

## 1. INTRODUCTION

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This Final Environmental Impact Statement/Environmental Impact Report (EIS/R) was prepared by the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG) partnering with the California Coastal Conservancy (Conservancy), US Army Corps of Engineers (Corps), Santa Clara Valley Water District (SCVWD), and the Alameda County Flood Control and Water Conservation District (ACFCWCD) to evaluate the potential environmental impacts of the proposed South Bay Salt Pond (SBSP) Restoration Project.

The SBSP Restoration Project is a collaborative effort among federal, state and local agencies working with scientists and the public to develop a programmatic plan for habitat restoration, flood management and wildlife-oriented public access within the approximately 15,100 acres of former Cargill Inc. (Cargill) salt ponds in South San Francisco Bay acquired in 2003.

The SBSP Restoration Project was planned in close coordination with a related but separate project, the South San Francisco Bay Shoreline Study (Shoreline Study). The Congressionally-authorized Shoreline Study will identify and recommend for federal funding one or more projects for flood damage reduction, ecosystem restoration and related purposes such as public access. Because they have similar objectives and geographic scope and include restoration and flood management components, the planning and management of these two projects will be closely integrated. Alternatives for the Shoreline Study are still being developed, but a preliminary list of potential actions under the Shoreline Study is presented in this EIS/R to provide full public disclosure regarding a separate but closely related project. This EIS/R, however, does not provide program- or project-level NEPA or CEQA compliance for the Shoreline Study. Separate EIS/Rs will be prepared for each phase of the Shoreline Study. Because the two projects are closely interconnected, the Shoreline Study EIS/R will incorporate this SBSP Restoration Project EIS/R by reference as appropriate.

This Final EIS/R includes program-level evaluation of the SBSP Restoration Project long-term alternatives as well as project-level analysis of the first phase of restoration (the Phase 1 actions) under the long-term alternatives (Phase 1 actions are the same under both Alternatives B and C).

This Final EIS/R has been revised in response to the public comments received on the SBSP Restoration Project Draft EIS/R during the public review period. Formal responses to the comments received on the Draft EIS/R are presented in Appendix O of this Final EIS/R. Appendix O also includes a section identifying minor revisions (corrections and clarifications) made by the lead agencies.

Issues raised during the public review period include the following:

- Relationship between the SBSP Restoration Project and the South San Francisco Bay Shoreline Study;
- Scope of the EIS/R;
- Preferred alternative;

- Adaptive Management Plan funding;
- Aircraft bird strikes;
- Public access and impacts to wildlife;
- Wildlife impact significance thresholds;
- Flooding;
- Impacts of sea level rise;
- Hunting; and
- Invasive *Spartina* and other invasive species.

Please refer to Appendix O, Response to Comments, for responses to comments on these issues and all of the other comments on the Draft EIS/R.

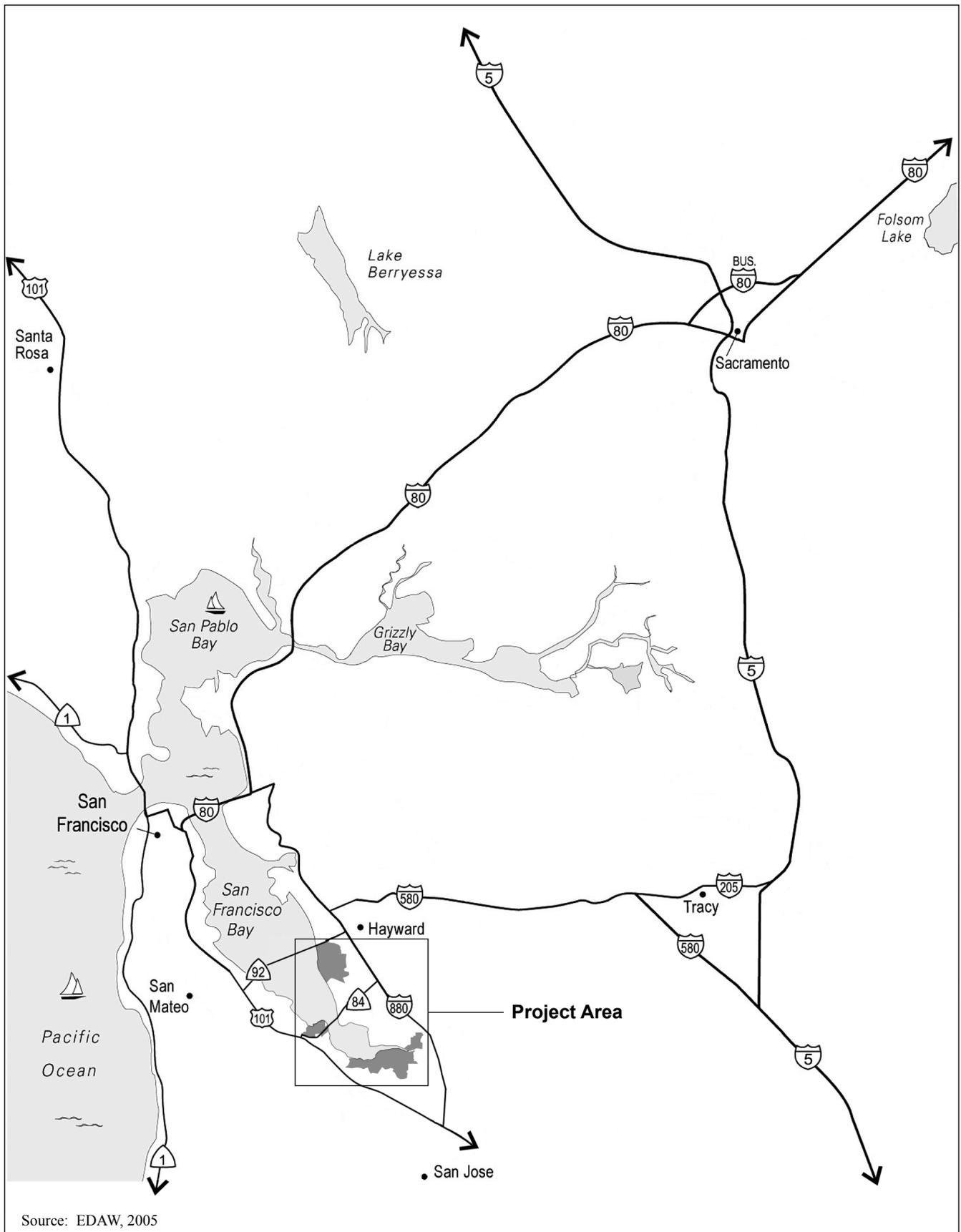
## 1.1 Project Location

The SBSP Restoration Project Area is located in South San Francisco Bay in northern California (see Figure 1-1). The SBSP Restoration Project Area consists of three pond complexes, totaling approximately 15,100 acres of salt ponds and adjacent habitats in South San Francisco Bay that USFWS and CDFG acquired from Cargill in 2003. The Project Area also includes Pond A6 which the USFWS has owned since 1983 (see Figure 1-2). CDFG owns and manages the 5,500-acre Eden Landing pond complex. USFWS owns and manages the 8,000-acre Alviso pond complex and the 1,600-acre Ravenswood pond complex.

The Eden Landing pond complex consists of 23 ponds on the shores of the East Bay, west of Hayward and Union City in Alameda County. These ponds are part of the Eden Landing Ecological Reserve (ELER). The approach to the San Mateo Bridge forms the northern boundary of the pond complex. Alameda Creek Flood Control Channel and the Coyote Hills form the southern boundary.

The Alviso pond complex consists of 25 ponds on the shores of the South Bay in Fremont, San Jose, Sunnyvale and Mountain View, in Santa Clara and Alameda counties. The pond complex is bordered on the west by the Palo Alto Baylands Nature Preserve and Charleston Slough, on the south by commercial and industrial land uses as well as NASA Ames Research Center and Sunnyvale Baylands Park, and on the east by Coyote Creek in San Jose and Cushing Parkway in Fremont.

The Ravenswood pond complex consists of seven ponds on the bay side of the Peninsula, along both sides of State Route (SR) 84 west of the Dumbarton Bridge, and on the bayside of the developed areas of the City of Menlo Park in San Mateo County. Bayfront Park in Menlo Park is directly west of the pond complex, and a portion of SR 84 and the Dumbarton Rail corridor are along its southern border.



10 5 0 10 Miles



Figure 1-1  
Regional Location

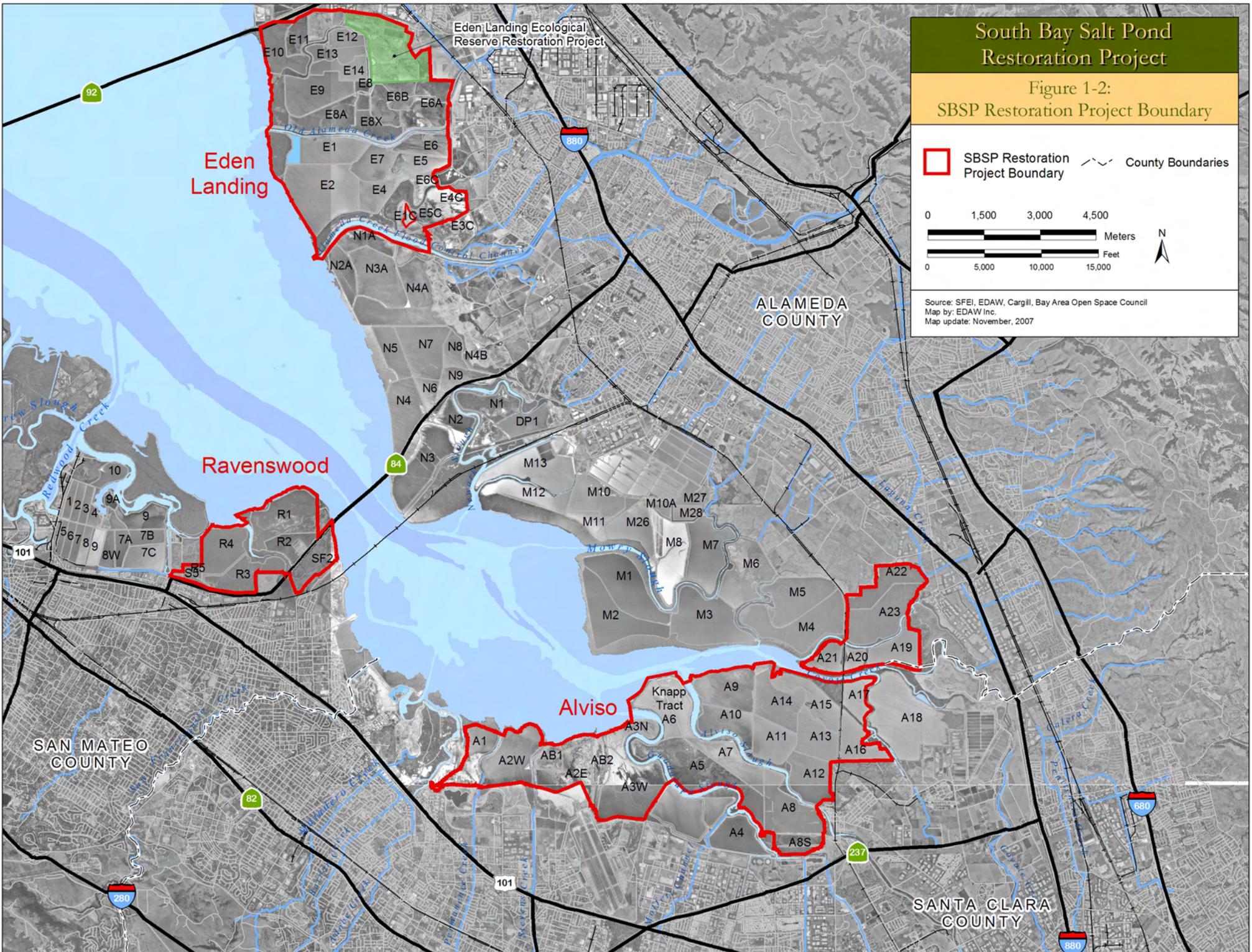
# South Bay Salt Pond Restoration Project

Figure 1-2:  
SBSP Restoration Project Boundary

 SBSP Restoration Project Boundary  County Boundaries



Source: SFEI, EDRAW, Cargill, Bay Area Open Space Council  
Map by: EDRAW Inc.  
Map update: November, 2007



## 1.2 NEPA and CEQA Overview

This EIS/R was prepared in accordance with CEQ Regulations for Implementing NEPA (40 CFR 1500-1508) and CEQA (Public Resources Code Section 21000 et seq.). USFWS is the lead agency under NEPA. CDFG is the lead agency under CEQA. The Corps and NASA Ames are cooperating agencies<sup>1</sup> under NEPA. Responsible agencies<sup>2</sup> include the California Coastal Conservancy (Conservancy), San Francisco Bay Regional Water Quality Control Board, Alameda County Flood Control and Water Conservation District (ACFCWCD), Santa Clara Valley Water District (SCVWD), East Bay Regional Park District (EBRPD), State Lands Commission, and San Francisco Bay Conservation and Development Commission (BCDC).

USFWS and CDFG are the landowners and managers of the SBSP Restoration Project Area and are currently conducting the interim stewardship of the former salt ponds. The Conservancy, CDFG, and USFWS jointly manage the SBSP Restoration Project in collaboration with the Corps, ACFCWCD and SCVWD. Together these agencies form the SBSP Restoration Project Management Team (PMT). The role of the PMT in the SBSP Restoration Project planning process is described in Section 1.3.1 below.

### 1.2.1 Purpose of the EIS/R

This EIS/R is intended to provide the public and responsible and trustee agencies with information about the potential environmental effects of the SBSP Restoration Project. It will be used by the lead agencies when considering approval of the Project.

CEQ Regulations for Implementing the NEPA (40 CFR 1502.1) states that “the primary purpose of an [EIS] is to serve as an action-forcing device to ensure that the policies and goals defined in [NEPA] are infused into the ongoing programs and actions of the federal government. An EIS shall provide full and fair discussion of significant environmental impacts and shall inform decision makers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment.”

CEQA Section 21002.1 states that the purpose of an EIR is to identify the significant effects on the environment of a project, to identify alternatives to the project, and to indicate the manner in which those significant effects can be mitigated or avoided.

Both NEPA and CEQA encourage the preparation of combined environmental planning documents.

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<sup>1</sup> According to Section 1501.6 of the CEQ Regulations, cooperating agencies are “any other Federal agency which has jurisdiction by law...in addition, any other Federal agency which has special expertise with respect to any environmental issue, which should be addressed in the statement [EIS] may be a cooperating agency upon request of the lead agency.”

<sup>2</sup> Responsible agencies is defined in Section 15381 of the CEQA Guidelines as “a public agency which proposes to carry out or approve a project, for which a Lead Agency is preparing or has prepared an EIR or Negative Declaration...[it] includes all public agencies other than the Lead Agency which have discretionary approval power over the project.” It includes both state and local agencies that issue permits or provide funding.

### 1.2.2 Joint EIS/R

As noted above, NEPA and CEQA have similar purposes and thus use generally similar concepts and terminologies. In some cases, different terms are used to convey the same meaning. Examples of these differences in terminologies are shown in Table 1-1 below. This joint EIS/R primarily uses CEQA terminology, however some NEPA terms are also used.

### 1.2.3 Environmental Review Process

#### Scoping

Scoping, or early consultation with persons or organizations concerned with the environmental effects of the project, is required when preparing a joint EIS/R. CEQ Regulations for Implementing the National Environmental Policy Act (40 CFR 1506.6) requires that agencies make diligent efforts to involve the public in preparing and implementing their NEPA procedures. Pursuant to NEPA, a Notice of Intent to prepare an EIS/R for the SBSP Restoration Project and the Shoreline Study was published in the Federal Register on November 9, 2004. Pursuant to CEQA Guidelines Section 15082, a Notice of Preparation was distributed to responsible agencies and the public on November 15, 2004. These notices announced a public review period during which comments were received on the appropriate scope of the EIS/R.

Two public scoping meetings were held on November 16 and 17, 2004 to solicit comments on environmental issues to be addressed in the EIS/R. Scoping comments received during the 30-day comment period as well as additional comments received after the comment period are presented in Appendix A.

Table 1-1 Terminologies Used in NEPA and CEQA Documents

NEPA TERM	CEQA TERM
Action	Project
Lead Agency	Lead Agency
Cooperating Agency	Responsible Agency
Notice of Intent	Notice of Preparation
Environmental Impact Statement	Environmental Impact Report
Record of Decision	Findings
Purpose and Need for Action	Objectives of the Project
Affected Environment	Environmental Setting
Environmental Consequences	Impacts Analysis and Mitigation Measures
Effect/Impact	Impact
Historic Property	Historical Resource

#### Draft EIS/R

A Notice of Availability (NOA) for the Draft EIS/R was published in the Federal Register and in a local newspaper, and the Draft EIS/R was filed with USEPA for federal review in accordance with NEPA

Guidelines. The publication of the NOA served to meet CEQA requirements. In addition, pursuant to the CEQA Guidelines, the Draft EIS/R, along with a Notice of Completion, was filed with the Office of Planning and Research (OPR) for state agency review. USFWS, the Corps and CDFG sent notices to all who provided scoping comments, expressed interest in this Project, or requested such notice in writing. Copies of the Draft EIS/R were available for public review on the SBSP Restoration Project website ([www.southbayrestoration.org](http://www.southbayrestoration.org)), as well as during regular office hours at the following locations:

- Visitor Center, Don Edwards San Francisco Bay National Wildlife Refuge, 1 Marshlands Road, Fremont, CA 94555;
- San Francisco District offices of the Corps at 1455 Market Street, San Francisco, CA 94103;
- CDFG Region 3 Office at 7329 Silverado Trail, Napa, CA 94558; and
- SCVWD's administrative offices at 5750 Almaden Expressway, San Jose, CA 95118-3614.

The Draft EIS/R was also available for public review at the following libraries:

- Alviso Branch Library: 5050 North First St., San José, CA 95002, (408) 263-3626;
- City of Mountain View Library: 585 Franklin Street, Mountain View, CA 94041, (650) 903-6337;
- Palo Alto Main Library: 1213 Newell Road, Palo Alto, CA 94303, (650) 329-2436;
- Menlo Park Library: 800 Alma Street, Menlo Park, CA 94025, (650) 330-2500;
- Sunnyvale Public Library: 665 West Olive Avenue, Sunnyvale, CA 94086, (408) 730-7300;
- Hayward Public Library: 835 C Street, Hayward, CA 94541, (510) 293-8685; and
- Fremont Main Library: 2400 Stevenson Blvd, Fremont, CA 94538, (510) 745-1400.

The Draft EIS/R was circulated for a 45-day public and agency review period, beginning with the publication of this document (receipt of the EIS/R from the State Clearinghouse and publication of the NOA in the Federal Register). The 45-day public comment period was extended to a total of 55 days to allow additional time for review and comment. Copies of the EIS/R were made available either directly or through the locations designated above to applicable local, state, and federal agencies and to interested organizations and individuals wishing to review and comment on the report.

During the 55-day public comment period, two public meetings were held to discuss the proposed Project and receive comments on the Draft EIS/R. The first meeting was held on March 28, 2007 at the NASA Research Center, Moffett Federal Airfield, and the second meeting was held on March 29, 2007 at Centennial Hall in Hayward. The dates, time, and place of these meetings were identified in the publicly-circulated NOA for the Draft EIS/R.

USFWS and CDFG considered all comments on the Draft EIS/R provided by the public and federal, state, and local agencies within the public review period. Formal responses to these comments are presented in Appendix O, Response to Comments, of this EIS/R.

## Final EIS/R

As described in the Introduction above, this Final EIS/R incorporates changes suggested by comments on the Draft EIS/R, as appropriate, and responds to all substantive comments received during the Draft EIS/R review period (see Appendix O). The Final EIS/R is required to (1) provide a full and fair discussion of the proposed action's significant environmental impacts, and (2) inform the decision-makers and the public of reasonable measures and alternatives that would avoid or minimize adverse impacts or enhance the quality of the human environment. A NOA for the Final EIS/R will be published in the Federal Register and in local newspapers, and the EIS/R will be filed with USEPA as required by NEPA. USFWS and CDFG will provide notices of the Final EIS/R to all who commented on the Draft EIS/R and others. Copies of the Final EIS/R will also be available for review on the SBSP Restoration Project website ([www.southbayrestoration.org](http://www.southbayrestoration.org)), as well as at the locations shown above where the Draft EIS/R was available.

## Thirty-Day Waiting Period/Public Comment Period

USFWS will accept and consider comments on the Final EIS/R received within 30 days of publication of the NOA and will not proceed with implementing the SBSP Restoration Project during this time period, pursuant to NEPA requirements. Under CEQA Guidelines, CDFG will send other agencies responses to the Draft EIS/R public comments prior to certification of the EIR.

## Record of Decision (ROD)

The final step in the NEPA process is the preparation of the Record of Decision (ROD), which presents a concise summary of the decision made by USFWS. The ROD can be published immediately after the Final EIS/R comment period has ended. After the conclusion of the 30-day waiting period on the Final EIS/R, USFWS will prepare and sign the ROD regarding the SBSP Restoration Project. The ROD will summarize the proposed action and alternatives considered in the EIS/R; identify and discuss factors considered in the federal lead agency's decision; and state how these considerations entered into the final decision. If appropriate, the ROD will state how the SBSP Restoration Project will be implemented and describe any associated mitigation measures.

## EIR Certification

The final step in the CEQA process is certification of the EIR, which includes preparation of a Mitigation Monitoring and Reporting Plan (MMRP), adoption of its findings, and preparation of a Statement of Overriding Considerations<sup>3</sup> (if required) should the SBSP Restoration Project be approved.

In accordance with CEQA, the lead agency (CDFG) must make one or more written findings for each of the significant effects, accompanied by a brief explanation of the rationale for each finding. The findings constitute a binding set of obligations that will come into effect when CDFG approves the Project. When

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<sup>3</sup> "CEQA requires the decision-making agency to balance, as applicable, the economic, legal, social, technological, or other benefits of a proposed project against its unavoidable environmental risk when determining whether to approve the project." A Statement of Overriding Considerations is written "[w]hen the lead agency approves a project which will result in the occurrence of significant effects which are identified in the final EIR but are not avoided or substantially lessened..." (Section 15093 of the CEQA Guidelines).

making the findings, the lead agency must adopt a program for reporting on or monitoring the changes which it has either required in the Project or made a condition of approval to avoid or substantially lessen significant environmental effects.

When a lead agency decides to approve a project that will result in significant unavoidable impacts (that cannot be avoided or reduced to less-than-significant levels), the lead agency is required to prepare a Statement of Overriding Considerations. The statement must specify the reasons to support the lead agency's actions based on substantial evidence in the record. According to CEQA Guidelines Section 15093, "CEQA requires the decision-making agency to balance, as applicable, the economic, legal, social, technological, or other benefits of a proposed project against its unavoidable environmental risks when determining whether to approve the project. If the specific economic, legal, social, technological, or other benefits of a proposed project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered 'acceptable'." A certified EIR indicates the following:

- The document complies with CEQA;
- The decision-making body of the lead agency reviewed and considered the Final EIR prior to approving the project; and
- The Final EIR reflects the lead agency's independent judgment and analysis.

After approval of the Project, the CEQA lead agency, CDFG, is required to file a Notice of Determination with OPR and the relevant county clerks within five working days.

### Mitigation Monitoring and Reporting Program (CEQA)

CEQA Section 21081.6(a) requires lead agencies to "adopt a reporting and mitigation monitoring program for the changes to the project which it has adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment." The MMRP required by CEQA need not be included in an EIR. However, throughout this EIS/R, measures have been clearly identified in order to facilitate establishment of an MMRP. Any mitigation measures adopted as a condition of approval of the Project will be included in CDFG's SBSP Restoration Project MMRP to verify compliance.

## 1.3 Purpose and Need

### 1.3.1 Purpose and Objectives

The SBSP Restoration Project Goal and Objectives were developed by the PMT with input from the Stakeholder Forum, Science Team, and Regulatory and Trustee Agency Group. The overarching Project goal and six Project Objectives within the SBSP Restoration Project Area, as adopted by the SBSP Restoration Project Stakeholder Forum on February 18, 2004, are as follows:

## Goal

The overarching Project Goal is the restoration and enhancement of wetlands in South San Francisco Bay while providing for flood management and wildlife-oriented public access and recreation.

## Objectives

1. Create, restore, or enhance habitats of sufficient size, function, and appropriate structure to:
  - Promote restoration of native special-status plants and animals that depend on South San Francisco Bay habitat for all or part of their life cycles.
  - Maintain current migratory bird species that utilize existing salt ponds and associated structures such as levees.
  - Support increased abundance and diversity of native species in various South San Francisco Bay aquatic and terrestrial ecosystem components, including plants, invertebrates, fish, mammals, birds, reptiles and amphibians.
2. Maintain or improve existing levels of flood protection in the South Bay Area.
3. Provide public access and recreational opportunities compatible with wildlife and habitat goals.
4. Protect or improve existing levels of water and sediment quality in the South Bay, and take into account ecological risks caused by restoration.
5. Implement design and management measures to maintain or improve current levels of vector management, control predation on special status species, and manage the spread of non-native invasive species.
6. Protect the services provided by existing infrastructure (*e.g.*, power lines, railroads).

### 1.3.2 Need for Action

The SBSP Restoration Project is needed to address the following:

- Historic losses of tidal marsh ecosystems and habitats in San Francisco Bay and concomitant declines in populations of endangered species (*e.g.*, clapper rail, salt marsh harvest mouse);
- Increasing salinity and declining ecological value in several of the ponds within the Project Area;
- Long-term deterioration of non-certifiable levees (for FEMA purposes) within the Project Area, which could lead to levee breaches and flooding;
- Long-term tidal flood protection; and
- Limited opportunities in South San Francisco Bay for wildlife-oriented recreation.

## 1.4 Project Background

### 1.4.1 Historic Tidal Marsh in South Bay

The San Francisco Bay Estuary began to form 10,000 years ago as sea level rose through the Golden Gate (Atwater and others 1979; Atwater and others 1977). As sea level rise slowed approximately 3,000 years ago, vegetation began to colonize and persist on the tidal mudflats along the estuarine margins (Atwater and others 1979; Collins and Grossinger 2004). As recently as 150 years ago, the San Francisco Bay landscape was dominated by tidal marsh habitat (see Figure 1-3, Historic Baylands Map). The open water areas of the Bay were very nearly surrounded by broad expanses of tidal mudflats and even broader areas of tidal marsh (Goals Project 1999). However, that landscape began to undergo vast changes beginning with the earliest European settlements (Orlando and others 2005). It is estimated that since 1800, over 80 percent of the tidal marsh habitat surrounding San Francisco Bay has been lost (Goals Project 1999). This equates to a loss of more than 150,000 acres of tidal marsh Estuary-wide. In the South Bay, over 90 percent of the historic tidal marsh area has been lost due to conversions to salt ponds, agricultural areas and urban developments (Foxgrover and others 2004). Through this Project and other similar projects that trend of loss is being reversed. Approximately 13,000 acres of tidal habitats around the Bay have been restored, and another 35,000 acres, including the acreage of this Project, is in the planning and design process.

### 1.4.2 Salt Pond Operations

Solar salt production through the conversion of tidal marsh areas to salt ponds began in the mid-1850s (Siegel and Bachand 2002). Early salt production efforts were small operations scattered throughout the Bay, but by 1936, the Leslie Salt Company emerged as the major player in the salt industry, consolidating the smaller companies into one large operation (EDAW 2005). In 1936, the Leslie Salt Company produced over 300,000 tons of salt annually on approximately 12,500 acres of salt ponds. By 1959, production had increased to one million tons of salt on 26,000 acres of salt ponds located in the North and South Bay. Cargill acquired the Leslie Salt Company in 1978 and continued producing approximately one million tons of salt annually on the 26,000-acre footprint of salt ponds.

The solar salt production process takes several years, with the time period depending on seasonal variations in temperature, rainfall and evaporation rates (Siegel and Bachand 2002). The process begins with the intake of Bay water into an “intake” pond, either through pumps or through a gate that opens at high tide. Once in the system, the Bay water is referred to as brine. The brine flows slowly through a series of ponds called “evaporator” or “concentrator” ponds, with salinity increasing from one pond to the next through evaporation.

When the brine becomes fully saturated with salt, the brine is pumped into “pickle” ponds for storage and then into crystallizer ponds for eventual harvesting (Life Science! 2004). Within a crystallizer pond, evaporation continues and a layer of salt accumulates on the bed. This raw salt is mechanically harvested and sent to Cargill’s processing plant in Newark for further processing before it is ready for consumers. The remaining solution, an extremely saline liquid by-product known as bittern, is pumped into bittern

# South Bay Salt Pond Restoration Project

Figure 1-3: San Francisco Estuary Institute  
Historic Baylands Map

**Legend**

- Salt Pond Acquisition Levee Boundaries
- Other Current Salt Pond Levee Boundaries

**Reference Features**

- Highway
- Railroad
- Road
- Creek / Stream
- County Boundary
- Aqueduct

**Habitats (EcoAtlas Baylands)**

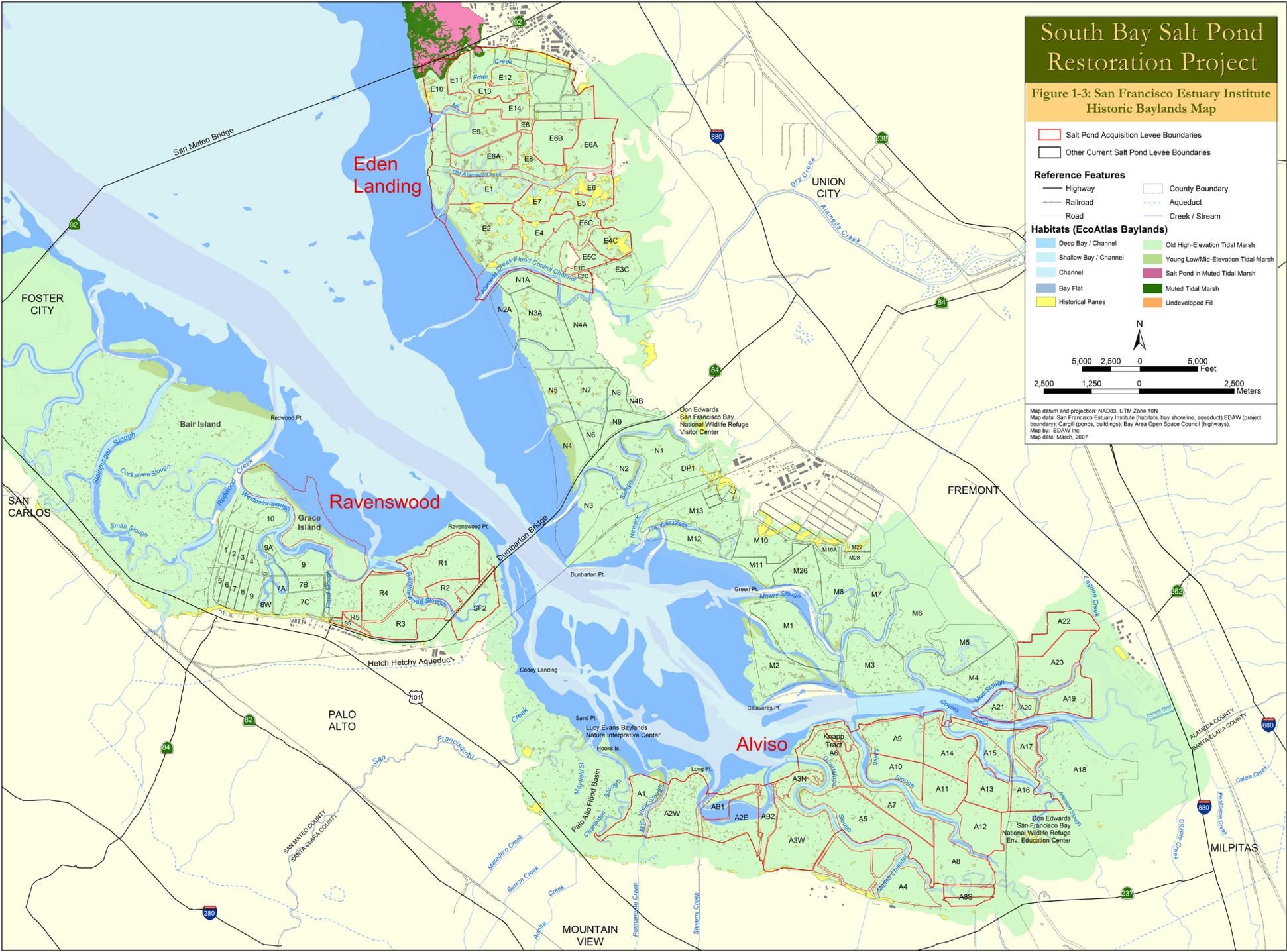
- Deep Bay / Channel
- Shallow Bay / Channel
- Channel
- Bay Flat
- Historical Pans
- Old High-Elevation Tidal Marsh
- Young Low/Mid-Elevation Tidal Marsh
- Salt Pond in Muted Tidal Marsh
- Muted Tidal Marsh
- Undeveloped Fill

**Scale**

0 2,500 5,000 Feet  
0 1,250 2,500 Meters

**Map Data**

Map datum and projection: NAD83, UTM Zone 10N  
 Map data: San Francisco Estuary Institute (habitats, bay shoreline, aqueduct); EDAW (project boundary); Cargill (ponds, buildings); Bay Area Open Space Council (highways).  
 Map by: EDAW Inc.  
 Map date: March, 2007



ponds near the processing plants for long-term storage. Because of its high salinity, bittern is toxic to aquatic plants and wildlife and cannot be discharged back to the Bay.

Although much of the former Cargill salt ponds in the South Bay are targeted for restoration by the SBSP Restoration Project, Cargill will continue to operate the Newark ponds and Newark and Redwood City processing plants, maintaining a production of approximately 600,000 tons of salt annually (Life Science! 2004).

### 1.4.3 History of the Refuge and Reserve

#### USFWS Don Edwards San Francisco Bay National Wildlife Refuge

Don Edwards San Francisco Bay National Wildlife Refuge is the first urban National Wildlife Refuge established in the United States dedicated to preserving and enhancing wildlife habitat, protecting migratory birds, protecting threatened and endangered species, and providing opportunities for wildlife-oriented recreation and nature study for the surrounding communities (USFWS 2003). Congress created the Refuge in 1972 "...for the preservation and enhancement of highly significant habitat...for the protection of migratory waterfowl and other wildlife, including species known to be threatened with extinction, and to provide opportunity for wildlife-oriented recreation and nature study. . ." (P.L. 92-330, 86 Stat. 399, June 30, 1972). USFWS was directed by Congress to acquire up to 23,000 acres in the area depicted on a Map entitled "Boundary Map, Proposed San Francisco Bay National Wildlife Refuge" and dated July 1971. Between 1977 and 1988, USFWS acquired approximately 19,000 acres, by purchase, lease or other means. Significantly, in 1979 USFWS acquired 15,347 acres from Leslie Salt (now Cargill Salt). At the time, Leslie Salt retained salt-making rights on this land. Also, in 1983 USFWS acquired Pond A6 from the Knapp family and The Nature Conservancy.

In 1988, Congress directed USFWS to expand the Refuge by authorizing the acquisition of an additional 20,000 acres for a total of 43,000 acres. (P.L. 100-556, 102 Stat. 2780, October 28, 1988). The additional acres were to be in the vicinity of, and similar to, the land identified in the original 1972 legislation and that "are necessary to protect fish and wildlife purposes." In 1990, USFWS completed an Environmental Assessment and Finding of No Significant Impact (1990 EA) that evaluated potential acquisition land to meet the Congressional purposes of establishing and expanding the Refuge. The 1990 EA identified the authorized expansion boundary (Authorized Expansion Boundary) on a map. (Both the 1990 EA and the Authorized Expansion Boundary map are presented in Appendix P to this EIS/R). The vast majority of the Authorized Expansion Boundary is south of the San Mateo Bridge as shown on Figure 1-4. Since 1990, USFWS has acquired land within the Authorized Expansion Boundary (through purchase, lease, or donation) including portions of the 15,100 acres acquired from Cargill in 2003 (see discussion below). As of 2007, the Refuge consists of approximately 30,000 acres. In 1995, the Refuge was renamed "Don Edwards San Francisco Bay National Wildlife Refuge" to honor Congressman Don Edwards, who spearheaded the effort to establish the Refuge.

#### CDFG Eden Landing Ecological Reserve

The Fish and Game Commission designated the CDFG portion of the SBSP Restoration Project Area as part of the Eden Landing Ecological Reserve (ELER). The original 835-acre property was acquired in

1996 and established thereafter as ELER when the ELER Restoration Project was initiated. As the property acquired in 2003 from Cargill (see below) was contiguous with the ELER Restoration Project and management goals were similar, the remaining ponds at the Eden Landing pond complex were added to ELER. According to Fish and Game Code Title 14, Section 630, “Ecological Reserves are established to provide protection for rare, threatened or endangered native plants, wildlife, aquatic organisms and specialized terrestrial or aquatic habitat types. Public entry and use shall be compatible with the primary purposes of such reserves...” Public use may include hiking on established designated trails, hunting and fishing; other use allowed within CDFG lands includes scientific studies. The ELER Restoration Project area was established to restore former salt ponds and crystallizers to tidal salt marsh and seasonal wetlands (see Section 1.6.4 below for a discussion of the ELER Restoration Project).

#### 1.4.4 2003 Salt Ponds Acquisition

In October 2000, Cargill proposed to consolidate salt pond operations and sell the land and salt production rights on 61 percent of its South Bay operation area. Negotiations headed by Senator Dianne Feinstein led to the signing of a Framework Agreement, which lays out the accord for the public acquisition of the South Bay salt ponds (including the acquisition of Cargill’s salt-making rights retained on some ponds in 1979), and 1,400 additional acres of crystallizer ponds along the Napa River in the North Bay. The Framework Agreement was signed in May 2002 by the California Resources Agency, Wildlife Conservation Board, CDFG, the Conservancy, USFWS, Cargill, and Senator Feinstein.

Additional negotiations were completed in December 2002 regarding the Phase-out Agreement, which lays out specific details regarding Cargill’s responsibilities for halting salt production in the ponds in question.

The acquisition and restoration of the South Bay salt ponds has long been a goal of legislators, resource agencies, and non-governmental organizations (NGOs) working to protect San Francisco Bay. Supporters and signatories of the Framework Agreement include the San Francisco Bay Joint Venture, Save The Bay, National Audubon Society, Citizens Committee to Complete the Refuge, and many other agencies, organizations, and individuals.

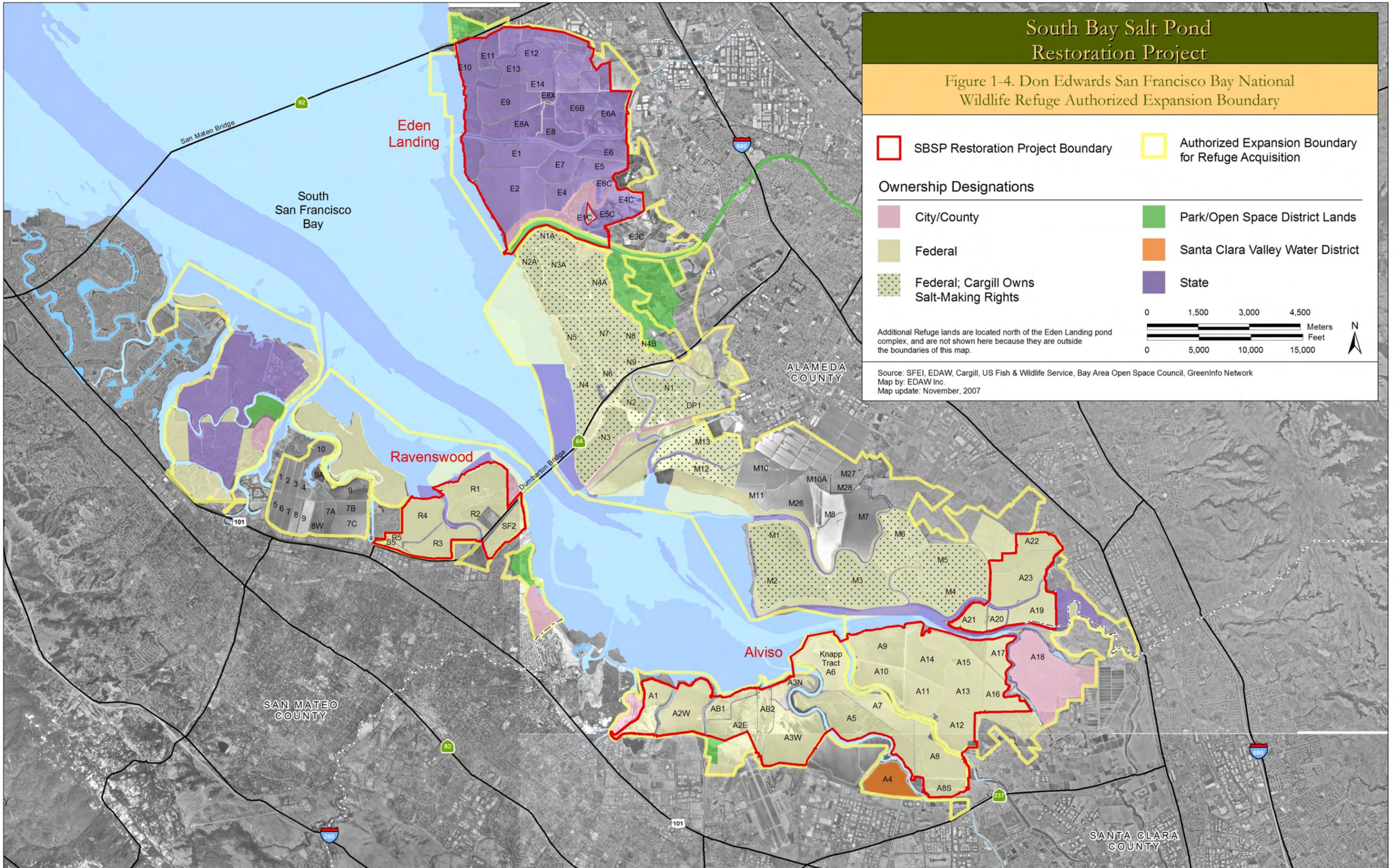
The State of California approved the purchase of the salt ponds from Cargill on February 11, 2003. USFWS and CDFG are now the landowners and land managers of the SBSP Restoration Project Area, with USFWS owning and managing the Ravenswood and Alviso pond complexes, and CDFG owning and managing the Eden Landing pond complex. Table 1-2 presents the ponds and pond acreage within each pond complex. The land acquired from Cargill in 2003 is all within the Authorized Expansion Boundary identified in the 1990 EA.

#### 1.4.5 Initial Stewardship Plan Operations

The Initial Stewardship Plan (ISP) is an interim plan to maintain and enhance the biological and physical conditions within the salt ponds acquired from Cargill in 2003 in the interim period between the cessation of salt production and the implementation of the long-term restoration plan – the SBSP Restoration

# South Bay Salt Pond Restoration Project

Figure 1-4. Don Edwards San Francisco Bay National Wildlife Refuge Authorized Expansion Boundary

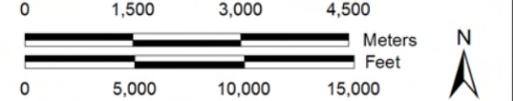


- SBSP Restoration Project Boundary
- Authorized Expansion Boundary for Refuge Acquisition

### Ownership Designations

- City/County
- Federal
- Federal; Cargill Owns Salt-Making Rights
- Park/Open Space District Lands
- Santa Clara Valley Water District
- State

Additional Refuge lands are located north of the Eden Landing pond complex, and are not shown here because they are outside the boundaries of this map.



Source: SFEI, EDAW, Cargill, US Fish & Wildlife Service, Bay Area Open Space Council, GreenInfo Network  
Map by: EDAW Inc.  
Map update: November, 2007

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Table 1-2 Pond Acreage by Pond Complex

EDEN LANDING POND COMPLEX		ALVISO POND COMPLEX		RAVENSWOOD POND COMPLEX	
POND	ACRES	POND	ACRES	POND	ACRES
E1	290	A1	275	R1	450
E1C	150	A2E	315	R2	140
E2	680	A2W	435	R3	270
E2C	30	A3N	160	R4	295
E3	165	A3W	570	R5	30
E4	190	A5	615	S5	30
E4C	175	A6	360	SF2	240
E5	165	A7	255		
E5C	95	A8	410		
E6	200	A8S	160		
E6A	320	A9	365		
E6B	270	A10	250		
E6C	80	A11	260		
E7	215	A12	310		
E8	175	A13	270		
E8A	240	A14	340		
E8X	30	A15	250		
E9	360	A16	240		
E10	265	A17	130		
E11	120	A19	265		
E12	110	A20	65		
E13	120	A21	150		
E14	155	A22	275		
		A23	445		
		AB1	145		
		AB2	170		
TOTAL ACREAGE	4,600	TOTAL ACREAGE	7,485	TOTAL ACREAGE	1,455
POND TOTAL					13,540
ALL OTHER (EXISTING MARSH, SLOUGHS, LEVEES, OTHER)					1,560
PROJECT AREA TOTAL					15,100

Project (Life Science! 2003; Life Science! 2004). Because the SBSP Restoration Project would be implemented in phases over time, some ponds may be managed under the ISP for many years.

The primary objectives of the ISP are to:

- Cease salt concentrating processes within the ponds;
- Circulate Bay water through the ponds and tidally restore the Island Ponds (Alviso Ponds A19, A20 and A21);
- Maintain existing open water and wetland habitat for the benefit of wildlife, including habitat for migratory shorebirds and waterfowl and resident breeding species;
- Maintain ponds in a restorable condition to facilitate future long-term restoration;
- Meet all regulatory requirements; especially discharge requirements to maintain water quality standards in the South Bay;
- Work within existing funding constraints; and
- Maintain existing levels of flood control.

The ISP includes a series of pond “clusters” in each pond complex. Each cluster was designed to intake Bay water, circulate water through the cluster, and discharge water back to the Bay at a salinity below 40 parts per thousand (ppt) in order to meet discharge salinity requirements. Additionally, some ponds were planned to be seasonal wetlands that were allowed to fill with rain water in the winter and dry through evaporation in the summer months, and other ponds were planned to be operated as medium salinity ponds. Life Science! (2003) describes the intended plan for each pond.

Most of the ISP has been implemented. The ISP actions (or some modification thereof) for the following ponds have occurred to date:

- July 2004 – Ponds A1-A5, A7-A8, and E10-E11;
- August 2004 – Ponds E1, E2, E4, and E7;
- March 2005 – Ponds A9-A17;
- April 2005 – Ponds E5, E6, and the C ponds [Ponds E2C, E3C, E4C, E5C, and E6C];
- May 2005 – Pond E8A system (E8A, E8X, E9, E12, E13, and E14);
- November 2005 – Ponds E6A, E6B, and E8; and
- March 2006 – Island Ponds (A19, A20, and A21).

The types of ISP actions that have been implemented at each pond complex are presented in Table 1-3. The ISP actions for Ponds A22 and A23 in the Alviso pond complex and all of the ponds in the Ravenswood pond complex have not yet occurred. Throughout the ISP implementation, modifications to the original plan have occurred. These modifications include changing pond habitat designations (*e.g.*, from a Bay water circulation pond to a seasonal pond) and changing pond operations (*e.g.*, changing water control structure placement and/or management). Figures 1 through 3 in Appendix B depict the

implemented and planned ISP operations to date. For the purposes of this EIS/R, the baseline conditions for the impact analysis assume that the ISP is fully implemented (see Section 3.1.2).

Table 1-3 ISP Management Regimes by Pond Complex and Pond

POND TYPE	POND COMPLEX	POND
Bay water circulation ponds	Alviso	A1, A2W, AB1, A2E, AB2, A3W, A5, A7, A9, A10, A11, A14, A16, A17
	Eden Landing	E1, E2, E2C, E9, E10
	Ravenswood	R1, R2, R3, R4, R5, S5, SF2
Seasonal ponds	Alviso	A22, A23
	Eden Landing	E12, E13, E14
Seasonal ponds/High salinity ponds <sup>1</sup>	Alviso	A3N, A8, A8S
Seasonal ponds/Bay water circulation pond	Eden Landing	E1C, E4C, E5C, E6C, E4, E7, E8A, E8, E6B, E6A, E11
High salinity ponds	Alviso	A12, A13, A15
	Eden Landing	E5, E6
Tidally-restored ponds	Alviso	A19, A20, A21
Note: <sup>1</sup> Seasonal ponds/high salinity ponds can be operated as either type depending on conditions such as rainfall, temperature and freshwater inflows.		

#### 1.4.6 Restoration in South San Francisco Bay

The SBSP Restoration Project is a direct outgrowth of the acquisition of the Alviso, Ravenswood and Eden Landing pond complexes (either in fee ownership or the salt-making rights) from Cargill in 2003. The Project, therefore, has focused on how best to manage and restore these lands, either through the ISP or this Restoration Plan. The 1990 EA for potential additions to the refuge makes it clear that due to a variety of reasons such as the lawful development of privately owned lands, lack of willing sellers or prohibitive cost, some lands within the boundary will not be able to be acquired. However, despite this, there are areas outside the Project Area but within the Authorized Expansion Boundary that offer additional restoration and conservation opportunities. The Authorized Expansion Boundary was established through a process that carefully evaluated existing South Bay habitats important for the protection of fish and wildlife (especially threatened and endangered species and migratory birds) and for wildlife-oriented recreation. The land within the Authorized Expansion Boundary reflects the diversity of wildlife habitats that could be restored to tidal wetlands, brackish marsh, managed ponds, seasonal wetlands, vernal pools, grasslands, riparian, freshwater marshes and adjacent uplands. Figure 1-4 shows all publicly owned open space within the Authorized Expansion Boundary. The unshaded areas in Figure 1-4 are either built out or are open lands still owned by private parties which represent future opportunities for acquisition by USFWS or CDFG.

Some lands outside the SBSP Restoration Project Area are more suitable for certain types of restoration than lands within the Project Area. It is true that because of certain challenges with particular Alviso Ponds (*e.g.*, mercury, subsidence), some of the Mowry Ponds currently owned by the Refuge and

operated by Cargill for salt production would be more suitable for tidal marsh restoration when and if they become available because they have fewer challenges. Another reason for the acquisition and restoration of the remaining privately owned lands within the Authorized Expansion Boundary is to spread the restoration risks over a larger geographic area making the likelihood of failure due to uncontrollable events (*e.g.*, oil spill) less likely. Some of these privately owned lands also provide opportunities to restore locally rare habitats (*e.g.*, riparian, seasonal wetlands, former duck clubs) that are limited when considering only the lands within the Project Area.

Areas outside the SBSP Restoration Project Area, however, are not currently available for restoration because the Project proponents either do not own the land or they do not possess the right to restore the land. Therefore, it is considered not practical or feasible to include any additional lands within the alternatives for evaluation as part of the SBSP Restoration Project in this EIS/R. Nonetheless, the Project proponents, and USFWS in particular, share the vision of many stakeholders to restore as much of South San Francisco Bay as possible to natural ecosystems and habitats. USFWS has a demonstrated history of acquiring and restoring land as it becomes available. Since the Refuge was established, and in particular since Congress directed the Refuge be expanded, USFWS has worked to acquire and restore many of these identified lands. For example:

- In 1992, the Refuge acquired the Carruf parcel in southern Fremont to restore the vernal pool/grasslands complex and former duck hunting club that provides habitat for three endangered species in addition to a variety of migratory birds.
- In 1995, the Refuge acquired the former Silver Pines Golf Course in Newark, to establish the Mayhews Landing Tract being managed to provide habitat for waterfowl, shorebirds and the endangered salt marsh harvest mouse.
- In 1999, the Refuge and CDFG obtained the majority of the remaining private land on Bair Island in Redwood City. Since then, the Refuge and CDFG have developed and are now implementing a plan to restore 1,400 acres of these former commercial salt ponds to tidal wetlands for threatened and endangered species, migratory species and enhanced wildlife-oriented public access. These ponds represented the largest wetland restoration opportunity in South San Francisco Bay until the 2003 acquisition from Cargill specific to this EIS/R.
- The Refuge has leased a number of tidal sloughs, marshes and mudflats within the expansion boundary from the California State Lands Commission to manage as part of the Refuge for wildlife and public education and nature study.
- The Refuge has an agreement with the City of Palo Alto to manage the City's Faber/Laumister parcels in San Mateo County for endangered species, migratory species, wildlife oriented public access and environmental education.
- In the 1990s the levees separating the former commercial salt crystallizer beds near the Refuge headquarters in Fremont from the waters of the Bay were intentionally breached. This action by Refuge staff, combined with the long period of non-use that preceded it, facilitated the return to salt marsh which now provides habitat for the endangered California clapper rail and the salt marsh harvest mouse. The resulting habitat, later named La Riviere Marsh, to honor two of the citizens that helped establish and later expand the Refuge, is illustrative of the success that can occur over time with reintroduction of tidal action to former salt ponds.

- Coyote Creek Lagoon, also known as Warm Springs Lagoon, is a former borrow pit (owned by the State Lands Commission and leased to USFWS) that is now tidal, brackish marsh heavily used by migratory species. Accessed by a popular Refuge trail, this area provides habitat while providing excellent wildlife-oriented recreational opportunities for the public.
- The Refuge's Warm Springs Vernal Pool Complex in Fremont, formerly known as the Carruf property, has been managed through a highly controlled grazing program to enhance the existing habitat for three endangered species that use the vernal pools along with grassland dependent species such as burrowing owls.
- USFWS is also working with ProLogis, a private development company, to expand these vernal pools/grasslands on adjacent private lands that will be donated to the Refuge.

These and other examples illustrate USFWS's ongoing actions to achieve Congressional intent in establishing and expanding the Refuge.

Expanding the area where the SBSP Restoration Project occurs could in turn improve the efficiency and success of the restoration. The adaptive management aspect of the Project anticipates the future opportunity of expanding the Project Area to include other lands identified in the Authorized Expansion Boundary. These additional lands, if or when they become available would not only increase the number of acres available for restoration and other conservation measures but would also increase the type and the mix of habitats that could be restored. Additional land and habitats, for example, would allow the Project proponents to spread their efforts to enhance sensitive species across the landscape, supporting more viable and resilient populations. Expanding the number and mix of habitats could also offer the Project more chances to connect a range of habitats to restore ecosystems as a whole. Expanding the Project Area could also help the Project meet its flood control objectives by improving both the cost efficiency and the effectiveness of flood control levees.

USFWS reiterates that it would like to acquire and where appropriate restore all lands within the Authorized Expansion Boundary when these areas become available. To that end, USFWS will continue to work with willing landowners of the privately owned parcels within the Refuge's Authorized Expansion Boundary to acquire, protect and when appropriate, restore them to further meet the Refuge's congressionally mandated purposes. At the beginning of each phase of the Project, the status of lands outside of the Project Area will be assessed. Although it is not feasible now, when there is a realistic and feasible opportunity to restore land outside the Project Area but within the Authorized Expansion Boundary, the Project will be redefined to consider them. This is consistent with the Project's adaptive management approach, which allows the Project proponents to stop and consider new information and changing conditions at each phase, and adjust the Project accordingly.

## 1.5 Overview of the SBSP Restoration Project Planning Process

Public involvement is an integral part of the SBSP Restoration Project planning process. The lead agencies and their partners (the PMT) have worked closely with trustee and regulatory agencies, local governments, non-governmental organizations, and the public to produce a scientifically informed and widely supported restoration plan.

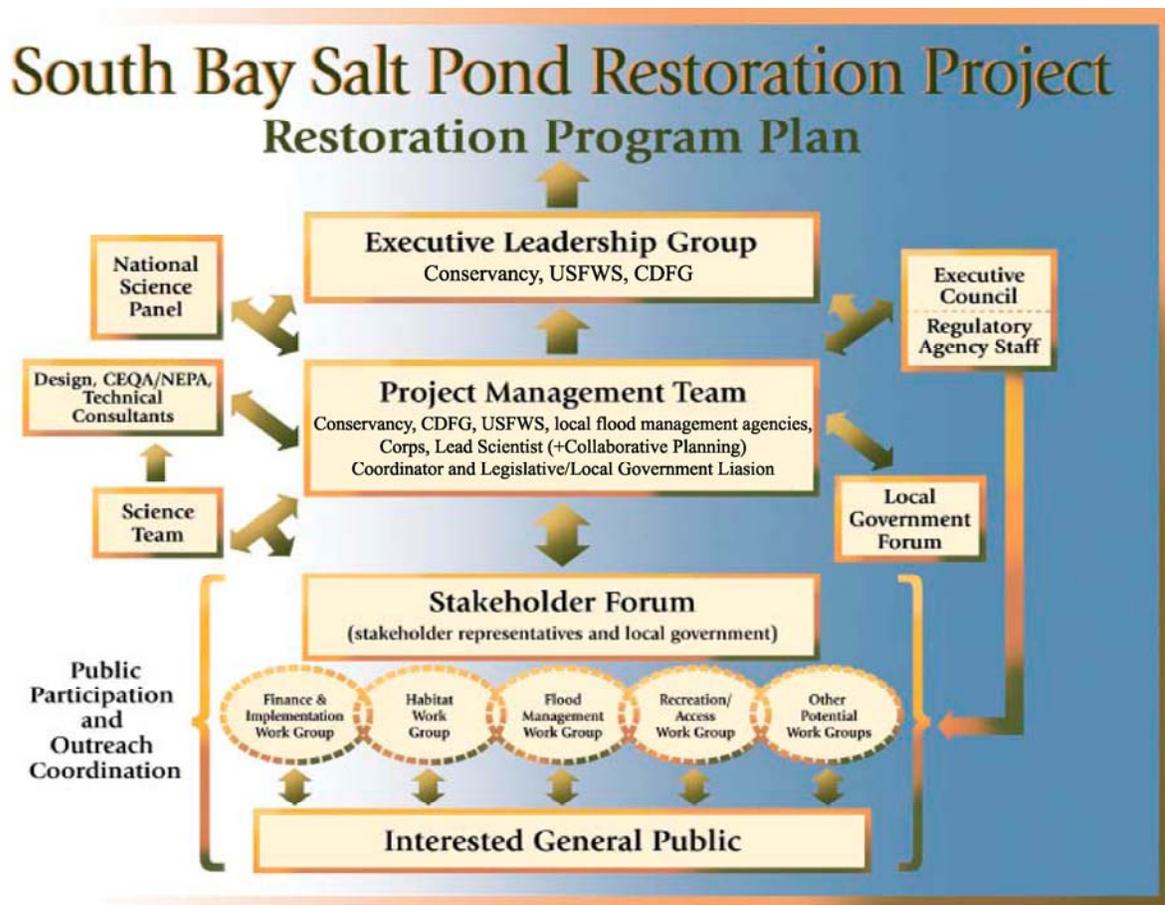
As noted above in Section 1.3.1, the SBSP Restoration Project Goal and Objectives were developed by the PMT with input from the Stakeholder Forum, Science Team, and Regulatory and Trustee Agency Group, and they were adopted by the Stakeholder Forum in February 2004. Since that time, public meetings and workshops have been held to provide information on Project planning to these groups and the public and to solicit their input to further refine Project planning.

The cornerstone of the public outreach effort is the Stakeholder Forum, which has been meeting regularly since late 2003. The Stakeholder Forum represents a variety of interests and provides the PMT with input on the development of the restoration plan. All meetings are open to the public.

### 1.5.1 SBSP Restoration Project Decisionmaking Structure

As shown in Figure 1-5 and described below, the decisionmaking structure for the SBSP Restoration Project involves an extensive network of partnerships between public agencies, environmental advocates, private organizations, and non-governmental organizations. The various entities that participate in the SBSP Restoration Project planning process are described below.

Figure 1-5 SBSP Restoration Project Decisionmaking Structure



## Project Management Team

The Project Management Team (PMT) provides the overall leadership for the planning process and is responsible for all components of the planning effort, including but not limited to: overall plan design; scientific assistance and review; public participation and outreach; public policy impacts and analysis; budgeting and funding; dispute resolution; integration of the planning process with flood management, public health, and regulatory entities; and state and federal legislative and local government relations.

The PMT is the primary decision-making body and reports directly to the Executive Leadership Group, made up of executive leaders of the Conservancy, USFWS, and CDFG, who will ultimately consider and act on the restoration plan. Each agency on the PMT has its own mandates and objectives that are being incorporated into the final plan design. Additional members of the PMT include representatives of SCVWD, ACFCWCD, and the Corps, as well as the Project's Lead Scientist. The collaborative planning coordinator from the Center for Collaborative Policy and a staff person from the Resources Legacy Fund (representing the private foundation funders) participate in PMT meetings.

The role of the Project Lead Scientist on the PMT is to ensure ongoing communication among the PMT, the Project's Science Team and the National Science Panel, and to ensure the PMT incorporates science program outputs, to the extent possible.

## Executive Leadership Group

The Executive Leadership Group (ELG) resolves disputes that cannot be resolved at the PMT level of the process. The ELG members include the Executive Officer of the Conservancy, the California/Nevada Operations Manager of USFWS, and the Director of CDFG.

## Executive Council

The Executive Council includes high-level administrators from local, state and federal resource and regulatory agencies involved in wetlands and watershed management, regulation, planning or research. The Executive Council is a Bay Area-wide forum to address policy or regulatory disputes that may impede progress on the SBSP Restoration Project. Specifically, resources and regulatory agency representatives on the Executive Council work with the PMT to provide "early warning" on any emerging policy or regulatory disputes.

## National Science Panel and Science Team

The National Science Panel includes internationally- and locally-recognized experts who are familiar with large-scale wetlands restoration efforts and knowledgeable about application of adaptive management protocols and long-term monitoring. The National Science Panel provides science oversight to the overall planning process and periodic review of local technical investigations pertaining to the restoration plan design.

The Science Team is composed of local physical, biological and social scientists recognized for their expertise on Bay ecology and restoration. Under the direction of the Lead Scientist, they provide the PMT with products designed to deliver key scientific advice and to guide the planning and

implementation of the Project. Important products include science syntheses of key uncertainties, applied studies descriptions and the Adaptive Management Plan.

### Local Government Forum

The Local Government Forum meets periodically to provide local government representatives with updates on the progress and milestones of plan development and to exchange relevant information and concerns. The forum meetings are announced broadly to all elected members from each city adjacent to the Project Area, one Public Works, Environmental Services or Planning Director from each adjacent city, and representatives from various special service districts and local agencies, as well as to the PMT and the Stakeholder Forum.

### Regulatory and Trustee Agency Group

The Regulatory and Trustee Agency Group includes staff of federal, state, local, and other regulatory agencies that provide endangered species recovery guidance and permitting authority for the SBSP Restoration Project. This group provides ongoing support to the regulatory agencies related to the plan development.

### Stakeholder Forum, Work Groups and Public Outreach

#### ***Stakeholder Forum***

The purpose of the Stakeholder Forum is to provide ongoing, publicly derived input to the PMT on three major components of the restoration plan: habitat objectives and actions, types and levels of public access, and integration of flood management and habitat restoration. The Forum also assists the PMT and other Project team members in gaining a broader understanding of public and interest group perspectives.

The Stakeholder Forum is comprised of core stakeholders with demonstrated long-term, ongoing interest in the restoration plan and South Bay shoreline, representing the following categories:

- Local business and adjacent landowners;
- Environmental organizations;
- Public access /recreation interests;
- Public infrastructure;
- Community advocates and institutions;
- Flood management;
- Public works/public health; and
- Local or state elected officials.

## **Stakeholder Forum Work Groups**

Stakeholder Forum Work Groups provide more detailed analysis of issues necessary to planning and implementing the restoration program. Work Groups address the following issues: Finance and Implementation, Habitat, Flood Management, and Recreation/Access. In addition, several informal work groups were formed to study the following issues: Sediment, Birds and Habitat, Pond A8, and Island Ponds.

## **Interested General Public**

The general public is invited to and does attend meetings of the Stakeholder Forum and associated Work Groups. Information about events and meetings is updated regularly on the Project website (<http://www.southbayrestoration.org/Events.html>). In addition, the public is kept informed through public workshops, an electronic newsletter, presentations to Bay Area communities, and regular media coverage.

## 1.6 Related Projects

### 1.6.1 Shoreline Study

#### Location

The Shoreline Study area extends along South San Francisco Bay and includes the three pond complexes within the SBSP Restoration Project Area as well as shoreline and floodplain areas in the counties of Alameda, San Mateo, and Santa Clara. An approximate boundary for the Shoreline Study area is shown in Figure 1-6. It roughly correlates with the potential 100-year floodplain and is subject to change, depending on hydrologic, hydraulic, and coastal modeling to be conducted for the Shoreline Study Feasibility Study.

The Shoreline Study area includes the Eden Landing, Alviso and Ravenswood ponds; Alameda County Cargill ponds; Alameda Creek Flood Control Channel in Alameda County; areas in San Mateo and Santa Clara counties between the Ravenswood and Alviso pond complexes, including the City of Palo Alto; and several creeks within the Alviso pond complex in Santa Clara County. Three other parcels—Moffett Federal Airfield (owned by NASA Ames), Pond A4 (part of the Alviso pond complex; owned by Santa Clara Valley Water District [SCVWD]), and Pond A18 (part of the Alviso pond complex owned by the City of San Jose),—are in the Shoreline Study area.

#### Background

The Shoreline Study was originally authorized by Congress in 1976 to assess the need for flood protection in the South Bay. Under the original Shoreline Study (completed in 1992), the Corps could not economically justify developing a federal flood management project along the South San Francisco Bay shoreline, in large part due to commercial salt pond levees that provided some level of flood protection within the Shoreline Study area. Although these salt pond levees were not engineered or built for the purpose of flood control, the original Shoreline Study cited the absence of a history of significant tidal



flooding within the study area as evidence that the levees provided protection (U.S. Army Corps of Engineers 1988).

However, in 2003, the federal and state government acquired 15,100 acres of the salt ponds in the South Bay from Cargill and began planning a restoration project that would ultimately affect the utility of those salt pond levees as flood control structures. In July 2002, the US House of Representatives requested that the Corps review its previous study on flood control in South San Francisco Bay, expanding the scope to include environmental restoration and protection, as well as tidal and fluvial flood damage reduction and related purposes.

The Corps completed an initial reconnaissance analysis in September 2004, which determined that due to the current and future anticipated conditions in the South Bay, it was likely that a federal flood control and ecosystem restoration project would be justified. In August 2005, the project sponsors (the Corps, SCVWD and the Conservancy) completed a Project Management Plan to outline how the work would be conducted and in September 2005 signed a Federal Cost Sharing Agreement.

On October 24, 2005, USFWS, the Corps, SCVWD, and the Conservancy began the first stage of the Shoreline Study – the Alviso Ponds and Santa Clara County Interim Feasibility Study. Alternatives are currently being developed for the first stage of the Shoreline Study. A Notice of Intent for a project-level EIS/R on the first stage of the Shoreline Study was published on January 6, 2006. A public scoping meeting was held on January 25, 2006 at the Milpitas Community Center to receive public input on the issues to be addressed in the Shoreline Study project-level EIS/R. Shoreline Study scoping comments are presented in Appendix C.

## Planning Process

The Corps uses a six-step planning process for the formulation and evaluation of alternative plans. The basis for the Corps process is the US Water Resources Council's Principles and Guidelines. The Corps's six-step process is described below.

### **Step 1. Identify Problems and Opportunities**

This step defines relevant water and related land resource problems and opportunities in the study area. In the case of the Shoreline Study, problems will generally involve: a) the health of San Francisco Bay and the pond ecosystem and the species they support, and b) flood potential. Opportunities will generally relate to recreation and public access.

During this step, planning objectives and constraints will also be defined to guide the overall planning process and to form a basis for evaluating the array of alternative plans and selecting a plan for recommendation. Planning objectives generally define what the project should achieve (*e.g.*, increase tidal marsh habitat) while planning constraints define what should not happen (*e.g.*, do not decrease existing levels of flood protection).

Plans will be evaluated based on how well they achieve planning objectives while not violating planning constraints (see Step 4, Evaluate Alternative Plans).

### **Step 2. Inventory and Forecast Conditions**

During the inventory phase of this step, information on key resources in the area (*e.g.*, special-status species, habitat, and infrastructure) is gathered and synthesized to provide an overall picture of both the historical (past) and existing status of the Shoreline Study area (and resources contained therein).

During the forecasting phase of this step, the results of engineering analyses and other studies are used to provide an estimate of what will happen to these resources in the future, if a project is not implemented (this defines the “future without-project condition”).

This step provides specific parameters by which the potential effects of project alternatives can be evaluated (see Step 4, see Evaluate Alternative Plans).

### **Step 3. Formulate Alternative Plans**

During this step, measures (actions/constructed elements that address one or more planning objectives [see Step 1]) are identified and combined into Alternative Plans that address the planning objectives.

### **Step 4. Evaluate Alternative Plans**

The forecasting process described in Step 2 (Inventory and Forecast Conditions) is performed for each project alternative (this defines a set of “future with-project conditions”). The sets of “future” conditions are compared to one another in order to evaluate the effects of each alternative plan.

During this step, both quantitative and qualitative information is used to form a complete picture of how effective each plan would be in meeting the planning objectives.

### **Step 5. Compare Alternative Plans**

This step, which is often performed in conjunction with Step 4 (Evaluate Alternative Plans), directly compares the plans to each other, including how well they would potentially meet project objectives.

### **Step 6. Recommend a Plan**

In selecting a plan to recommend or implement, this step considers a number of factors, including: effectiveness and completeness in meeting project objectives while not violating constraints, acceptability to all project partners and resource agencies, and cost effectiveness (*e.g.*, benefits gained compared to project cost).

The ultimate product of the six-step planning process is a Feasibility Report that Congress will consider for determining if a project should be authorized under the Water Resources Development Act.

### Objectives

The Shoreline Study planning objectives have not yet been fully defined; however, they are expected to include objectives similar to SBSP Restoration Project Objectives 1, 2, and 3 presented above. Like the

SBSP Restoration Project, the general objectives of the Shoreline Study include ecosystem restoration, flood-damage reduction, and recreation (*e.g.*, public access). General objectives of the Shoreline Study, are referenced in the following resolution by the US House of Representatives Transportation and Infrastructure Committee, adopted July 24, 2002, for preparation of a Feasibility Report for the Shoreline Study:

“Resolved by the Committee on Transportation and Infrastructure of the United States House of Representatives, that the Secretary of the Army is requested to review the Final Letter Report for the San Francisco Bay Shoreline Study, California, dated July 1992, and all related interims and other pertinent reports to determine whether modifications to the recommendations contained therein are advisable at the present time in the interest of tidal and fluvial flood damage reduction, environmental restoration and protection and related purposes along the South San Francisco Bay shoreline for the counties of San Mateo, Santa Clara and Alameda, California.”

SBSP Restoration Project Objectives 4, 5, and 6 are also expected to be incorporated in the Shoreline Study as either planning objectives or constraints, per the Corps planning process.

The process for defining the Shoreline Study objectives will involve direct input from the Corps and its project partners (including the Conservancy, SCVWD, ACFCWCD, and USFWS), and incorporate additional input from other stakeholders (*e.g.*, local governments, environmental organizations, neighboring landowners, businesses, and community organizations).

This process may identify additional and/or more specific planning objectives beyond those defined for the SBSP Restoration Project. The Shoreline Study objectives will be described in the Interim Feasibility Studies and subsequent EIS/Rs that will be prepared for the Shoreline Study.

### Shoreline Study Interim Feasibility Studies

The Corps and its partners have determined that the Feasibility Phase for the Shoreline Study will be conducted through several Interim Feasibility Studies, which will address flood damage reduction, ecosystem restoration, and other related project purposes in specific geographic areas. This approach reflects anticipated federal and non-federal funding availability.

Each Interim Feasibility Study will have its own Federal Cost Sharing Agreement(s) and Project Management Plan, including a detailed scope of work, schedule, and study cost estimate. Each Interim Feasibility Study will document a complete Six-Step Planning Process for its designated study area. If funding and non-federal interest allow, two or more of these Interim Feasibility Studies may be conducted concurrently.

Each Interim Feasibility Study will undergo its own environmental review under NEPA and CEQA. Because the Shoreline Study and the SBSP Restoration Project are closely related, however, the EIS/R accompanying each Interim Feasibility Study will incorporate by reference the SBSP Restoration Project, to the extent appropriate and allowed by law. The Alviso Ponds and Santa Clara County Interim Feasibility Study was the first study initiated because of the relatively high existing flood risk in this area.

The Corps has divided the Shoreline Study area into four geographic areas for future interim studies, as shown in Figure 1-7. Interim Feasibility Study area boundaries, and the focus of study for each area, are provided below.

### ***Ravenswood Ponds and San Mateo County***

This Interim Feasibility Study area generally consists of Redwood City, Menlo Park, portions of East Palo Alto and the Ravenswood ponds. The Ravenswood ponds are owned by USFWS. This Interim Feasibility Study area is separated from the remainder of the Shoreline Study area in terms of hydrology and political jurisdictions. This Interim Feasibility study area includes all of the Shoreline Study area in San Mateo County, and is focused on ecosystem restoration and tidal flood protection for the Ravenswood ponds, as well as flood protection for Flood Slough and Ravenswood Slough drainages. Flood protection for San Francisquito Creek is being studied under a separate Congressional authorization<sup>4</sup>. San Francisquito Creek serves as the southern edge of this Interim Feasibility Study area, dividing the Santa Clara County and Alviso Ponds Interim Feasibility Study area from the Ravenswood Ponds and San Mateo County Interim Feasibility Study area.

### ***Alviso Ponds and Santa Clara County***

This Interim Feasibility Study area generally includes portions of Palo Alto and Mountain View (south of San Francisquito Creek), and the Alviso ponds owned by USFWS and the areas adjacent to these ponds, including Pond A4 (owned by SCVWD), Pond A18 (owned by the City of San Jose), and Moffett Federal Airfield. This Interim Feasibility Study area is separated from the remainder of the Shoreline Study area in terms of hydrology and political jurisdictions. This Interim Feasibility Study area includes all of the geographic area in Santa Clara County, as well as a small area in Alameda County that is part of the Coyote Creek/Mud Slough drainage from Santa Clara County. The Interim Feasibility Study will focus on ecosystem restoration and flood protection for all of the Alviso ponds in Santa Clara and Alameda counties as well as flood protection for the immediately adjacent area in Palo Alto/Mountain View<sup>5</sup>. The drainages in this Interim Feasibility Study area all flow through Santa Clara County and include: Coyote Creek/Mud Slough, Artesian Slough, Guadalupe River/Alviso Slough, Guadalupe Slough/Moffett Channel/Sunnyvale East and West Channels, Stevens Creek, Permanente Creek/Mountain View Slough, Charleston Slough/Barron Creek/Adobe Creek, and Matadero Creek/Mayfield Slough. These drainages are part of four distinct watersheds: Coyote watershed, Guadalupe watershed, West Valley watershed, and Lower Peninsula watershed. The Alviso ponds are at the base of these watersheds. As discussed

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<sup>4</sup> The Corps and the San Francisquito Creek Joint Powers Authority (SFCJPA) are currently conducting a Flood Damage Reduction and Ecosystem Restoration Feasibility Study on San Francisquito Creek. The study includes Congressional authorization to study and recommend projects to reduce the risk of tidal flooding from San Francisco Bay in the tidal reaches of the San Francisquito Creek floodplain. Under this authorization, the Corps and the SFCJPA are currently conducting a feasibility study for this reach of Bay front, which includes all tidal areas of Menlo Park, East Palo Alto and Palo Alto, including Ravenswood Slough and Flood Slough. A small portion of Redwood City is located within the San Francisquito Creek floodplain and is eligible to be included in the feasibility study, but the City of Redwood City declined an invitation to participate in the study.

<sup>5</sup> The ponds located within Alameda County that are not part of the Alviso Pond Complex will not be studied as part of this Interim Feasibility Study,"

**Figure 1-7 Shoreline Study Interim Feasibility Study Boundaries**



above, flood protection for San Francisquito Creek is being studied under a separate Congressional authorization.

### ***Cargill Salt Production Ponds in Alameda County***

This Interim Feasibility Study area is comprised of the salt ponds within Alameda County that lie north of the Alviso ponds and south of the Alameda Creek Flood Control Channel. Cargill has retained salt production rights to these ponds and is using them for salt production. This Interim Feasibility Study area lies entirely within Alameda County. The Interim Feasibility Study will focus on flood protection for lands east of the salt ponds in Alameda County still operated by Cargill for salt production. The drainages in this Interim Feasibility Study area include: Mowry Slough, Plummer Creek, and Newark Slough.

### ***Eden Landing***

This Interim Feasibility Study area includes the Eden Landing ponds owned by CDFG as well as the “J” ponds owned by ACFCWCD (within the Eden Landing pond complex between Ponds E4, E1C and E6C). The Interim Feasibility Study will focus on ecosystem restoration and associated flood protection of the Eden Landing ponds, as well as flood protection for the Alameda Creek Flood Control Channel drainage area.

### Shoreline Study Potential Actions

As stated above, the Corps is currently developing alternatives for the first stage of the Shoreline Study in cooperation with the Study’s non-federal sponsors, SCVWD and the Conservancy. Potential actions include flood protection improvements, ecosystem restoration, and recreation and public access features. The Corps’s South San Francisco Bay Shoreline Study Section 905(b) (WRDA 86) analysis identifies specific measures within these categories of potential actions that will be considered during the Feasibility Phase. Corps staff has recently updated the measures from the 905(b) report, shown in Table 1-4. These measures will be considered and a determination will be made regarding whether they should be retained in the formulation of Shoreline Study alternatives.

The Shoreline Study potential actions presented in Table 1-4 could occur within any of the Interim Feasibility Study areas identified above. The Corps has not identified where any of the preliminary actions presented above would occur, nor has it committed to implementing any Shoreline Study actions at this time. Shoreline Study alternatives will be determined through the Corps’s plan formulation process as part of future Interim Feasibility Studies. The preliminary list of potential actions will be evaluated in separate, subsequent project-level EIS/Rs as part of the Interim Feasibility Studies. It is currently anticipated that the preliminary list of Shoreline Study potential actions that could occur under the Shoreline Study within the Eden Landing, Alviso, and Ravenswood pond complexes would complement the habitat outcomes of SBSPP Restoration Project Alternatives B and C described in this EIS/R.

Table 1-4 Preliminary List of Shoreline Study Potential Actions and Measures

TYPES OF ACTIONS
<b>Flood Protection Measures</b>
Relocate homes/businesses in flood-prone areas
Create flood management plan <sup>1</sup>
Increase channel capacity to improve conveyance (Channel/hydrodynamic modification/sediment dredging)
Construct flood control levees, setback levees
Construct/improve inboard salt pond levees
Construct new or modified stormwater management facilities
Construct managed ponds and tidal ponds as detention basins or floodplain
Breach levees along tidal creeks
Construct flood walls
Install erosion control measures (e.g., rip rap)
<b>Ecosystem Restoration Measures</b>
<b>Measures to Improve Managed Pond Habitat</b>
Create new, or reconfigure, managed ponds
Reinforce salt pond levees
Replace and install water control structures
Construct internal pond levees
Construct internal islands
Grade pond bottoms
Prepare water management plan <sup>1</sup>
<b>Measures to Establish Tidal Marsh Habitat and Associated Tidal Habitats</b>
Plant native vegetation
Prepare land use management plan <sup>1</sup>
Remove non-native plant species through physical, chemical, or mechanical techniques
Remove or break up gypsum deposits where necessary
Breach levees
Install ditch blocks
Lower levees
Import and place sediment/dredged material
Excavate starter channels
Construct berms
Create high marsh/transition areas
Restore habitat on adjacent upland areas
Cover contaminated sediment
Conduct aeration to increase dissolved oxygen in the ponds
<b>Recreation Measures</b>
Install information signage and kiosks
Construct multi-purpose trails and access points
Install safety features such as lighting and signage
Install appropriate surfacing and drainage improvements to accommodate new access and recreation facilities
Install ADA-compliant public access features
Install non-motorized boat launch sites
Construct viewing platforms
Note:
<sup>1</sup> Management plans are identified by the Corps as non-structural measures. The Corps would recommend that local agencies develop, fund, and implement specific measures to address flooding, water, and land use. As this recommendation to prepare management plans does not involve physical changes to the environment, no environmental evaluation of these measures would be required. The local agencies would be required to conduct their own environmental analysis to address specific actions identified in their management plans.
Source: USACE 2004, USACE 2006, William R. DeJager, US Army Corps of Engineers 2006.

While SBSP Alternatives B and C present a landscape-level view of expected habitat types in the three pond complexes, the Shoreline Study Interim Feasibility Studies will present more detailed actions for enacting landscape changes and flood management.

### 1.6.2 Initial Stewardship Plan (ISP)

Through the South Bay Salt Ponds ISP, the landowners, USFWS and CDFG, are operating and maintaining the ponds within the SBSP Restoration Project Area prior to the development of the long-term restoration plan (*i.e.*, the proposed SBSP Restoration Project). The ISP is described in Section 1.4.5 above.

The ponds within the SBSP Restoration Project Area are managed by the agencies in a manner that provides habitat values while the long-term restoration plan is being developed. During ISP implementation, Bay waters are circulated through water control structures and the existing levees are being maintained for minimum flood protection. Additionally, some ponds are operated as seasonal wetlands and are allowed to fill with rain water in the winter and dry through evaporation in the summer months, and other ponds are operated as high salinity ponds. The Island Ponds (Ponds A19, A20 and A21) in the Alviso pond complex were breached to tidal action in March 2006. The detailed design for the restoration was completed by SCVWD and includes two breaches to Pond A19, one breach to Pond A20, and two breaches to Pond A21. All breaches are on the south side connecting the ponds to Coyote Creek (USFWS and SCVWD 2006).

### 1.6.3 San Francisco Estuary Invasive Spartina Project

The San Francisco Estuary Invasive Spartina Project (Invasive Spartina Project) has begun implementing a coordinated, region-wide eradication program, comprising a number of on-the-ground treatment techniques to stave off the invasion of non-native invasive cordgrasses (*Spartina alterniflora* and its hybrids, as well as *S. densiflora*, *S. patens*, and *S. anglica*) (California Coastal Conservancy and USFWS 2003). The Invasive Spartina Project is focused within the nearly 40,000 acres of tidal marsh and 29,000 acres of tidal flats that comprise the shoreline areas of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma, and Sacramento counties. The purpose of the Invasive Spartina Project is to arrest and reverse the spread of invasive non-native cordgrass species in the Estuary in order to preserve and restore the ecological integrity of the Estuary's intertidal habitats and estuarine ecosystem.

### 1.6.4 Eden Landing Ecological Reserve Restoration Project

The CDFG ELER Restoration Project was established in May 1996 to restore former salt ponds and crystallizers to tidal salt marsh and seasonal wetlands. A public access trail is also being developed to connect adjacent facilities. The ELER Restoration Project was initiated in 1999 and is ongoing.

The ELER Restoration Project is located in the northeast corner of the Eden Landing pond complex. The design of this project was completed by Kamman Hydrology and Engineering under the oversight of the EBRPD. The ELER Restoration Project area originally consisted of fifteen salt ponds, and the restoration

plan involved breaching several of the internal levees and excavating historic channels, thereby turning the ponds into two distinct wetlands (Kamman Hydrology and Engineering 2004). These wetlands, referred to as the North and South wetlands, connect to the South Bay via Mt. Eden Creek and North Creek, a spur off of Old Alameda Creek. These connector creeks were both dredged, and the levees on Mt. Eden Creek were set back to enhance conveyance between the South Bay and the restored wetlands. Three of the ELER Restoration Project ponds (Ponds 16B, 15B, 14B) will be managed for snowy plover habitat.

#### 1.6.5 Alviso Slough Restoration Project

SCVWD is currently conducting a two-year planning/environmental study evaluating possible actions to restore Alviso Slough. The community of Alviso, which is incorporated by the City of San Jose, is located along the southern edge of San Francisco Bay near Alviso Slough, which is the last reach of the Guadalupe River before it enters the open waters of San Francisco Bay. Since the 1940s, Alviso Slough has been subject to various changes due to subsidence and the dynamic interaction of the Slough and Bay over time. These changes include: sediment flux between bay marsh and the Slough; historic land subsidence induced by aquifer overdraft; additional fill added to the salt pond levees to maintain levee elevations due to subsidence; and changes to vegetation presence, abundance, and plant community types. Although land subsidence was arrested by the mid-1970s due to aggressive groundwater recharge, its effects remain. Over the years, sediment has filled in areas of the Slough and the vegetation in the Slough has grown and thrived, thereby reducing the extent of open water in the Slough. The community of Alviso advocates returning the Slough to its previous condition, and has a strong desire to create a model project that combines effective flood protection, habitat enhancement and restoration, and water-related recreation improvements. SCVWD plans to coordinate their Alviso Slough Restoration Project with the larger SBSP Restoration Project as well as the Shoreline Study, as these projects may provide benefits for one another. As the project is still in its environmental planning phase, action on the project cannot proceed until CEQA/NEPA compliance is completed and the District's Board chooses to move forward on one of the project alternatives and approves the alternative at a future public Board meeting.

#### 1.6.6 Lower Guadalupe River Flood Protection Project

This flood protection project was constructed to prepare the channels to handle storm water runoff in the event of a 100-year flood, protect endangered species, preserve fish and migratory bird habitat and allow for open-space recreation. SCVWD made flood protection improvements along 6.5 miles of the Guadalupe River from the I-880 bridge north to the Union Pacific Railroad (UPRR) bridge in Alviso.

Construction began with the downstream reaches and continued upstream for a period of four years. The levee-top trails in each section were closed during construction of that particular phase. Project work included: construction of floodwalls or raising levees along the river banks; replacement of the SR 237 eastbound bridge; modification of 19 storm drain outfalls; improvement and construction of maintenance roads and undercrossings; construction of an overflow weir to divert high flows into one of the former salt ponds (Pond A8); improvement of the west perimeter levee around Alviso; and construction of grade-control weirs (gradual drops in the stream elevation).

The project also featured enhancements, which include: future recreation and trail extensions on project levees; sediment and vegetation management plans in project area; temporary pumps in Ponds A5, A6, A7 and A8 after major storms to reduce the depth and duration of storm-related flooding in the ponds; management of vegetation in the river channel near the UPRR bridge; strengthening the levees separating the ponds; and planting of native vegetation.

### 1.6.7 Other Related Projects

Other related projects include flood protection projects identified in Section 4.3.2 of Chapter 4, Cumulative Impacts.

## 1.7 Intended Uses of the EIS/R and Required Approvals

This EIS/R will be used by the lead agencies when considering approval of the SBSP Restoration Project. The EIS/R will also be used by responsible agencies that have review and permit authority over the Project. NASA Ames, a cooperating agency, will use this EIS/R when considering approval of the portions of the SBSP Restoration Project that are within and/or adjacent to the NASA Ames property boundary. In addition, the EIS/R will serve as a tiering document for subsequent project-level EIS/Rs for the SBSP Restoration Project.<sup>6</sup>

The EIS/R will be incorporated by reference in future EIS/Rs that will be prepared for the Shoreline Study Interim Feasibility Studies as appropriate.

Agencies with responsibility for permit approval of certain Project elements may include the following:

- The Corps under Section 404 of the Clean Water Act;
- USFWS and NMFS for Section 7 consultation pursuant to the federal Endangered Species Act regarding “take” of federally listed threatened or endangered species;
- NMFS for Essential Fish Habitat consultation under the Magnuson-Stevens Fishery Conservation and Management Act;
- CDFG for a Streambed Alteration Agreement (SAA) pursuant to Section 1600 of the state Fish and Game Code. It should be noted that a SAA may not be issued as tidal/slough environments often are not explicitly regulated under Section 1600. In addition, when BCDC permit issues a permit, CDFG often will not issue a SAA;
- San Francisco Bay Regional Water Quality Control Board (RWQCB) for Water Quality Certification under Section 401 of the Clean Water Act;

<sup>6</sup> Section 15385 of the CEQA Guidelines provides the following definition for tiering: “Tiering” refers to the coverage of general matters in broader EIRs ... with subsequent narrower EIRs or ultimately site-specific EIRs incorporating by reference the general discussions and concentrating solely on the issues specific to the EIR subsequently prepared.

Section 1508.28 of the CEQ Regulations for Implementing NEPA states: “Tiering” refers to the coverage of general matters in broader environmental impact statements ... with subsequent narrower statements or environmental analyses (such as regional or basinwide program statements or ultimately site-specific statements) incorporating by reference the general discussions and concentrating solely on the issues specific to the statement subsequently prepared.

- RWQCB for a general construction activity stormwater NPDES permit requiring preparation of a Stormwater Pollution Prevention Plan (SWPPP);
- San Francisco Bay Conservation and Development Commission (BCDC) for permit and determination of conformity with the California Coastal Act, the McAteer-Petris Act, Coastal Zone Management Act of 1972, and the San Francisco Bay Plan;
- California State Lands Commission for leases within SLC jurisdiction, including the submerged lands of the sloughs within the SBSP Restoration Project Area, and several small areas of state-owned land within the Project Area; and
- Bay Area Air Quality Management District (BAAQMD) may require permits to operate the proposed portable pumps.

Other ministerial permits/approvals not dependent on the EIS/R include:

- Encroachment permits from UPRR and PG&E;
- Permits from cities with jurisdiction over the Project; and
- Easements or modifications to existing easements from nearby landowners for proposed levees that provide flood protection and trail access

The lead agencies will work with Mid-Peninsula Regional Open Space District (MROSD) to negotiate any agreements that may be needed for lands within MROSD's jurisdiction.

## 1.8 Documents Incorporated By Reference

An EIS/R can incorporate by reference all or portions of another document which is a matter of public record or is generally available to the public (CEQA Guidelines Section 15150 and CEQ Regulations for Implementing NEPA (40 CFR 1502.21)). Where all or part of another document is incorporated by reference, it has to be made available for inspection at a public place. In addition, the document that is incorporated by reference must be briefly summarized or described in the EIS/R, and the relationship of the referenced document and the EIS/R shall be described.

“Incorporation by reference is most appropriate for including long, descriptive, or technical materials that provide general background but do not contribute directly to the analysis of the problem at hand” (CEQA Guidelines Section 15150(f)). This statement clearly distinguishes those documents that are incorporated by reference and those that are included as appendices. Materials included as appendices to an EIS/R contribute substantively to the impacts analysis (such as modeling results).

The documents below are incorporated by reference in the EIS/R. The chapters and sections of the EIS/R where these documents are summarized are provided in parentheses following the document name, with the exception of the ISP, which is described in Section 1.4.5, and the ISP EIS/EIR, which is described below.

- ISP and ISP EIR/EIS (Chapter 1);
- SBSP Alternatives Development Framework (Chapter 2);

- SBSP Restoration Project Final Alternatives Report (Chapter 2);
- SBSP Restoration Project Initial Opportunities and Constraints Summary Report (Chapter 2);
- SBSP Restoration Project Hydrodynamics and Sediment Dynamics Existing Conditions Report (Section 3.3);
- SBSP Restoration Project Levee Assessment Report (Section 3.3);
- SBSP Restoration Project Flood Management and Infrastructure Existing Conditions Report (Sections 3.3 and 3.16);
- SBSP Restoration Project Water and Sediment Quality Existing Conditions Report (Section 3.4);
- SBSP Restoration Project Biology and Habitats Existing Conditions Report (Section 3.6);
- SBSP Restoration Project Public Access and Recreation Existing Conditions Report (Section 3.7); and
- SBSP Restoration Project Final Cultural Resources Assessment Strategy Memorandum and Historic Context Report (Section 3.8).

All of these documents are available for review on the SBSP Restoration Project's official website: [www.southbayrestoration.org](http://www.southbayrestoration.org).

### 1.8.1 ISP EIR/EIS

As described in Section 1.8 above, all of the incorporated by reference documents are described in various chapters and sections of this EIS/R. The ISP EIR/EIS is described herein.

The ISP EIR/EIS evaluates a no action alternative and three action alternatives for managing the former salt ponds in the SBSP Restoration Project Area during the interim period (between the cessation of salt-making activities and the implementation of a long-term restoration plan) while a long-term restoration plan is developed (Life Science! 2004).

The EIR/EIS evaluated the environmental impacts of the proposed alternatives and found that Alternative 1, the Seasonal Pond Alternative, would result in more adverse impacts than Alternatives 2 and 3, the pond management alternatives. Alternatives 2 and 3 had similar projected environmental impacts; however, Alternative 3, the Phased Initial Release Alternative, included monitoring of the first releases which would provide data to adaptively manage subsequent releases and thus reduce overall impacts. In addition, Alternative 3 allowed circulation of Bay waters to occur at an earlier time for a substantial number of ponds, resulting in more rapid restoration of the ponds. Therefore, Alternative 3 was identified as the environmentally superior alternative under CEQA and the preferred alternative under NEPA in the EIR/EIS.

The impact to waterbirds from the loss of medium- and high-salinity ponds under the ISP alternatives was determined to be a significant environmental impact in the ISP EIR/EIS. While measures were identified to mitigate this impact, it would remain potentially significant even with implementation of these measures. As discussed in Section 3.6, Biological Resources, of this SBSP Restoration Project EIS/R,

monitoring of the Project-area ponds has detected recent declines in a few bird species which use the medium- and high-salinity ponds (*i.e.*, eared grebes, phalaropes, and Bonaparte's gulls), within the ISP/SBSP Restoration Project Area itself, since the ISP was implemented. However, it is not known whether these declines resulted in larger scale, regional population declines or simply resulted from a shift in habitat use from the ISP/SBSP Restoration Project ponds to Cargill-managed salt ponds, or to other areas outside the South Bay. Ongoing monitoring of both the Project-area ponds and Cargill-managed ponds will help to document changes in waterbird numbers since implementation of the ISP. All other impacts identified in the ISP EIR/EIS were determined to be less than significant with implementation of proposed mitigation measures.

