs include costs for completing all planning, engineering, economic, real estate efforts needed to define problems and needs and associated causes; develop and evaluate alternative plans; conduct additional detail design and cost estimates on the proposed recommended plan to establish a sound basis for cost estimates and real estate requirements; and perform all required compliance to environmental requirements including NEPA and CEQA, Endangered Species Section 7 consultation, Coastal Commission concurrence in a Coastal Consistency report, and Regional water and air quality certifications. The duration of the study is about 4 years, as indicated above. Accordingly the cost of the study would be on the average, about \$2 million a year. The cost of the study is cost-shared 50 percent Federal and 50 percent non-Federal, and the non-Federal share can be provided as cash or in-kind services or a combination of cash and in-kind.

The cost estimate for the study will be developed in detail during preparation of the Project Management Plan. This will include further analysis of the scope of work requirements, and review of available information. It will also include further breakdown of the costs for each fiscal year of the study and negotiation with non-Federal interests on how much of the costs can be provided as in-kind services and how much will be cash. This will provide a cost flow projection required to complete the study on schedule.

## 11. VIEWS OF OTHER RESOURCE AGENCIES

WBS#	Description	Cost
JAA00	Feas - Surveys and Mapping except Real Estate	400,000
JAB00	Feas - Hydrology and Hydraulics Studies/Report (Coastal)	1,200,000
JAC00	Feas - Geotechnical Studies/Report	700,000
JAEO0	Feas - Engineering and Design Analysis Report	600,000
JB000	Feas - Socioeconomic Studies	300,000
JC000	Feas - Real Estate Analysis/Report	100,000
JD000	Feas - Environmental Studies/Report (Except USF&WL)	1,200,000
JE000	Feas - Fish and Wildlife Coordination Act Report	100,000
JF000	Feas - HTRW Studies/Report	50,000
JG000	Feas - Cultural Resources Studies/Report	50,000
JH000	Feas - Cost Estimates	\$100,000
JI000	Feas - Public Involvement Documents	100,000
JJ000	Feas - Plan Formulation and Evaluation	600,000
JL000	Feas - Final Report Documentation	300,000
JLD00	Feas - Technical Review Documents	100,000
JM000	Feas - Washington Level Report Approval (Review Support)	\$50,000
JPA00	Project Management and Budget Documents	200,000
JPB00	Supervision and Administration	500,000
JPC00	Contingencies	1,000,000
L0000	Project Management Plan (PMP)	100,000
Q0000	PED Cost Sharing Agreement	50,000
Total		\$7,800,000

Because of the funding and time constraints of the reconnaissance phase, coordination with other Federal, State and local resource agencies is deferred to preparation of the Project Management Plan. However, a review of past reports indicates the U.S. Fish and Wildlife Service, Santa Ana Regional Water Quality Control Board, and State of California Department of Fish and Game are concerned with limited circulation in Anaheim Bay, algae growth, and the impact of contaminated sediments settling in Huntington Harbour. Close coordination will be maintained with these agencies in preparing the Project Management Plan and throughout the Feasibility Study to examine measures that could be included in a project to improve these conditions and minimize any adverse impacts.

## 12. POTENTIAL ISSUES AFFECTING INITIATION OF FEASIBILITY PHASE

a. Continuation of this study into the cost-shared feasibility phase is contingent upon an executed FCSA. One issue that have been identified that will impact the initiation of the feasibility phase for the studies is that there were no funds appropriated for this study in the Fiscal Year 2004 Energy and Water Development Appropriation Act. Consequently continuing work on this study is dependent whether funds can be made available to restore funds revoked in FY 2003

and that no additional funding will be needed to complete and negotiate the Project Management Plan and Feasibility Cost Sharing Agreement.

b. The schedule for signing the Feasibility Cost Sharing Agreement (FCSA) is November 2004. Based on the schedule of milestones in Paragraph 9., completion of the feasibility report would be in January 2009.

c. Combining this study with the San Gabriel to Newport Bay Feasibility Study was considered. It was determined that a decision on whether to combine the study should be deferred to such time when there would be a preliminary indication on whether improvements to protect the Surfside Colony Area are consistent with a 2<sup>nd</sup> entrance channel to Huntington Harbour. These improvements could include designing the jetties required for the 2<sup>nd</sup> entrance channel to provide protection or reduce erosion of the protective beach along the Surfside Colony.

### 13. RECOMMENDATIONS

I recommend that the Huntington Harbour Study proceed into the feasibility phase. The feasibility phase will continue the investigation of navigation, ecosystem restoration, storm damage reduction, and related issues in the Huntington Harbour and Anaheim Bay. The California Department of Boating and Waterways have expressed interest in cost sharing the feasibility study and initiation of the Feasibility Cost Sharing Agreement (FCSA) upon completion of the Project Management Plan.

Date: 26-Nov-2003

//s//

John V. Guenther  
Lieutenant Colonel, US Army  
Acting District Engineer

Attachment 1

**DEPARTMENT OF BOATING AND WATERWAYS**

2000 Evergreen Street, Suite 100  
SACRAMENTO, CA 95815-3888  
Tele: (916) 263-8157  
Fax: (916) 263-0648  
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November 25, 2003

Colonel Richard G. Thompson  
District Engineer, Los Angeles District  
U.S. Army Corps of Engineers  
P.O. Box 532711  
Los Angeles, CA 90053-2325

**Subject: Huntington Harbour Study**

Dear Colonel Thompson:


The California Department of Boating and Waterways (DBW) supports the on-going efforts of the U.S. Army Corps of Engineers reconnaissance study to assess potential Federal participation in a multi-purpose project at Huntington Harbour and vicinity. At this time, DBW is willing to support the recommended feasibility study that will possibly result in a multi-purpose project to provide unrestricted navigation to Huntington Harbour, improve the aquatic ecosystem at the Seal Beach Wildlife Refuge, provide coastal storm damage protection to Surfside Colony, Seal Beach, California and reduce the renourishment frequency of the Surfside-Sunset project beachfill project.

DBW has reviewed the 905 (b) Analysis Reconnaissance Report and is interested in entering into a cost sharing agreement with the U.S. Army Corps of Engineers subject to DBW's final review and approval of the Project Management Plan. DBW understands that a Feasibility Cost Sharing Agreement will have to be signed prior to initiating the feasibility study. DBW also understands that a feasibility study must be cost shared 50 percent Federal and 50 percent non-Federal, and of the 50 percent non-Federal share, of which, the non-Federal share can be up to 100 percent in-kind services.

The California Department of Boating and Waterways looks forward to working with the U.S. Army Corps of Engineers, Los Angeles District in completing the feasibility study.

If you have any questions, you can contact Mr. Kim Sterrett at (916) 263-8157.

Sincerely

  
Raynor Tsuneyoshi  
Director


CESPL-PD-WA

25 November 2003

MEMORANDUM FOR Chief, Plan Formulation Branch, Planning Division  
(ATTN: Ed Demesa)


SUBJECT: Certification of Quality Control for Huntington Harbor, CA Expedited  
905(b) Reconnaissance Report.

1. This memorandum serves as the Certification of Quality Control for Subject Report.
2. The document has been reviewed and has been found to be in compliance with the principles and guidelines appropriate for the planning process and development of the initial plan for conduct for the feasibility phase.
3. All comments resulting from the Independent Technical Review of the report have been resolved. If there are any further questions, please contact Ms Deborah Lamb, at (213) 452-3798.

  
DEBORAH LAMB 11/25/03  
Plan Formulation, Section A  
Planning Division

#### QUALITY CONTROL CERTIFICATION

As noted above, all issues and concerns resulting from the technical review of the product have been resolved. In accordance with CESP-D-ET-P, memorandum, Expedited Reconnaissance Phase Studies, dated 5 June 2000, I certify the quality control review for this report has been completed.

  
RUTH BAJZA VILLALOBOS  
Chief, Planning Division