

Chapter I - The Project Management Plan

This Project Management Plan (PMP) is an attachment to the Feasibility Cost Sharing Agreement (FCSA) for the San Gabriel to Newport Bay (Surfside Colony), California Feasibility Study. This document defines the planning approach, activities to be accomplished, schedule, and associated costs that the Federal Government and the Non-Federal Sponsors will be supporting financially. The PMP defines a contract between the Corps of Engineers and the Non-Federal Sponsor – the City of Seal Beach, and reflects a buy-in on the part of the financial backers, as well as those who will be performing and reviewing the activities involved in the shoreline special study.

Basis for Change

Because planning is an iterative process without a predetermined outcome, more or less funding and time may be required to accomplish the formulation and reformulation and evaluation of the alternative plans. With clear descriptions of the scopes and assumptions outlined in the PMP, deviations are easier to identify. The impact in either time or money is easily assessed and decisions can be made on how to proceed. The PMP provides a basis for change.

Review and Evaluation

The PMP is a basis for the review and evaluation of the study report. Since the PMP represents a contract among study participants, it will be used as the basis to determine if the draft study report has been developed in accordance with established procedures and previous agreements. The PMP reflects mutual agreements between the Los Angeles District (CESPL), the South Pacific Division (CESPD), the Non-Federal Sponsor – the City of Seal Beach, and Headquarters, U.S. Army Corps of Engineers (HQUSACE) regarding the San Gabriel to Newport Bay (Surfside Colony), California Feasibility Study. The PMP establishes the scope, critical assumptions, methodologies, and level of detail for the studies that are to be conducted during the feasibility phase study. Review of the draft report will be to insure that the study has been developed consistent with these agreements. The objective is to provide early assurance that the project is developed in a way that can be supported by higher headquarters.

Management Tool

The PMP is a study management tool that includes scopes of work to be used for funds allocation by the Project Manager. It forms the basis for identifying commitments to the Non-Federal Sponsor and serves as a basis for performance measurement.

Summary of PMP Requirements

This PMP is comprised of the following chapters:

Chapter 1. The Project Management Plan. This chapter includes a description of the PMP and a summary of PMP requirements.

Chapter 2. Section 905(b) Analysis. Chapter 2 is the approved Section 905(b) Analysis that includes an overview of the reconnaissance study findings, the plan formulation rationale and proposed streamlining initiatives. This chapter also documents any deviations from the approved Section 905(b) Analysis that have occurred during the negotiations of the FCSA.

Chapter 3. Work Breakdown Structure. A product-based Work Breakdown Structure (WBS) defines the project, subprojects, and parent tasks and other tasks that will be accomplished throughout the study. The major milestone tasks and definitions are included as Enclosure B to the PMP.

Chapter 4. Scopes of Work. Detailed scope of the tasks and activities that describes in narrative form the work to be accomplished, and answers the questions -- What? How? How Much? This chapter provides a reference to the detailed scopes of work, which are included as Enclosure C to the PMP.

Chapter 5. Responsibility Assignment. The Organizational Breakdown Structure (OBS) defines who will perform work on the study. This allows the identification of the functional organization that will perform each of the tasks in a Responsibility Assignment Matrix (RAM).

Chapter 6. Study Schedule. The schedule defines when key decision points, CESPDP milestone conferences and mandatory HQUSACE milestones will be accomplished.

Chapter 7. Study Cost Estimate. This is the baseline cost estimate for the feasibility phase study.

Chapter 8. Quality Management Plan. Chapter 8 supplements the District's Quality Management Plan. It highlights any deviations to the District's plan and lists the members of the study team and the independent review team.

Chapter 9. Identification of Procedures and Criteria. This chapter references the regulations and other guidance that cover the planning process and reporting procedures.

Chapter 10. Public Involvement and Coordination. Public involvement and coordination activities for the San Gabriel to Newport Bay (Surfside Colony), California Feasibility Study are described in this Chapter.

Chapter 2 - San Gabriel to Newport Bay (Surfside Colony) Shoreline Feasibility Study, Section 905(b) (WRDA 86) Analysis

Study Authority

This Section 905(b) (WRDA 86) Analysis was prepared as an initial response to the Energy and Water Development Appropriations Act for 2000, Public Law 106-60, 29 September 1999, which reads as follows:

The Committee recommendation includes funds for the Corps of Engineers to conduct a reconnaissance study investigating shoreline protection alternatives for San Gabriel to Newport Bay, California.

Previous authorizations for this area include the River and Harbor and Flood Control Act of 1962, Public Law 87-874, 87th Congress, 2nd Session, approved 23 October 1962, in accordance with Section 110.

Study Purpose

The purpose of the reconnaissance phase study is to determine if there is a Federal interest in participating in a cost shared feasibility phase study to investigate providing shore protection to the shoreline at Surfside in the City of Seal Beach, Orange County, California. In response to the study authority, the reconnaissance study was initiated on 26 April 2000. 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) (WRDA 86) 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) (WRDA) Analysis is used as the chapter of the Project Management Plan which presents the reconnaissance overview and formulation rationale.

Location of Study, Non-Federal Sponsor and Congressional District

The study area is located on the Pacific Ocean coastline of Orange County and covers 13 miles from San Gabriel River to Newport Bay (specifically the principle shore community in the City of Seal Beach). Toward the northern limit, Anaheim Bay Harbor is composed of two entrance protective jetties in an arrowhead configuration. The southern limit is at the Newport Bay. The terminus to the Newport Submarine Canyon lies in close proximity to Newport Pier. The entire stretch of shoreline is considered a single littoral unit. The specific area of concern for local storm erosion is the Surfside Colony area as shown in Figure 1.

The non-Federal Sponsor for the feasibility phase study is the City of Seal Beach.

The study area is in the 47th Congressional District.

Prior Reports and Existing Projects

Prior Reports

The following reports have been reviewed as part of this study:

1) *Beach Erosion Control Report on Cooperative Study of Orange County, California, Appendix V, Phase II, House Document No. 602*, U.S. Army Corps of Engineers, October 1962. This report determined that the northern coastline of Orange County, between Anaheim Bay and the Newport Pier, warranted protective shore measures to prevent further damage caused by beach erosion. Loss of land, installations, and property damage prompted this study. Erosion was particularly severe along Surfside/Sunset Beach, Bolsa Chica, Huntington Beach State Park, and the beaches fronting the Cities of Huntington Beach and Newport Beach.

2) *Beach Erosion Control Report on Cooperative Research and Data Collection Program of Coast of Southern California-Cape San Martin to Mexican Boundary, Three-Year Report -- 1964-1966*, U.S. Army Corps of Engineers, December 1967. This report presented the results of a three-year research and data collection program for the entire coastline of California south of San Luis Obispo County to identify areas of active or potential erosion. The data collections specifically for Orange County included aerial and ground photographs, hydrographic surveys, numerous sand samples, and two pressure wave gages near Dana Point. Storm damage was evident along the shoreline of Newport Beach between 30th and 60th Streets and areas of Capistrano Beach.

3) *Beach Erosion Control Report on Cooperative Research and Data Collection Program of Coast of Southern California-Cape San Martin to Mexican Boundary, Three-Year Report- 1967-1969*, U.S. Army Corps of Engineers, December 1970. This second three-year report presented the results of a research and data collection program for the California coastline south of San Luis Obispo County for identifying areas of active or potential erosion. Beach inspections, aerial and ground photographs, hydrographic surveys, sand samples, two wave gages, stream delta surveys, Newport Submarine Canyon, offshore sand sources, shoreline conditions, evaluation of wave refraction models and beach profiles were investigated for Orange County.

4) *Southern California Coastal Water Research Project - Annual Reports*, Southern California Coastal Water Research Project Authority, 1974-present. This collection of technical papers released the results of various water quality related studies throughout southern California. This annual report investigated sources of effluents, fates of benthic populations, effects on habitat, numerical integration and assessment, and development of proper monitoring methods to enhance the ecology of the community.

5) *Orange County NPDES Stormwater Permit Program - Proposed Water Quality Monitoring Programs for the Orange County Stormwater System and Receiving Waters*, Orange County Flood Control District, December 1990. This report was prepared to propose a monitoring program for storm water runoff in Orange County. The monitoring program for storm channels consisted of field screening, dry weather, flow-composite sampling, and episodic sampling. The receiving water monitoring program included stations in Huntington Harbor, Surfside/Sunset, Anaheim, Bolsa Bays, Upper and Lower Newport Bays, and Dana Point Harbor. In addition, semi-annual sampling of bed sediment to determine the chronic effects of storm water runoff was proposed.

6) *Existing State of Orange County Coast, Coast of California Storm and Tidal Waves Study*, U.S. Army Corps of Engineers, April 1993. This report provided comprehensive coastal data for the portion of the Orange County coast spanning from the San Gabriel River to the Dana Point headlands. The data collection and analysis addressed numerous coastal issues including a review of historical shoreline and coastal cliff changes, sediment transport characteristics, sediment budget identification, the geomorphologic makeup, and the impacts of the hydrodynamic forces that prevail throughout the region. The findings of this study indicated that for northern Orange County, near Sunset and Bolsa Chica beaches, the shoreline has remained stable, then at a progressive and increasing rate south of the West Newport groin field and through the Balboa Peninsula, erosion trends have dominated. The study identified an erosion hot spot seaward of the Huntington Cliffs where the dry beach width at high tide was minimal. South of Newport Beach, in the Laguna Beach Mini Littoral Cells, the shoreline had been stable over the past 50 plus years; however, beach widths are considered to be narrow for recreational purposes. Various changes in the upland uses of drainage basins were identified as possible causes of erosion.

7) *Shoreline and Volume Changes Along the Orange County Coast, Coast of California Storm and Tidal Waves Study, Orange County*, U.S. Army Corps of Engineers, 1994. This report identified the shoreline position and sediment volume changes within the Orange County littoral zone, extending from the San Gabriel River mouth to the Dana Point Harbor. The littoral coastal region was divided into three distinct littoral cells: the Seal Beach Subcell, the Huntington Beach Subcell, and the Laguna Beach Mini Subcells. Several coastal areas exhibiting net erosion were identified and possible causes for this erosion in each respective community were investigated.

8) *Seacliff Erosion and Its Sediment Contributions-Dana Point to the San Gabriel River, Coast of California Storm and Tidal Waves Study, Orange County*, U.S. Army Corps of Engineers, 1995. This study identified seacliffs as erosion features indicative of the landward retreat of the littoral zone. The seacliff erosion rate depends upon the width of dry beach width at the cliff base and the magnitude of the wave activity. Estimated mean seacliff retreat rates based on geomorphic models were presented; however, time-dependent potential structural damage could not be predicted due to the episodic nature of retreat.

9) *Field Activities Report-Bathymetric Profile Survey, Coast of California Storm and Tidal Waves Study, Orange County*, Coastal Frontiers Corporation, January 1996. This report presented the results of the bathymetric profile survey conducted in May 1995 along 26 transects between Anaheim Bay and Newport Beach Harbor with cross-lines through the study area at approximate depths of 20, 30, and 40 feet, Mean Lower Low Water (MLLW). Each transect was surveyed from the backshore to a minimum depth of 60 feet MLLW. A brief analysis and description of the bathymetric changes between this survey and a survey conducted in 1992 were also included.

10) *Coastal Sediment Budget Analysis Summary, Orange County, California*, U.S. Army Corps of Engineers, January 1996. This report summarized the existing state of knowledge related to the sediment budget of the Orange County region and discussed the various components which comprise the sediment budget. Detailed analysis of these components include: fluvial sediment production, historical bathymetric changes, littoral losses to Newport Submarine Canyon, aerial photo analysis of historical shoreline changes of the Laguna Beach Mini littoral cells, littoral sediment loss at east jetty of Anaheim Bay, and littoral sediment by-passing at Dana Point.

11) *Nearshore Hydrodynamic Factors and Wave Study of the Orange County Coast, Coast of California Storm and Tidal Waves Study, Orange County*, U.S. Army Corps of Engineers, January 1996. This study, recognizing the lack of sufficient existing wave hindcast and measurement data, developed a practical, detailed database to be used for coastal planning and design applications for Orange County. The analysis within this report included: a review of the local, regional, and hemispheric meteorological weather systems responsible for the Orange County wave climate, and bathymetric transformation of deep water waves to nearshore waters. A synthetic numerically simulated model to compute significant wave height, predominant wave period, and approach direction near the shoreline to provide a synoptic atlas of nearshore wave climate was developed for 13 segments. Analysis of historical extreme episodic wave events was also conducted.

12) *Energy Flux and Longshore Transport in Orange County, Coast of California Storm and Tidal Waves Study, Orange County*, U.S. Army Corps of Engineers, February 1996. Utilizing a computed synoptic atlas of nearshore wave climate, this report presented preliminary GENESIS model calculations for the magnitude of the alongshore sediment transport rate. The results advanced the understanding of the temporal and spatial variation of the alongshore sediment transport in Orange County allowing Federal, state, and local agencies the ability to implement more effective coastal planning and design specifications for beach maintenance and sand management.

13) *Sediment Budget Analysis: Dana Point to Newport Bay, California*, Coastal Frontiers Corporation, June 1997. This report presented the analysis of the hindcast sediment budgets for the 13-mile long, high relief coast consisting of 23 pocket beaches between Dana Point and Newport Harbor to establish a means to predict future nearshore coastal behavior. The beaches were found to be stable over time; however, causes for concern with regards to the artificial human interaction of altering the Southern Orange County sediment budget were outlined.

14) *Beach Width and Profile Volumes, Coast of California Storm and Tidal Waves Study, Orange County Coast*, Coastal Frontiers Corporation, U.S. Army Corps of Engineers, December 1999. This report documented the changes in dry beach width and sediment volume occurring within the Huntington Beach Littoral Cell from 1963-1997 with a particular emphasis on the data collected from 1992-1997. A steady increase in the mean shoreline for the Huntington Littoral Cell was found to be on average 4 feet per year, with the exception of the Huntington Cliffs. The accretion was determined to be a result of both volume increases associated with periodic nourishment efforts and episodic sub-aerial flood flows.

15) *Marine Monitoring-Annual Reports*, Orange County Sanitation District (OCSD), California, 1972-present. This report detailed the ocean monitoring study conducted to evaluate potential environmental and public health effects from the discharge of treated wastewater. The areas of concern with regards to wastewater effluent includes water quality, sediment quality, biological communities, tissue contaminants in marine organisms, and fish health. The OCSD publishes this report annually to update the analysis of the ongoing monitoring program.

16) *Study to Reduce Shoreline Erosion at Surfside-Sunset Beach Using an Alternative Structure (Draft)*, Orange County Beach Erosion Control Project, San Gabriel River to Newport Bay, Orange County, California, U.S. Army Corps of Engineers, March 1999. The study evaluated the feasibility of altering the wave reflection patterns at Surfside Beach, and thereby, reducing the future requirements for periodic beach nourishment. The study concluded that a 1,200 ft submerged breakwater attached to Anaheim Bay jetty and oriented approximately parallel to the structure would reduce the volume requirements for periodic beach nourishment or equivalently extend the present renourishment cycle from 5 to 7 years results in a cost savings.

Existing Projects

Surfside-Sunset Project - The study is investigating potential modification of the following project(s):

The existing authorized Surfside-Sunset project consists of beach nourishment and groin construction/beach fill along the project area from San Gabriel River to Newport Bay. Stages 1 through 10 of the project have been completed. Stages 1 (Jun64), 4A (May71), 7 (Jun79), 8 (Apr84), 9 (Nov90), and 10 (Jul97) comprised beach replenishment (15.6 million cubic yards) at Surfside-Sunset Beach, adjacent and down coast from Anaheim Bay East Breakwater. Stages 2 (Nov68), 3 (Nov69), 4B and 5 (Mar73), and 10 (Jul97) comprised the construction of eight groins and placement of beach fill (2.1 million cubic yards) at West Newport Beach. Stage 10 for West Newport Beach was included only beach fill. Stage 6, a detached breakwater at the mouth of the Santa Ana River, has not been constructed and is on hold pending demonstration of need.

The study is investigating measures to decelerate the erosion rate and provide storm damage reduction at Surfside Colony, Seal Beach, California. Alternative measures to storm damage problem may result in a beneficial modification of the Surfside-Sunset Project.

Plan Formulation

During a feasibility 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 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 during the feasibility phase.

National Objectives.

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 net value of the national output of goods and services, expressed in monetary units. Contributions to NED are the direct benefits that accrue in the planning area and the rest of the nation.

Public Concerns

A number of public concerns have been identified during the course of the expedited reconnaissance study. Initial concerns were expressed in the study authorization. Additional input was received through coordination with the City of Seal Beach and Orange County in conjunction with some coordination from other agencies. The public concerns that are related to the establishment of planning objectives and planning constraints are:

- 1) Beach erosion hinders adequate public recreation in localized areas along the Orange County coastline.
- 2) Nearshore ecological deteriorations have resulted in repeated beach closures.
- 3) Coastal flooding and storm damages from storm-induced waves have and may occur in the future at Surfside Colony.
- 4) Federal jetties at Anaheim Bay (Naval Weapon Station (NAVWEPSTA) at Seal Beach) have caused an accelerated erosion rate the Surfside Colony.
- 5) Erosion of East Beach (City of Seal Beach) negatively impacts public recreation, and may result in storm damages to adjacent structures.

Problems and Opportunities

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

- 1) Beach erosion (Storm Damages). Due to the natural littoral processes of the region, the Surfside Colony area has been identified as an erosion hotspot. As the erosion trend continues to proceed unimpeded, the loss of protective dry beach and storm damage to public and private properties within these areas is expected to increase.

- 2) Beach erosion (Recreation). Recreation along several public beaches in Orange County have been adversely impacted by beach erosion. Adequate recreation on beaches requires a minimum dry beach width on the foreshore.
- 3) Nearshore ecological deteriorations. The areas of prime concern include West Beach located at the mouth of the San Gabriel River in Seal Beach; within the coastal segment from 0 to 2,740 meters (9,000 feet) north of the mouth of the Santa Ana River ending at the Edison Plant in Huntington Beach, in Newport Beach. The beach closures plaguing Orange County over the past few years have adversely impacted the nearshore environment, as well as, the economy of the entire coastal community.
- 4) Shoreline and beach erosion areas. The areas of concern include Surfside Colony, East Beach in Seal Beach, Newport Groin Fields, and Huntington Beach Blufftop.

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) To reduce storm-related damages to public and private properties.
- 2) To protect and maintain traffic corridors.
- 3) To enhance and maintain beach recreation, and associated economic tourism benefits, by restoring and improving the beaches.

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 are as follows:

- 1) Alternatives must comply with the County's and applicable City's Local Coastal Programs (CZM).
- 2) All plan alternatives should comply with various regulatory agencies such as the California Coastal Commission, California Regional Water Quality Control Board, California Department of Fish and Game, U.S. Fish and Wildlife Service, National Marine Fisheries Service, as well as the regulations and planning guidelines of the Corps of Engineers.
- 3) All alternative plans shall not adversely affect the operational functionality of Naval Weapon Station (NAVWEPSTA), Seal Beach.

Measures to Address 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 in this study are presented below; and are confined to the Surfside Colony component of this study. The other potential components within the study area have been eliminated from future investigation under this study, as explained in Section 6 (Federal Interest) of this document.

- 1) No Action: If no action is proposed, the beach at Surfside Colony will continue to diminish and storm damages will increase in severity. Public safety and liability problems will not be resolved, and recreational activity on the beaches will be degraded resulting in a loss of associated economic benefits. The existing authorized Surfside-Sunset beach renourishment project will continue on the scheduled maintenance schedule given available funding.
- 2) Nonstructural. Consideration shall be given to potential buyout of the residential properties that are in danger because of storm damage. Designating a proper setback distance from the edge, the City of Seal Beach can convert the properties into public scenic overlooks.
- 3) Dynamic Structural. Beach fill during off-cycle periods of the Surfside-Sunset Beach renourishment project.
- 4) Static Structural. Alternatives including beachfill, revetments, sheetpile walls, and offshore submerged breakwaters are being considered.
 - a) Beachfill. Beach nourishment involves placement of compatible sand from an offshore borrow area or upland source to effectively widen the beach above and beyond current Surfside-Sunset renourishment project. The beach fill material acts as a buffer dissipating storm waves and runup over the wider profile.
 - b) Beachfill with Structures. Retention structures may be required to stabilize the beachfill or extend the time between renourishment cycles, as well as preserve a minimum dry beach width. Due to the conservation of sand sources, the reduction in the erosion rate could reduce the continual cost for the Surfside-Sunset renourishment project.
 - c) Revetments. Revetments are flexible structures made of placed quarry stone designed to prevent shoreline retreat and to protect landslide improvements from damages due to wave action.
 - d) Sheetpile Walls. Sheetpile walls are steel or precast concrete panels vertically placed in the ground to form a continuous seawall for protecting backbeach improvements.
 - e) Modification. Modification of the Anaheim jetties may cause improvements from damages from wave refraction due to the jetties action.
 - f) Offshore Submerged Breakwater. These alternative structures include offshore reefs or submerged breakwaters, that protect the shoreline against direct wave attack and reduce the transmitted

wave energy to less damaging levels along the beach at Surfside Colony.

- 5) Separable Features. No separable feature is identified.
- 6) Secondary Features

Offshore Dredging. Offshore dredging will probably be required for the beachfill alternative. Since available offshore borrow sites exist, sand would be delivered to the beachfill sites using hopper dredges with pump out or large cutter suction dredges. For the hopper dredge with pump out, temporary nearshore pipeline and monobuoys would be positioned at about the 9-meter (30-foot) depth contour to permit the dredge to pump each load directly ashore. A hydraulic dredge with multiple booster pumps would pump material onshore through submerged and floating pipelines. However, this method becomes less preferred as distance offshore and depths increase, and the wave climate becomes more energetic.

Preliminary Plans

Preliminary plans are comprised of one or more management measures that survived the initial screening. The descriptions and results of the evaluations of the preliminary plans that were considered in this study are presented below:

Preliminary Plans Eliminated from Further Consideration

Due to potential environmental impacts and concerns related to nearshore recreational activities, sheetpile walls were not considered feasible.

Preliminary Plans for Further Consideration

A wide beach berm resulting from beachfill can effectively provide a buffer against storm wave attack, and improve recreational opportunities significantly. Beachfill would address all of the problems and concerns. Revetments and offshore submerged breakwaters will effectively address storm damage concerns; however, they do not address beach recreation concerns. Among the viable structural alternatives, revetments are the most economic measure. These preliminary alternatives will be considered and evaluated in the feasibility analysis.

Alternative Implementation Authorities

Alternatives or measures that cannot be implemented by the Corps of Engineers may qualify for implementation by other Federal agencies, or by State, County or local governmental agencies, or private interests.

Conclusions from the Preliminary Screening

The preliminary screening indicates that alternatives including beachfill, revetments, and offshore submerged breakwaters have the greatest potential for implementation.

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 beachfill with and without retention structures, revetments, and breakwaters.

Future screening and reformulation will be based on the following factors:

- 1) Technical feasibility and effectiveness in meeting the planning objectives. Projects must be functional and complete, recognizing state-of-the-art design and construction methods.
- 2) Environmental impacts. Environmental acceptability must be ascertained, and adverse impacts should be avoided if possible, or minimized if avoidance is not possible.
- 3) Economic justification in accordance with current guidelines and policies. Benefits must, at a minimum, equal the costs of a project. Ideally, benefits will clearly outweigh costs. The alternative with the greatest net benefits is selected as the National Economic Development Plan, and is generally selected as the Recommended Plan, unless there is an overriding reason to select another alternative.
- 4) Acceptability from the general public and the Non-Federal Sponsors.

Federal Interest

Study Areas Eliminated from Further Consideration

- 1) East Beach. Eliminated because of the Shoreline Protection and Beach Erosion Control Corps study (6 December 1994) concurred with the original authorization to have East Beach locally maintained.
- 2) Huntington Beach Blufftop. Bluff top erosion impacting recreational facilities, servicing infrastructure, and possibly Pacific Coast Highway will be looked at under a separate feasibility study.
- 3) Newport Groin Fields. Current and planned nourishment activities will result in sufficient sand volumes to nourish the groin fields.
- 4) Orange County Nearshore Ecology. Planned to be investigated under the Orange County Shoreline Feasibility Study.

Study Area for Further Consideration

Since coastal storm damage prevention is an output with a high budget priority, and preventing storm damages is the primary output of the alternatives to be evaluated in the feasibility phase, there is a strong Federal interest in conducting the feasibility study. Long-term erosion can reasonably be expected to undermine and increase the flood potential of existing public and private structures along the Surfside Colony shoreline. A preliminary economic flooding analysis for the area from Surfside Colony south to Anderson estimated the annualized damages for 50-year period ranging from \$217,000 to \$461,000. As the width of the sandy beach decreases over time, winter storm damages will have a greater impact on the public transportation corridor and residential communities. Based on this information and the preliminary screening of alternatives, there appears to be potential project alternatives that would be consistent with Corps of Engineers policies, costs, benefits, and environmental impacts.

Since Surfside Colony experiences an accelerated erosion rates as compared to the rest of the San Gabriel to Newport Bay reach, the Surfside-Sunset Beach renourishment project frequency is dependent upon the Surfside Colony erosion rate. If the erosion rate at Surfside Colony can be decelerated then benefits may be acquired through the reduction in the frequency and costs of routine beach nourishment under the Surfside-Sunset project.

Preliminary Financial Analysis

As the Non-Federal Sponsor, the City of Seal Beach will be required to provide 50% of the cost of the feasibility phase study. The Non-Federal Sponsors are also aware of the cost sharing requirements for the potential project implementation. A letter of intent from the non-Federal Sponsors stating willingness to pursue the feasibility phase study and share in its cost, and an understanding of the cost sharing that is required for project construction is included as Enclosure B.

Assumptions and Exceptions

Feasibility Phase Assumptions

The following critical assumptions will provide a basis for the feasibility study; the beaches at Surfside Colony will continue to erode and more damages would continue to occur, public safety and tourism will also be negatively impacted and the existing authorized project at Surfside-Sunset will continue.

Policy Exceptions and Streamlining Initiatives

The study will be conducted in accordance with the Principles and Guidelines and Corps of Engineers regulations. No applicable policy exceptions and streamlining initiatives will result from the approval of the Section 905(b) Analysis by HQUSACE.

Other Approvals Required

Include items that require HQUSACE approval, such as studies and new benefit categories are not applicable.

Feasibility Phase Milestones

Milestone	Description	Duration (mo)	Cumulative (mo)
Milestone F1	Initiate Study	0	0
Milestone F2	Public Workshop/Scoping	2	2
Milestone F3	Feasibility Scoping Meeting	11	13
Milestone F4	Alternative Review Conference	9	22
Milestone F4A	Alternative Formulation Briefing	5	27
Milestone F5	Draft Feasibility Report	3	30
Milestone F6	Final Public Meeting	1	31
Milestone F7	Feasibility Review Conference	1	32
Milestone F8	Final Report to SPD	3	35
Milestone F9	DE's Public Notice	1	36
-	Chief's Report	4	40
-	Project Authoriztion	4	44

Feasibility Phase Cost Estimate

WBS#	Description	Cost
JAA00	Feas - Surveys and Mapping except Real Estate	15,000
JAB00	Feas - Coastal Studies/Report	710,000
JAC00	Feas - Geotechnical Studies/Report	174,000
JAE00	Feas - Engineering and Design Analysis Report	200,000
JB000	Feas - Socioeconomic Studies	165,000
JC000	Feas - Real Estate Analysis/Report	42,000
JD000	Feas - Environmental Studies/Report (Except USF&WL)	120,000
JE000	Feas - Fish and Wildlife Coordination Act Report	50,000
JF000	Feas - HTRW Studies/Report	0
JG000	Feas - Cultural Resources Studies/Report	5,000
JH000	Feas - Cost Estimates	38,200
JI000	Feas - Public Involvement Documents	90,000
JJ000	Feas - Plan Formulation and Evaluation	98,000
JL000	Feas - Final Report Documentation	83,000
JLD00	Feas - Technical Review Documents	83,000
JM000	Feas - Washington Level Report Approval (Review Support)	50,000
JPA00	Project Management and Budget Documents	140,000
JPB00	Supervision and Administration	177,800
JPC00	Contingencies	200,000
L0000	Project Management Plan (PMP)	50,000
Q0000	PED Cost Sharing Agreement	50,000
Total		\$2,541,000

Views of Other Resource Agencies

Because of the funding and time constraints of the reconnaissance phase, only limited and informal coordination has been conducted with other resource agencies, and no significant information has been received at this time. However, it is anticipated that views from the California Department of Fish and Game, U.S. Fish and Wildlife Service, and National Marine Fisheries Service, with regards to the beachfill alternative, would be to prevent environmental impacts due to cross-shore sediment transport and impacts from operational activities to construct the recommended project.

Potential Issues Affecting Initiation of Feasibility Phase

Continuation of this study into the cost-shared feasibility phase is contingent upon an executed Feasibility Cost-Sharing Agreement (FCSA). Failure to achieve an executed FCSA within 18 months of the approval of the Section 905(b) Analysis will result in termination of the study. There are no apparent issues at this time that impact on the implementation of the feasibility phase.

The schedule for signing the Feasibility Cost-Sharing Agreement is December 2001. Based on the schedule of milestones in Paragraph 9, completion of the feasibility report would be in December 2004, with a potential Congressional Authorization in WRDA 2004.

Typically, there is strong local opposition to the concept of "hardening" the California Coastline. Structural alternatives proposed in the feasibility study will be heavily scrutinized by all interests.

For security purposes, NAVWEPSTA, Seal Beach desires to reduce recreational boat traffic traveling through the existing entrance and main channels of Anaheim Bay. As a result, NAVWEPSTA, Seal Beach could propose an altered entrance or second entrance channel to service the recreational harbor at Huntington Beach. If the Navy's proposal is carried forward, the dynamics of the feasibility study may be dramatically affected.

Environmental Evaluation

A project to provide shore protection to the shoreline at Surfside in the City of Seal Beach, Orange County, California. The preliminary screening indicates that alternatives including beachfill, revetments, and offshore-submerged breakwaters have the greatest potential for implementation. Substantial issues and affected environmental resources include the following:

- 1) Geology: Beachfill, either by itself or in conjunction with revetments and/or offshore-submerged breakwaters is expected to widen the existing beach using sand imported from an underwater borrow site. The expanded beach would not be used to support structures and so is not expected to result in significant adverse impacts resulting from liquefaction or other earthquake-related impacts. Revetments and/or offshore-submerged breakwaters, either alone or with beachfill, are not expected to be significantly impacted by earthquake-related affects.
- 2) Air Quality: Emissions from construction equipment associated with the construction of structural control measures are expected to be insignificant. These measures, limited to revetments and offshore-submerged breakwaters are not expected to exceed either daily or quarterly significant emissions levels set by the South Coast Air Quality Management District. Likewise emissions associated with the beachfill alternative (dredging, dredge placement, and spreading of the beachfill materials) are also expected to be insignificant.
- 3) Water: Minor, construction-related turbidity may occur during placement of sand, or construction of revetments and offshore-submerged breakwaters. The large percentage of sand, relative to silt, would quickly settle, preventing a widespread turbidity plume. There is low potential of encountering contaminated sediments, as the beachfill would only use clean sand.

- 4) **Biological Resources:** Burial under sand placed as beachfill would allow few organisms on the existing beach to survive. Additionally, placement of sand on the beach may be accompanied by impacts to nearshore waters. The area of direct disturbance would probably be relatively small, but turbidity could extend for several hundred feet. The decrease in light penetration and increase in suspended sediments would eliminate or reduce the number of fish, benthic organisms, and algae immediately adjacent to the placement area. However, the benefit of providing a wider, nourished beach (increasing available foraging and nesting areas) would be expected to outweigh such impacts. Impacts to threatened/endangered (California least tern, California brown pelican) or sensitive species (grunion) are not expected to be significant nor jeopardize their continued existence.
- 5) **Noise:** Noise impacts from construction equipment associated with the construction of structural control measures are expected to be insignificant. Construction would be short-term and would be conducted in accordance with local noise regulations reducing potential impacts to insignificance.
- 6) **Transportation:** Traffic impacts from construction equipment associated with the construction of structural control measures are expected to be insignificant. Construction would be short-term and would not significantly impact local traffic patterns.
- 7) **Aesthetics:** Visual impacts from construction equipment associated with placement of sand and/or the construction of revetments and/or offshore-submerged breakwaters are expected to be minor, short-term, adverse impacts. These impacts are expected to be offset by the beneficial impacts resulting from the aesthetic impacts of a wider beach.
- 8) **Public Health and Safety:** The proposed project is expected to result in beneficial impacts to public health and safety. Proposed shoreline protection will reduce ongoing erosion of beaches. Continued erosion would result in the loss of protective dry beach with an ensuing increase in storm damage to public and private properties.
- 9) **Recreation:** Short-term beach closures during construction are considered to be an insignificant impact. This is because construction will likely take place during the winter months, when beach use is at its lowest point and seasonal wildlife considerations (i.e. California least tern foraging and California grunion reproductive activities) will not be in effect. Shoreline protection, over the long term, will result in wider beaches, yielding increased recreational opportunities on the protected beaches.
- 10) **Cultural Resources:** A records and literature search will be conducted for any construction sites identified in conjunction with the proposed project. No impacts are anticipated.
- 11) **Compliance with Environmental Laws, Permit Requirements:** In addition to compliance with NEPA (through preparation of an EA or EIS), permits or authorization will be required from the following agencies during the Feasibility Study: U.S. Fish and Wildlife Service (Endangered Species Act, Fish and Wildlife Coordination Act), Environmental Protection Agency (Clean Water Act, Clean Air Act), California Coastal Commission (Coastal Zone Management Act), California Regional Water Quality Control Board (Clean Water Act), State Historic Preservation Office (National Historic Preservation

Act), California Department of Fish and Game (Fish and Wildlife Coordination Act), South Coast Air Quality Management District (Clean Air Act), and the City of Seal Beach (compliance with local ordinances).

- 12) Environmental Restoration Opportunities: No environmental restoration opportunities have been identified at this time. Further coordination with resource agencies will occur during the feasibility stage.

Project Area Map

A map of the study area is shown in Figures 1 and 2 in Enclosure A.

Recommendations.

I recommend that the San Gabriel to Newport Bay Reconnaissance Study proceed into the feasibility phase. The emphasis of the study is the storm damage reduction and decrease in the erosion rate in the Surfside Colony area through structural or non-structural means. It is anticipated that incidental benefits can be achieved through the reduction of beach nourishment for the Surfside-Sunset project and in the long term provide cost savings benefits to that project.

Date: 010320

//s//
John P. Carroll
Colonel, Corps of Engineers
District Engineer

Chapter 3 - Work Breakdown Structure

Levels of the Work Breakdown Structure

The work breakdown structure is divided into the following five levels.

Level 1. The Project

Level 2. The Subprojects are established by the phase that is appropriated by Congress – in this case the feasibility-type phase of the special study. This level includes the major products generated in the feasibility-type phase: the Study Report, the Project Management Plan and the PED Agreement, which are identified in the first character of the work breakdown structure code.

Level 3. The Parent Tasks are generally identified as separate products that go into the final feasibility-type special study documentation. Examples of these subprojects include such items as the real estate report, the coastal report, etc. These parent tasks are normally identified with the responsibility of a particular functional organization. This level is generally identified in the second and third characters of the work breakdown structure code.

Level 4. The Tasks are major separable elements of the subprojects that are keyed to separately identifiable products that are developed for the major special study milestones. These tasks are elements of work resulting in a deliverable product which have a beginning and an end, may be accomplished within one functional organization, can be described at a work order of detail and are the lowest level that will be specifically tracked with respect to cost and schedule. As an example, the cost estimates for the draft special study report would be an example of a task. Tasks can be described as the summation of activities that would be accomplished by a particular functional organization between two of the milestone events. The milestone tasks and definitions are included in Enclosure B. The following durations between milestones are generally used for the establishment of tasks.

- 1) Between Milestone F1 and F3
- 2) Between Milestone F3 and F4
- 3) Between Milestone F4 and F4A
- 4) Between Milestone F4A and F5
- 5) Between Milestone F5 and F8
- 6) Between Milestone F8 and F9

Level 5. The Activities are separate elements of work that are managed by the functional managers to whom the tasks are assigned and which may not necessary result in a deliverable work product to another organization. These activities are not tracked separately in terms of cost and schedule but are described in the scopes of work to the extent required to provide a clear understanding of the work required.

Listing Of Tasks - Work Breakdown Structure

In accordance with the levels above, the following work breakdown structure indicates subprojects and parent tasks in bold type, followed by the subordinate tasks.

WBS#	Description
J0000	Feasibility Report (Feas)
J0000	Milestones
	Initiate Study
	Study Public Workshop (F2)
	Study Scoping Meeting (F3)
	Management Plan Review Conference (F4)
	Management Plan Formulation Briefing - AFB
	Draft Study Report
	Final Public Meeting
	Study Review Conference
	Study Report w/NEPA
	MSC Commander's Public Notice
	Filing of Final EIS/EA
	Chief's Report to ASA (CW)
	ROD Signed or FONSI Signed
	President Signs Authorization
JA000	Engineering Appendix
JAA00	Feas - Surveys and Mapping except Real Estate
	Surveys & Mapping - Historical Survey Data Reductions
JAB00	Feas - Coastal Studies/Report
	Coastal - Data Collection and Review
	Coastal - Longshore/Cross-shore Sediment Process
	Coastal - Wave and Current Climatology
	Coastal - Wave/Current Baseline Numerical Model Studies
	Coastal - Alternatives Development/Analysis
	Coastal - Shoreline Change Numerical Model Studies
	Coastal - Structure Storm Damage Analysis
	Coastal - ERDC Physical Model Studies
	Coastal - Recommended Plan Detailed Analysis
	Coastal - AFB Documentation
	Coastal - Draft Report
	Coastal - Final Report
JAC00	Feas - Geotechnical Studies/Report
	Geotech - Geology Investigations
	Geotech - Soils Design and Materials
	Geotech - AFB Documentation
	Geotech - Draft Report
	Geotech - Final Report

JAE00	Feas - Engineering and Design Analysis Report
	Engr & Design - Without Project Conditions & Preliminary Plans
	Engr & Design - With Project Conditions for Final Plans
	Engr & Design - AFB documentation
	Engr & Design - Draft Report
	Engr & Design - Final Report
JB000	Feas - Socioeconomic Studies
	Socioecon - Existing Baseline Conditions
	Socioecon - Coastal Storm Damage Model
	Socioecon - Inundation, Erosion and Wave Attach Analyses
	Socioecon - Risk and Uncertainty Analysis
	Socioecon - With Project Conditions
	Socioecon - Draft Report
	Socioecon - AFB documentation
	Socioecon - Final Report
JC000	Feas - Real Estate Analysis/Report
	Real Estate - Baseline Conditions
	Real Estate - AFB documentation
	Real Estate - Draft Report
	Real Estate - Final Report
JD000	Feas - Environmental Studies/Report (Except USF&WL)
	Environ - Without Project Conditions & Preliminary Plans
	Environ - With Project Conditions for Final Plans
	Environ - AFB documentation
	Environ - Draft Report/EIS
	Environ - Final Report/EIS
JE000	Feas - Fish and Wildlife Coordination Act Report
	USFWS - Planning Aid Letter
	USFWS - Draft Coordination Act Report
	USFWS - Final Coordination Act Report
JF000	Feas - HTRW Studies/Report
	HTRW - Not applicable
JG000	Feas - Cultural Resources Studies/Report
	Cultural - Without Project Conditions & Preliminary Plans
	Cultural - With Project Conditions for Final Plans
	Cultural - AFB documentation
	Cultural - Draft Report
	Cultural - Final Report
JH000	Feas - Cost Estimates
	Cost Estimates - Without Project Conditions & Preliminary Plans
	Cost Estimates - With Project Conditions for Final Plans
	Cost Estimates - AFB documentation
	Cost Estimates - Draft Report

WBS#	Description
JI000	Feas - Public Involvement Documents
	Initial Public Meeting/NEPA Scoping
	Public Workshops in Support of Plan Selection
	Public Involvement Support to AFB
	Final Public Meeting
	Public Involvement Support to FRC
JJ000	Feas - Plan Formulation and Evaluation
	Plan Formulation and Evaluations of the Special Study Tasks
	Plan Formulation and Evaluations - AFB documentation
	Plan Formulation and Evaluations - Draft Report
	Plan Formulation and Evaluations - Final Report
	Plan Formulation and Evaluations - Support to Division Commander's Notice
JL000	Feas - Final Report Documentation
	Reproduction and Distribution of F3 Documentation
	Reproduction and Distribution of F4 Documentation
	Reproduction and Distribution of AFB Documentation
	Reproduction and Distribution of Draft Report
	Reproduction and Distribution of Final Report
JLD00	Feas - Technical Review Documents
	Independent Technical Review - F3 Documentation
	Independent Technical Review - F4 Documentation
	Independent Technical Review - AFB Documentation
	Independent Technical Review - Draft Report
	Independent Technical Review - Final Report
JM000	Feas - Washington Level Report Approval (Review Support)
JP000	Feas - Management Documents
JPA00	Project Management and Budget Documents
	Programs and Project Management to Support F3 Milestone
	Programs and Project Management to Support F4 Milestone
	Programs and Project Management - AFB Documentation
	Programs and Project Management - Draft Report
	Programs and Project Management - Final Report
	Programs and Project Management - DE's Notice
JPB00	Supervision and Administration
	S&A - Planning Division
	S&A - Engineering Division
	S&A - Real Estate Division
	S&A - PPMD
	S&A - Contracting Division
JPC00	Contingencies
L0000	Project Management Plan (PMP)
	PMP - Draft PMP
	PMP - Final PMP
Q0000	PED Cost Sharing Agreement

Chapter 4 - Scopes of Work

Detailed Scopes of Work

For each task that is included in the work breakdown structure, a scope of work is developed that describes the work that is to be performed. For each task, the scope describes the work, including specific activities, to be accomplished in narrative form. The scopes of work have been developed by the study team, which includes representatives of the City of Seal Beach. The scopes also reflect the policy exceptions and streamlining initiatives that have been approved in the Section 905(b) Analysis. The detailed scopes of work for the special study are organized by parent task in Enclosure C.

Durations of Tasks

The durations for the tasks are entered into the project's network analysis system (NAS) to develop the schedule that is included in Chapter 6 – Study Schedule. The durations are based on negotiations between the Project Manager and the chiefs of the responsible organizations, as identified in Chapter 5 – Responsibility Assignment.

Costs of Tasks

Lastly, the scopes of work for the tasks are grouped by the parent tasks that they support. The total estimates for the parent tasks are then combined in the Study Cost Estimate – Chapter 7. The cost estimates for the tasks are also based on negotiations between the Project Manager and the chiefs of the responsible organizations.

Chapter 5 - Responsibility Assignment

Organizational Breakdown Structure

The scopes of work represent agreements between the Project Manager and first line supervisors of functional organizations. The functions of these organizations in support of the project are defined by the work that is assigned. All organizations responsible for tasks, including the City of Seal Beach and other agencies, are included with their organization codes in the following Organizational Breakdown Structure (OBS).

Los Angeles District	Org Code
Planning/Coastal Studies Group	CESPL-PD-WS
Planning/Economics & Social Analysis Group	CESPL-PD-E
Planning/Ecosystem Planning Section	CESPL-PD-RN
Engineering/Coastal Engineering Section	CESPL-ED-DC
Engineering/Geology & Investigations Section	CESPL-ED-GG
Engineering/Soils Design & Materials Section	CESPL-ED-GD
Engineering/Survey & Mapping Section	CESPL-ED-GS
Engineering/Cost Engineering Unit	CESPL-ED-DS
Engineering/Structural Engineering Unit	CESPL-ED-DS
Real Estate/Acquisitions Section	CESPL-RE-A
PPMD/Civil Projects Branch	CESPL-PM-C
Non-Federal Sponsor	Org Code
City of Seal Beach	
Other Agencies/Other Corps	Org Code
US Fish and Wildlife Service	USF&WL

Responsibility Assignment Matrix

The scopes for each task are grouped by the parent task that they support and the primary responsible organization for each parent task is identified by the organization codes in the following Responsibility Assignment Matrix (RAM).

WBS#	Description	District Org	Non-Fed	Other
JAA00	Feas - Surveys and Mapping except Real Estate	CESPL-ED-GS		
JAB00	Feas - Coastal Studies/Report	CESPL-ED-DC		
JAC00	Feas - Geotechnical Studies/Report	CESPL-ED-GG		
JAE00	Feas - Engineering and Design Analysis Report	CESPL-ED-DC		
JB000	Feas - Socioeconomic Studies	CESPL-PD-E		
JC000	Feas - Real Estate analysis Report	CESPL-RE-A		
JD000	Feas - Environmental Studies/Report (Except USF&WL)	CESPL-PD-RN		
JE000	Feas - Fish and Wildlife Coordination Ad Report	-	-	USF&WL
JF000	Feas - HTRW Studies/Report	CESPL-PD-RN		
JG000	Feas - Cultural Resources Studies/Report	CESPL-PD-RN		
JH000	Feas - Cost Estimates	CESPL-ED-DS		
JI000	Feas - Public Involvement Documents	CESPL-PD-WS		
JJ000	Feas - Plan Formulation and Evaluation	CESPL-PD-WS		
JL000	Feas - Final Report Documentation	CESPL-PD-WS		
JLD00	Feas - Technical Review Documents	CESPL-PD-WS		
JM000	Feas - Washington Level Report Approval (Review Support)	CESPL-PD-WS		
JPA00	Project Management and Budget Documents	CESPL-PM-C		
JPB00	Supervision and Administration	All		
JBC00	Contingencies	Not Assigned		
L0000	Project Management Plan (PMP)	CESPL-PD-WS		
Q0000	PED Cost Sharing Agreement	CESPL-PD-WS		

Chapter 6 - Study Schedule

Schedule Development

All schedules are developed using a Network Analysis System (NAS). The network is based upon the tasks that are listed in Chapter 3 – Work Breakdown Structure and the durations that are included in the detailed scopes of work in Enclosure C – Detailed Scopes of Work. Major milestones that are defined in Enclosure B – CESPDMilestone System are also included in the schedules.

Funding Constraints

Funding for the first Fiscal Year of the special study is normally limited because of the uncertainty in the initiation of the feasibility-type special study. This constraint has been reflected in the development of the study schedule. Following the first year, an optimum schedule based upon unconstrained funding has been assumed for subsequent Fiscal Years.

Non-Federal Sponsor Commitments

Milestones become commitments when the project manager meets with the Non-Federal Sponsor, the City of Seal Beach, at the beginning of each Fiscal Year and identifies two to five tasks that are important for the Los Angeles District to complete during the Fiscal Year. These commitments will be flagged in the PROMIS database and monitored and reported on accordingly.

Milestone Schedule

The schedule for the San Gabriel to Newport Bay Study milestones in the CESPDP Milestone System is as follows:

Milestone	Description	Starting Date	Completion Date
Milestone F1	Initiate Study	01-May-02	01-May-02
Milestone F2	Public Workshop/Scoping	01-Sep-02	02-Sep-02
Milestone F3	Study Scoping Meeting	01-Jun-03	01-Jun-03
Milestone F4	Alternative Review Conference	01-Jun-04	01-Jun-04
Milestone F4A	Alternative Formulation Briefing	01-Sep-04	01-Sep-04
Milestone F5	Draft Study Report	01-Dec-04	01-Dec-04
Milestone F6	Final Public Meeting	01-Jan-05	01-Jan-05
Milestone F7	Feasibility Review Conference	01-Jan-05	01-Jan-05
Milestone F8	Final Report to SPD	01-Apr-05	01-Apr-05
Milestone F9	DE's Public Notice	01-Jun-05	01-Jun-05
-	Chief's Report	01-Oct-05	01-Oct-05
-	Project Authorization	01-Feb-06	01-Feb-06

Chapter 7 - Special Study Cost Estimate

Basis For The Cost Estimate

The feasibility cost estimate is based upon a summation of the costs that were identified for the individual tasks in detailed scopes of work that are included in Enclosure C – Detailed Scopes of Work. Study cost estimates include allowances for inflation so that the City of Seal Beach is fully aware of its financial commitment.

Appropriate contingencies and contingency management are included to adequately deal with the uncertainty in the elements of the study. Experience has shown that approximately 20 percent of the study costs should be reserved for activities following the release of the draft report. Contingencies in the amounts required to cover the costs of these activities have been added to the cost estimate.

Costs for Federal and Non-Federal Activities

The City of Seal Beach must contribute 50 percent of the cost of the study during the period of the study. The entire Non-Federal share may be made through the provision of services, materials, supplies or other in-kind services necessary to complete the study and prepare the feasibility report. The following study cost estimate includes credit for work that is to be accomplished by the City of Seal Beach.

Summary of Costs

WBS#	Description	Cost
JAA00	Feas - Surveys and Mapping except Real Estate	15,000
JAB00	Feas - Coastal Studies/Report	710,000
JAC00	Feas - Geotechnical Studies/Report	174,000
JAE00	Feas - Engineering and Design Analysis Report	200,000
JB000	Feas - Socioeconomic Studies	165,000
JC000	Feas - Real Estate Analysis/Report	42,000
JD000	Feas - Environmental Studies/Report (Except USF&WL)	120,000
JE000	Feas - Fish and Wildlife Coordination Act Report	50,000
JF000	Feas - HTRW Studies/Report	0
JG000	Feas - Cultural Resources Studies/Report	5,000
JH000	Feas - Cost Estimates	38,200
JI000	Feas - Public Involvement Documents	90,000
JJ000	Feas - Plan Formulation and Evaluation	98,000
JL000	Feas - Final Report Documentation	83,000
JLD00	Feas - Technical Review Documents	83,000
JM000	Feas - Washington Level Report Approval (Review Support)	50,000
JPA00	Project Management and Budget Documents	140,000
JPB00	Supervision and Administration	177,800
JPC00	Contingencies	200,000
L0000	Project Management Plan (PMP)	50,000
Q0000	PED Cost Sharing Agreement	50,000
Total		\$2,541,000

**San Gabriel to Newport Bay (Surfside Colony), California Feasibility Study
Project Management Plan**

Chapter 8 - Quality Control Plan

Quality Control Plan Objective

The quality control objective is to achieve special study phase documents and services that meet or exceed customer requirements, and are consistent with Corps of Engineers policies and regulations.

Guidelines Followed For Technical Review

The guidelines for independent technical review are set forth in the South Pacific Division Quality Management Plan, and in the corresponding Los Angeles District Quality Management Plan.

Study Team

Organization/Function	Name/Title	Address	Telephone
Planning Division Coastal Studies Group	Susie Ming Coastal Planner	P.O. Box 532711 Los Angeles CA 90053-2325	213/452-3825
Engineering Division Coastal Engineering Sect.	Chuck Mesa Coastal Engineer	P.O. Box 532711 Los Angeles CA 90053-2325	213/452-3678
Planning Division Ecosystem Planning Sect	Larry Smith Environmental Manager	P.O. Box 532711 Los Angeles CA 90053-2325	213/452-3846
Planning Div, Economics & Social Analysis Group	Michael Green Economist	P.O. Box 532711 Los Angeles CA 90053-2325	213/452-3827
Programs & Project Mgmt Div, Project Mgmt Branch	Cecilia Morgan Program Manager	P.O. Box 532711 Los Angeles CA 90053-2325	213/452-4023
Planning Division Real Estate Division	John Sunshine Realty Specialist	P.O. Box 532711 Los Angeles CA 90053-2325	213/452-3132
Engineering Division Geotechnical/Soils/ Geology	Chris Sands Geologist	P.O. Box 532711 Los Angeles CA 90053-2325	213/452-3605
Engineering Division Cost Engineering	Nate Govan Cost Engineer	P.O. Box 532711 Los Angeles CA 90053-2325	213/452-3739

Technical Review Team

Organization/Function	Name/Title	Experience
Engineering Division Coastal Engineering Sect.	Arthur T. Shak Coastal Engineer	

Documents to be Reviewed and Schedule For Review Activities

All of the products of the tasks listed in the detailed scopes of work in Enclosure C – Detailed Scopes of Work, will be subject to independent technical review. Seamless Single Discipline Review will be accomplished prior to the release of materials to other members of the study team or integrated into the overall study. Section chiefs shall be responsible for accuracy of the computations through design checks and other internal procedures, prior to the independent technical review.

Independent product review will occur prior to major decision points in the planning process at the CESPDP milestones so that the technical results can be relied upon in setting the course for further study. These products would include documentation for the CESPDP mandatory milestone conferences (F3 & F4), HQUSACE issue resolution conferences (AFB & FRC) and the draft and final reports. These products shall be essentially complete before review is undertaken. Since this quality control will have occurred prior to each milestone conference, the conference is free to address critical outstanding issues and set direction for the next step of the study, since a firm technical basis for making decisions will have already been established. In general, the independent technical review will be initiated at least two weeks prior to a CESPDP mandatory milestone conference and at least two weeks prior to the submission of documentation for a HQUSACE issue resolution conference.

For products that are developed under contract, the contractor will be responsible for quality control through an independent technical review. Quality assurance of the contractor's quality control will be the responsibility of the Los Angeles District.

Deviations from the Approved Quality Management Plan

The following deviations from the approved quality management plan have been approved by the South Pacific Division:

******List of deviations will be provided by the Los Angeles District******

Cost Estimate for Quality Management

The costs for conducting the independent technical review are included in the individual scopes of work that are included in Enclosure C – Detailed Scopes of Work. Quality management activities of Branch and Division Chiefs are included in Supervision and Administration. The total cost for quality management is approximately \$127,000, which is approximately 5 percent of the study cost estimate. Of this amount, \$83,000 is included in parent task JLD00 and \$44,000 is included in other parent tasks.

PMP Quality Certification

The Chief, Planning Division has certified that 1) the independent technical review process for this PMP has been completed, 2) all issues have been addressed, 3) the streamlining initiatives proposed in this PMP will result in a technically adequate product, and 4) appropriate quality control plan requirements have been adequately incorporated into this PMP. The signed certification is included as Enclosure D.

Study Certification

The documentation of the independent technical review shall be included with the submission of the reports to CESP. Documentation of the independent technical review shall be accompanied by a certification, indicating that the independent technical review process has been completed and that all technical issues have been resolved. The certification requirement applies to all documentation that will be forwarded to either CESP or HQUSACE for review or approval. The Chief, Planning Division will certify the pre-conference documentation for the HQUSACE Issue Resolution Conferences and the Draft Study Report. The Final Study Report, to include the District Commander's signed recommendation, will be certified by the District Commander. This certification will follow the example that is included as Appendix H of the CESP Quality Management Plan and will be signed by the Chief, Planning Division and the District Commander.

Chapter 9 - Identification of Procedures and Criteria

Evolution Of The PMP

The Project Management Plan describes all activities from the initial tasks of the special study through the preparation of the final special study report, the Project Management Plan and PED cost-sharing agreement, and the Los Angeles District's support during the Washington-level review. As the PMP is based primarily on existing information, it will be subject to scope changes as the technical picture unfolds. Because of the limited evaluations during the reconnaissance phase study, the PMP will include significantly more uncertainty and must make appropriate allowances. As an example, this PMP assumes the requirement for an Environmental Impact Statement, because of the limited environmental evaluations conducted in the reconnaissance phase.

Use of the PMP

The current PMP, including the documentation of agreements on changes to the conduct of the study, will be addressed at each of the CESPDP milestone conferences and at the formal Issue Resolution Conferences with HQUSACE, including the Alternative Formulation Briefing and Feasibility Review Conference.

The Planning Process

The Water Resource Council's Principles and Guidelines is the basic planning guidance, which establishes a six-step planning process. This process is a conceptual planning sequence for developing solutions to water resource problems and opportunities. The Planning Manual and Planning Primer, both published by the Corps of Engineers' Institute for Water Resources, provide excellent coverage of the planning process. The South Pacific Division also provides training in the six-step process.

Policy

The policies that govern the development of projects are contained in the *Digest of Water Resources Policies and Authorities, EP 1165-2-1*.

Corps of Engineers Regulations

Corps of Engineers regulations are available on the HQUSACE Internet Web Site. The most important of these regulations is *ER 1105-2-100, Planning Guidance*. Policy compliance review is addressed in *EC 1165-2-203, Technical and Policy Compliance Review*, and, quality control is covered in the *CESPDP Quality Management Plan, CESPDP R 1110-1-8*. The review of the special study products will be accomplished with the review checklist provided in *EC 1165-2-203 as Appendix B, Policy Compliance Review Considerations*.

Processing Requirements

In addition to ER 1105-2-100, the South Pacific Division has provided additional guidance on the processing requirements for each of the milestone submittals. This guidance is contained in *CESPD-ET-P Memorandum, Processing of Planning Reports in the South Pacific Division*, dated June 5, 2000.

Chapter 10 - Public Involvement and Coordination

Major Milestones

Two of the milestones in the CESPDP milestone system have been established specifically for the purpose of providing public forums for public review and to receive public comment and input. The first of these is the initial public workshop. This workshop is an opportunity to present the study to the public, obtain input and public opinions, and fulfill NEPA scoping requirements. The second milestone in the system is the final public meeting. Scheduled following the release of the draft report for public review, provides the opportunity to present the findings of the special study and the draft report to the public and receive public comment.

Public Involvement-Coordination Program

Many public laws, executive orders, Federal agency regulations and the Water Resources Council's Principles and Guidelines require that public involvement and coordination be applied to water resources planning activities. The Corps of Engineers (COE) is required to coordinate with State agencies and the Governor or his designated agency, interested and affected agencies at all levels, and public and private groups and individuals. This commitment is to the broadest possible array of publics -- to include any person, group or agency that is not the COE. The importance of public involvement and coordination in COE planning efforts makes it practical to consider that the public includes any individual interested in the study, in effect, anyone not on the study team.

Purposes and Objectives

The purpose of public involvement and coordination is to ensure that Corps of Engineers planning is responsive to the needs and concerns of the public, and to involve all interested parties in the planning decision-making process. Its objectives are 1) to provide information about COE activities and proposed actions to the public; 2) make public desires, needs and concerns available to the decision-makers; 3) provide for adequate interaction with the public before decisions are made, and 4) to adequately account for the views of the public in making decisions. However, these purposes and objectives must be achieved within a framework where the Corps of Engineers cannot relinquish its legislated responsibilities for decision-making.

Public involvement and coordination actions must not only be utilized to inform the public; they must also actively seek public responses in regard to needs, values, ideas for solutions, and, very significantly, reactions to proposed solutions. Public involvement and coordination must be a two-way communications process, and it must provide people from diverse backgrounds and interests with multiple opportunities to ask questions and offer suggestions.

Effective public involvement and coordination are also effective in reducing the probability of, and reduce unnecessary, conflict, and where possible, achieve consensus. Consensus sometimes occurs spontaneously, and in many instances conflict does not appear to be resolvable. Conflict management techniques should be incorporated into public involvement and coordination activities.

Public Involvement Planning

Public Involvement planning will be incorporated as a major and significant part of the overall planning process – it will develop and be implemented as the special study progresses. Public involvement and coordination must be a dynamic process, capable of taking into account changes in the plan formulation process and public attitudes and reactions, and making adjustments to handle these unforeseen occurrences. Every member of the planning team should be prepared to provide input to the public involvement and coordination program, as well as to represent the planning effort in the achievement of public involvement goals.

Representatives of the Non-Federal Sponsor – the City of Seal Beach– are perhaps the most important players in this element of the planning process. They know the study area and the attitudes and issues surrounding the problems and their solution. They also are familiar with the individuals and organizations that are familiar with the study area and the forces surrounding community attitudes and reactions, which are significant to the planning effort.

Another resource that should not be overlooked for participation in public involvement/coordination planning and implementation is the Los Angeles District's Public Affairs Office. They can provide invaluable insight and assistance in the public information effort, which is the important front-end information-out element of any successful public involvement/coordination plan. The Chief of Public Affairs and staff members possess knowledge of the public communications media, which serves the study area, and influences the attitudes and reactions of the affected individuals and organizations with an interest in the study and its outcome. A successful public information effort can vastly influence the attainment of public involvement/coordination program objectives.

Public Involvement-Coordination Elements

All available means of reaching the many publics affected by and interested in the San Gabriel to Newport Bay (Surfside Colony) Feasibility Study should be developed and utilized if the Study Team is to be successful in accomplishing the study purposes and objectives. The following listing of available resources and methods should be developed and used as appropriate during the progress of the study:

Public Communications Media

Newspapers, radio and television stations, magazines and newsletters and other media distributed by interested and affected study publics should be used whenever possible to distribute information and serve as a conduit for input and comment. News releases issued whenever appropriate can serve well in informing all affected publics of study activities and progress.

Meetings

There are a variety of meetings that must be effectively utilized in the successful

achievement of public involvement/coordination objectives. The most important and visible meetings are the formal public meetings, which are scheduled by directive at the initiation of the special study, and near the end of the study as part of the public review of the draft special study report and the study findings. Public comment and input are vital to finalizing the special study report and completing the study. These meetings include public meetings, open meetings with interest groups, workshops, and any opportunities to distribute information of the study and progress to generate public input.

Publications

Reports, brochures, newsletters and information bulletins can be prepared and distributed at appropriate points throughout the study process. These publications could be distributed after the definition of problems and opportunities, when preliminary alternatives have been formulated, or when the effects or impacts of alternatives have been identified.

Mailing Lists

Mailing lists are listed last on this preliminary itemization of public involvement-coordination elements to emphasize their importance to the program. They should be among the first public involvement actions, because they are key to the successful accomplishment of program objectives, and will be utilized throughout the conduct of the study.

San Gabriel to Newport Bay (Surfside Colony), California Feasibility Study
Project Management Plan

CHAPTER 11 - STATEMENT OF CERTIFICATION

This is to certify that the undersigned have reviewed, and concur in the scope, structure, and cost estimate for the subject study in the amount of \$2,541,000, to be completed in 44 months.

Los Angeles District

RUTH VILLALOBOS
Chief, Planning Division
Management

BRIAN M. MOORE, P.E.
Deputy District Engineer, Project

ROBERT E. KOPLIN, P.E.
Chief, Engineering Division

GEORGE L. BEAMS, P.E.
Chief, Construction Operations Division

STEPHEN E. TEMMEL
District Counsel

THOMAS D. MCKERCHER
Chief, Contracting Division

TERRY KAPLAN
Chief, Real Estate Division

RAYMOND P. MELLARD
Chief, Resource Management Office

**San Gabriel to Newport Bay (Surfside Colony), California Feasibility Study
Project Management Plan**

Enclosure A. Project Area Map

**San Gabriel to Newport Bay (Surfside Colony), California Feasibility Study
Project Management Plan**

Enclosure B. CESPDP Milestone System

Study Phase

Milestone Number¹ And Name	Milestone Description
100 Initiate Feasibility Phase	CESPD Milestone F1 ² – The date the District receives Federal feasibility study funds.
101 Study Public Workshop (F2)	CESPD Milestone F2 ² – This is a Public Meeting/Workshop to inform the public and obtain input, public opinion and fulfill scoping requirements for NEPA purposes.
102 Study Scoping Meeting (F3)	CESPD Milestone F3 ² – The Study Scoping Meeting with HQUSACE is to address potential changes in the PMP. It will establish without-project conditions and screen preliminary plans.
103 Review Conference (F4)	CESPD Milestone F4 ² – The Plan Review Conference will evaluate the final plans, reach a consensus that the evaluations are adequate to select a plan and prepare AFB issues.
124 Plan Formulation Briefing	CESPD Milestone F4A ² – The Plan Formulation Briefing (AFB) is for policy compliance of the proposed plan with HQUSACE to identify actions required to prepare and release the draft report.
145 Public Review of Draft Report	CESPD Milestone F5 ² – Initiation of field level coordination of the draft report with concurrent submittal to HQUSACE through SPD for policy compliance review.
162 Final Public Meeting	CESPD Milestone F6 ² – Date of the final public meeting.
130 Special Study Review Conference	CESPD Milestone F7 ² – Policy compliance review of the draft report with HQUSACE to identify actions that are required to complete the final report.
165 Special Study Report w/NEPA	CESPD Milestone F8 ² – Date of submittal of final report package to CESPDP-ET-P, including technical and legal certifications, compliance memorandum and other required documentation.
170 MSC Commander's Public Notice	CESPD Milestone F9 ² – Date of issue of the Division Commanders Public Notice. Congressional notification would occur two days prior. The report and supporting documentation would be forwarded to HQUSACE. This milestone is used as the completion of the special study report in the CMR.
310 Filing of Final EIS/EA	Date that notice appears in the Federal Register. Letters for filing would be furnished by HQUSACE.
330 Chief's Report to ASA (CW)	Date of the signed report of the Chief of Engineers.
320 ROD Signed of FONSI Signed	Date that ROD is signed by the ASA (CW) when forwarded for authorization.
350 President Signs Authorization	Date President signs authorizing legislation.
1 MIL – Milestone number used in the PROMIS database.	
2 F1 through F9 are the historical designations for the SPD Milestones.	

**San Gabriel to Newport Bay (Surfside Colony), California Feasibility Study
Project Management Plan**

Enclosure C: Detailed Scopes of Work

Table of Contents

WBS#	Description	Page
JAA00	Feas - Surveys and Mapping except Real Estate	C-8
JAB00	Feas - Coastal Studies/Report	C-9
JAC00	Feas - Geotechnical Studies/Report	C-13
JAEO0	Feas - Engineering and Design Analysis/Report	C-15
JB000	Feas - Socioeconomic Studies	C-17
JC000	Feas - Real Estate Analysis/Report	C-21
JD000	Feas - Environmental Studies/Report (Except USF&WL)	C-23
JE000	Feas - Fish and Wildlife Coordination Act Report	C-24
JF000	Feas - HTRW Studies/Report	C-24
JG000	Feas - Cultural Resources Studies/Report	C-25
JH000	Feas - Cost Estimates	C-25
JI000	Feas - Public Involvement Documents	C-26
JJ000	Feas - Plan Formulation and Evaluation	C-29
JL000	Feas - Final Report Documentation	C-31
JLD00	Feas - Technical Review Documents	C-33
JM000	Feas - Washington Level Report Approval (Review Support)	C-35
JPA00	Project Management and Budget Documents	C-36
JPB00	Supervision and Administration	C-38
JPC00	Contingencies	C-40
L0000	Project Management Plan (PMP)	C-41
Q0000	PED Cost Sharing Agreement	C-42
	Summary of Costs	C-43

San Gabriel to Newport Bay (Surfside Colony), California Feasibility Study
Project Management Plan

Enclosure D - Quality Control Certification

Completion of Quality Control Activities

The District has completed the Project management plan for the San Gabriel to Newport Bay (Surfside Colony), California Feasibility Study. All quality control activities defined in the generic quality control plan for reconnaissance phase products have been completed. Compliance with clearly established policy principles and procedures, utilizing justified and valid assumptions, has been verified, including whether the PMP meets the needs of the City of Seal Beach and is consistent with the law and existing Corps of Engineer's policy. All issues and concerns resulting from the independent technical review of the PMP have been resolved.

Certification

Certification is hereby given that 1) the independent technical review process for this PMP has been completed, 2) all issues have been addressed, 3) the streamlining initiatives proposed in this PMP will result in a technically adequate product, and 4) appropriate quality control plan requirements have been adequately incorporated into this PMP. In summary, the study may proceed into the special study phase in accordance with this PMP.

Date

Chief, Planning Division

San Gabriel to Newport Bay (Surfside Colony), California Feasibility Study
Project Management Plan

Enclosure E. List of Acronyms

AFB	Alternative Formulation Briefing
ASA (CW)	Assistant Secretary of the Army for Civil Works
CESPD	South Pacific Division (also SPD)
DE	Division Engineer (Division Commander)
EA	Environmental Assessment
EC	Engineering Circular
EIS	Environmental Impact Statement
EP	Engineering Pamphlet
ER	Engineering Regulation
FCSA	Feasibility Cost Sharing Agreement
FONSI	Finding of No Significant Impact
FRC	Feasibility Review Conference
H&H	Hydrology and Hydraulics
HQUSACE	Headquarters, U.S. Army Corps of Engineers
HTRW	Hazardous, Toxic and Radioactive Waste
MSC	Major Subordinate Command
NAS	Network Analysis System
NED	National Economic Development
NEPA	National Environmental Policy Act
OBS	Organizational Breakdown Structure
P&G	Water Resources Council's Principles and Guidelines
PED	Preconstruction Engineering and Design
PMP	Project Management Plan
PPMD	Programs and Project Management Division
PROMIS	Project Management Information System
PMP	Project Management Plan
RAM	Responsibility Assignment Matrix
ROD	Record of Decision
S&A	Supervision and Administration
SPD	South Pacific Division (CESPD)
USF&WL	U.S. Fish and Wildlife Service
WBS	Work Breakdown Structure
WRDA	Water Resources Development Act