

# South Bay Salt Pond Restoration Project

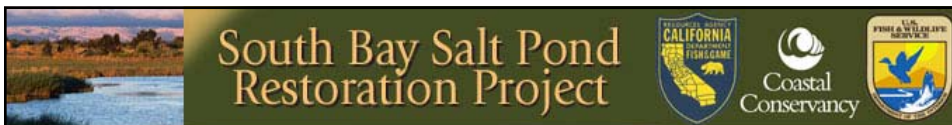
**Stakeholder Forum Work Groups**

**Joint Meeting**

**Tuesday, May 25, 2004**

**9:30 am – 1:00 pm**

**Centennial Hall, Hayward**



## Meeting Objectives



- 1. Preview the Draft Alternatives Development Framework**
- 2. Develop feedback on the revised detailed project objectives, evaluation criteria and overall proposed evaluation process**
- 3. Provide early input on project opportunities and constraints**

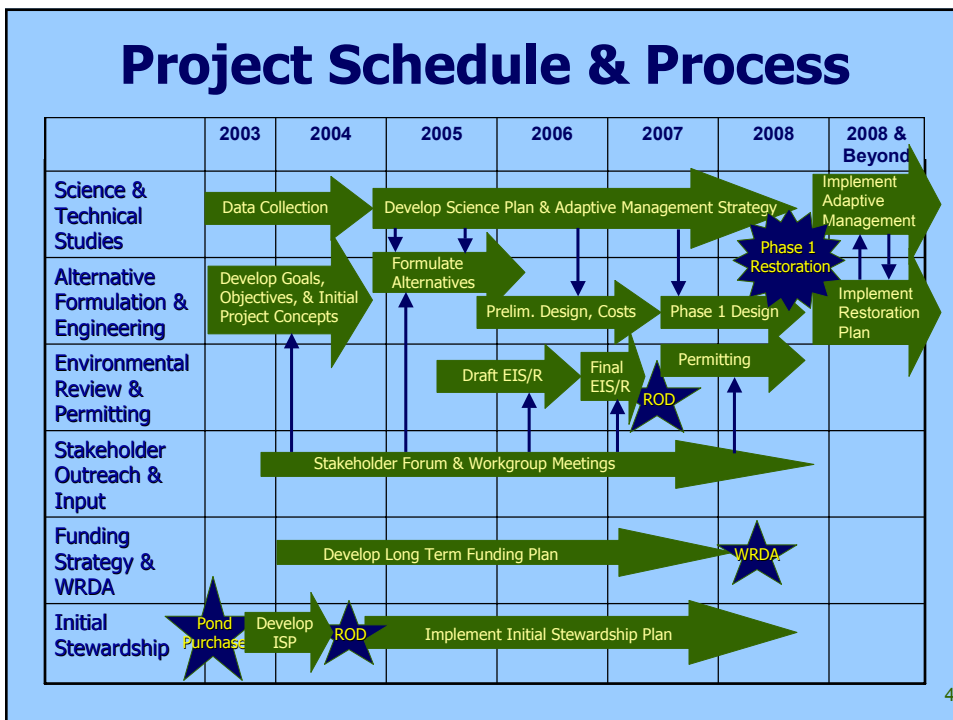


## Meeting Agenda

- **Overview of the Alternatives Development Framework (20 mins)**
- **Discuss and develop feedback on proposed detailed objectives, evaluation criteria and evaluation process (90 mins)**
- **Break (15 mins)**
- **Work Group “tours” and dialogue between Work Groups (60 mins)**
- **Wrap-up and Next Steps (15 mins)**



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## **Overview of Draft Alternatives Development Framework Document**

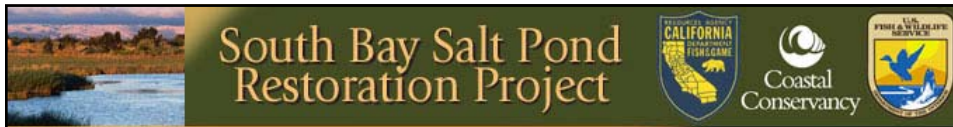
1. EXECUTIVE SUMMARY
2. INTRODUCTION
3. PROJECT OBJECTIVES AND EVALUATION FACTORS
4. DETAILED OBJECTIVES AND ALTERNATIVES EVALUATION CRITERIA
5. ALTERNATIVES FORMULATION AND EVALUATION PROCESS

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## **Overview - cont.**

6. LANDSCAPE-SCALE RESTORATION STRATEGIES
  - 6.1 Overview
  - 6.2 Scenario A. No Project / ISP with minimal operations and maintenance.
  - 6.3 Scenario B. No Project / ISP with full operations and maintenance
  - 6.4 Scenario C. Maximize Managed Pond Habitat
  - 6.5 Scenario D. Mix of Tidal Marsh and Managed Pond Habitat (67/33)
  - 6.6 Scenario E. Maximize Tidal Marsh Habitat
  - 6.7 Landscape Scenario Comparisons
7. EVALUATION, RANKING, AND WEIGHTING PROCEDURES 6

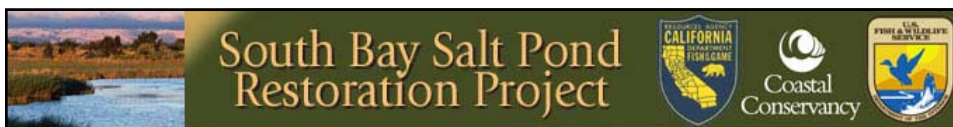


## Biological Habitat

**Objective 1A. 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.**

Detailed Objectives	Alternatives Evaluation Criteria
<ul style="list-style-type: none"> <li>Contribute to the recovery of the south bay subspecies of the salt marsh harvest mouse</li> </ul>	<ul style="list-style-type: none"> <li>Area of complete salt marshes, with broad marshplain (<i>i.e.</i>, pickleweed) habitat and broad upland/peripheral halophyte transitional zones</li> <li>Connectivity of such existing and restored marshes</li> </ul>
<ul style="list-style-type: none"> <li>Contribute to the recovery of the California Clapper Rail</li> </ul>	<ul style="list-style-type: none"> <li>Area of broad tidal marshes with suitable channel densities and appropriate vegetation structure. Connectivity of such existing and restored marshes</li> </ul>
<ul style="list-style-type: none"> <li>Re-establish populations of special-status plants</li> </ul>	<ul style="list-style-type: none"> <li>Area of high marsh/upland transitional zones</li> </ul>
<ul style="list-style-type: none"> <li>Contribute to the recovery of the Western Snowy Plovers and California Least Terns</li> </ul>	<ul style="list-style-type: none"> <li>Area of suitable breeding habitat (salt pan islands, undisturbed levees) , assuming appropriate foraging habitat is available.</li> </ul>
<ul style="list-style-type: none"> <li>Enhance habitat for anadromous special-status fish. (Salmon and steelhead)</li> </ul>	<ul style="list-style-type: none"> <li>Length of tidal channel habitat within marshes connected to creek and river systems that support or could support these species</li> </ul>

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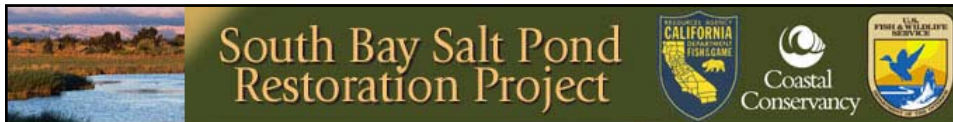


## Biological Habitat – cont.

**Objective 1B. Maintain current migratory bird species that utilize existing salt ponds and associated structures such as levees.**

Detailed Objectives	Alternatives Evaluation Criteria
<ul style="list-style-type: none"> <li>Maintain current populations of birds breeding at the salt ponds</li> </ul>	<ul style="list-style-type: none"> <li>Area of managed ponds with associated breeding islands</li> </ul>
<ul style="list-style-type: none"> <li>Maintain habitat for salt pond specialized birds (<i>e.g.</i>, Wilson’s Phalaropes)</li> </ul>	<ul style="list-style-type: none"> <li>Area of managed pond habitat with somewhat elevated salinities (100-140 ppt), and appropriate depths</li> </ul>
<ul style="list-style-type: none"> <li>Maintain current population levels for foraging shorebirds</li> </ul>	<ul style="list-style-type: none"> <li>Estimate of foraging habitat area, including mudflat exterior to salt ponds, ponds and pans in tidal marshes and suitable foraging areas in managed ponds.</li> </ul>

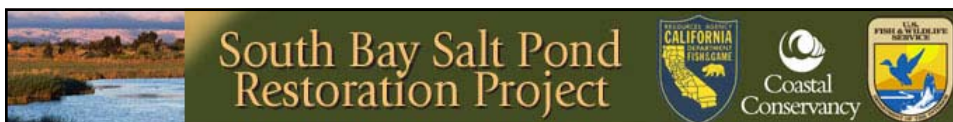
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## Biological Habitat – cont.

<b>Objective 1C. 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.</b>	
<b>Detailed Objectives</b>	<b>Alternatives Evaluation Criteria</b>
<ul style="list-style-type: none"> <li>• Maintain or enhance the populations of shorebirds currently using intertidal mudflat habitat</li> </ul>	<ul style="list-style-type: none"> <li>• Area of mudflat habitat available in the South Bay through the life of the project</li> </ul>
<ul style="list-style-type: none"> <li>• Enhance South Bay fish populations</li> </ul>	<ul style="list-style-type: none"> <li>• Area of tidal marsh and tidal channel habitat within marshes, in combination with bay and mudflat habitat</li> </ul>
<ul style="list-style-type: none"> <li>• Enhance habitat for intertidal invertebrate populations by contributing to the grazing and detrital food webs</li> </ul>	<ul style="list-style-type: none"> <li>• Area of intertidal habitat, including tidal marshes and mudflats</li> </ul>
<ul style="list-style-type: none"> <li>• Maintain or enhance the populations of near-shore birds including waterfowl, currently using the Bay</li> </ul>	<ul style="list-style-type: none"> <li>• Length of edge habitat (water or mudflat bordering on salt marsh)</li> <li>• Area of mudflat and shallow waters inundated at high tide, and area of shallow water ponds</li> </ul>
<ul style="list-style-type: none"> <li>• Enhance harbor seal habitat for foraging and isolated haul-out areas</li> </ul>	<ul style="list-style-type: none"> <li>• Area of new isolated, large/deep tidal channels adjacent to marsh plain</li> </ul>
<ul style="list-style-type: none"> <li>• Enhance moist grassland habitats</li> </ul>	<ul style="list-style-type: none"> <li>• Areas where moist grasslands could grade into transitional habitats</li> <li>• Length of edge where transitional habitats could grade into moist grasslands</li> </ul>

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## Flood Management

<b>Objective 2. Maintain or improve existing levels of flood protection in the South Bay area.</b>	
<b>Detailed Objectives</b>	<b>Alternatives Evaluation Criteria</b>
<ul style="list-style-type: none"> <li>• Maintain existing levels of flood protection in the South Bay area</li> </ul>	<ul style="list-style-type: none"> <li>• Must not increase the frequency of occurrence of flood inducing water levels<sup>1,2,*</sup></li> </ul>
<ul style="list-style-type: none"> <li>• Improve levels of flood protection in the South Bay area</li> </ul>	<ul style="list-style-type: none"> <li>• Decrease in frequency of occurrence of flood inducing water levels<sup>1,2</sup></li> </ul>
<ul style="list-style-type: none"> <li>• Remove FEMA identified areas of flood risk from the floodplain</li> </ul>	<ul style="list-style-type: none"> <li>• Area removed from the FEMA floodplain<sup>1</sup></li> </ul>
<ul style="list-style-type: none"> <li>• Provide flood protection to Corps standards</li> </ul>	<ul style="list-style-type: none"> <li>• Area afforded adequate flood protection</li> </ul>

1 in areas where flooding is not desirable based on land use

2 include consideration of sediment deposition and erosion effects on water levels

\* EXCLUSION CRITERION, i.e. must be met by alternative to carry forward and receive further consideration

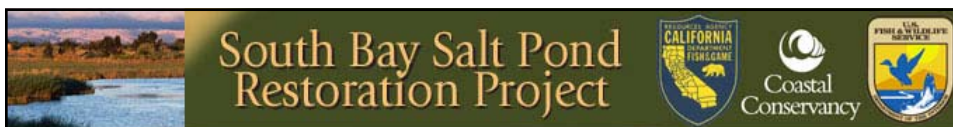
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## Public Access and Recreation

<b>Objective 3. Provide public access and recreational opportunities compatible with wildlife and habitat goals.</b>	
<b>Detailed Objectives</b>	<b>Alternatives Evaluation Criteria</b>
<ul style="list-style-type: none"> <li>Improve public access and recreation in the project area</li> </ul>	<ul style="list-style-type: none"> <li>Number of compatible public access and recreation opportunities consistent with DFG and USFWS missions and regulatory requirements.</li> <li>Number of opportunities for multi-agency/stakeholder partnering to plan, implement and manage public access and recreation</li> </ul>
<ul style="list-style-type: none"> <li>Provide access and recreation that promotes wildlife-oriented public use</li> </ul>	<ul style="list-style-type: none"> <li>Number of opportunities for USFWS “priority uses” (e.g. wildlife observation, wildlife photography, environmental interpretation, environmental education, hunting, and fishing)</li> <li>Number of user experiences provided (e.g. access to the water, educational and interpretive opportunities, ability to experience a diversity of habitats)</li> </ul>
<ul style="list-style-type: none"> <li>Provide recreation for a variety of uses and user types</li> </ul>	<ul style="list-style-type: none"> <li>Number of user groups and individuals that can be accommodated</li> <li>Number of access points and staging areas with amenities required for a variety of different uses</li> <li>Range and diversity of active and passive uses provided</li> </ul>

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<b>Detailed Objectives</b>	<b>Alternatives Evaluation Criteria</b>
<ul style="list-style-type: none"> <li>Enhance opportunities for linking the project areas to existing public open spaces and adjacent communities.</li> </ul>	<ul style="list-style-type: none"> <li>Number of links provided</li> <li>Number of Bay Trail spine gaps closed and spur and connector trails provided</li> <li>Number of links to public transit</li> <li>Number of opportunities for non-motorized, multi-modal access to and from the project area</li> </ul>
<ul style="list-style-type: none"> <li>Enhance opportunity for aesthetic experiences</li> </ul>	<ul style="list-style-type: none"> <li>Number of opportunities for multi-sensory experiences. (e.g. open water and marsh views, smells of the bay, listen to wildlife and others)</li> <li>Number of popular viewing areas/viewpoints/ scenic overlooks</li> <li>Number of access points and trails that are close to the open bay</li> </ul>

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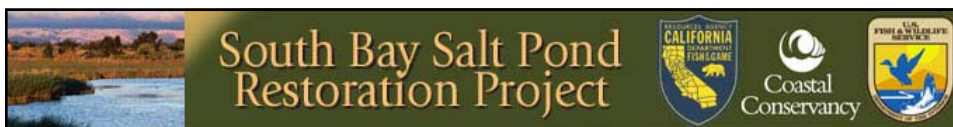
## Water and Sediment Quality

**Objective 4. Protect or improve existing levels of water and sediment quality in the South Bay, and take into account ecological risks caused by restoration.**

Detailed Objectives	Alternatives Evaluation Criteria
<ul style="list-style-type: none"> <li>Maintain existing levels of water quality (surface and ground water)</li> </ul>	<ul style="list-style-type: none"> <li>Within the range of background concentrations of key indicator constituents (e.g., mercury, metals, nutrients, algae)*</li> </ul>
<ul style="list-style-type: none"> <li>Improve levels of water quality (surface and ground water)</li> </ul>	<ul style="list-style-type: none"> <li>Below the range of background concentrations of key indicator constituents (e.g., mercury, metals, nutrients, algae)</li> </ul>
<ul style="list-style-type: none"> <li>Limit ecological risk associated with mercury methylation and bioaccumulation</li> </ul>	<ul style="list-style-type: none"> <li>No net increase in mercury or methylmercury loads to the bay</li> <li>Minimization of methylmercury production and biological uptake</li> </ul>
<ul style="list-style-type: none"> <li>Limit mobilization of existing contaminants present in sediments</li> </ul>	<ul style="list-style-type: none"> <li>Higher concentration sediments stabilized and protected from erosion or transport</li> </ul>

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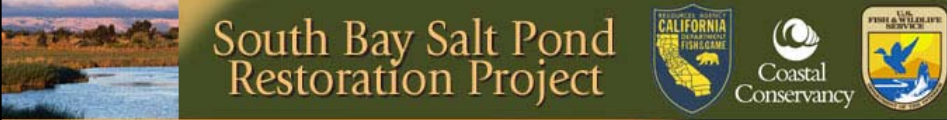


## Nuisance Species Management

**Objective 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.**

Detailed Objectives	Alternatives Evaluation Criteria
<ul style="list-style-type: none"> <li>Minimize colonization of mudflats and marshplain by non-native <i>Spartina</i> and its hybrids</li> </ul>	<ul style="list-style-type: none"> <li>Area of potentially colonizable mudflat (assuming that no control measures are found to be feasible)</li> </ul>
<ul style="list-style-type: none"> <li>Maintain or improve the current levels of vector management</li> </ul>	<ul style="list-style-type: none"> <li>Increased area of potential mosquito habitat</li> </ul>
<ul style="list-style-type: none"> <li>Improve protection from predators and reduce need for Predator Management</li> </ul>	<ul style="list-style-type: none"> <li>Area of predator-accessible tidal marshes</li> </ul>

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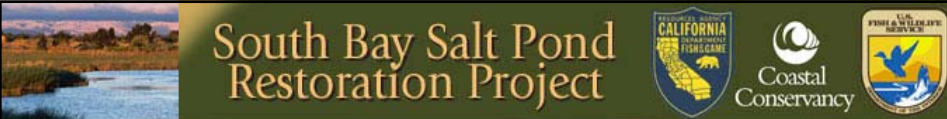


## Infrastructure

<b>Objective 6. Protect the services provided by existing infrastructure (e.g. power lines, railroads, wastewater treatment plants).</b>	
Detailed Objectives	Alternatives Evaluation Criteria
<ul style="list-style-type: none"> <li>Maintain the services provided by existing infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>Must not increase risk of failure or service degradation due to physical changes*</li> </ul>
<ul style="list-style-type: none"> <li>Maintain maintenance access for existing infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>Does not eliminate maintenance access due to physical changes or limitations resulting from habitat improvements.</li> </ul>

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## Cost Effectiveness




<b>Objective 7. Consider costs of implementation, management, and monitoring so that planned activities can be effectively executed with available funding. Form partnerships and alliances to develop and institute a long-term viable funding strategy.</b>	
Detailed Objectives	Alternatives Evaluation Criteria
<ul style="list-style-type: none"> <li>Manage construction costs to achieve project goals and objectives with available funding</li> </ul>	<ul style="list-style-type: none"> <li>Dollars</li> </ul>
<ul style="list-style-type: none"> <li>Manage long-term operations and maintenance costs</li> </ul>	<ul style="list-style-type: none"> <li>Dollars, 50-year time frame</li> </ul>
<ul style="list-style-type: none"> <li>Manage monitoring costs to support project goals and objectives</li> </ul>	<ul style="list-style-type: none"> <li>Dollars, 10-year time frame</li> </ul>
<ul style="list-style-type: none"> <li>Institute a long-term viable funding strategy</li> </ul>	<ul style="list-style-type: none"> <li>Assessment of institutional complexity and achievability</li> </ul>
<ul style="list-style-type: none"> <li>Increase partnerships and alliances to institute a long-term funding strategy</li> </ul>	<ul style="list-style-type: none"> <li>Participation by multiple entities (e.g., Corps, SCVWD, and others) in long-term funding</li> </ul>
<ul style="list-style-type: none"> <li>Achieve a favorable benefit/cost ratio.</li> </ul>	<ul style="list-style-type: none"> <li>Calculation of benefit to cost (b/c) ratio, using Corps procedures</li> </ul>
<ul style="list-style-type: none"> <li>Limit costs of delay</li> </ul>	<ul style="list-style-type: none"> <li>Assessment of institutional and legal complexity/controversy</li> </ul>

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## South Bay Salt Pond Restoration Project




### Environmental Impact

<b>Objective 8. Promote environmental benefit and reduce impact in topics other than biology.</b>	
Detailed Objectives	Alternatives Evaluation Criteria
1. Preserve cultural resources, including important archaeological and historical sites	<ul style="list-style-type: none"> <li>Number of cultural resource sites impacted</li> <li>Number of opportunities for interpretation and education</li> </ul>
2. Provide public services to accommodate projected demand	<ul style="list-style-type: none"> <li>Number of law enforcement patrols needed</li> <li>Response times for fire, police and ambulance services</li> </ul>
3. Promote compatibility with surrounding land plans and uses	<ul style="list-style-type: none"> <li>Level of land use compatibility</li> </ul>
4. Provide safe, convenient access to the project area while managing congestion on nearby streets	<ul style="list-style-type: none"> <li>Number of vehicle trips</li> <li>Number of parking spaces</li> <li>Number of bicycle lanes</li> <li>Level of service on nearby roads</li> </ul>
5. Enhance air quality for proposed and surrounding uses	<ul style="list-style-type: none"> <li>Air pollutant levels</li> <li>Potential for creation of objectionable odors</li> </ul>
6. Manage noise levels for proposed and surrounding uses	<ul style="list-style-type: none"> <li>Decibel levels</li> <li>Number of noise-generating activities</li> <li>Distance between noise-generating activities and nearby sensitive receptors</li> </ul>

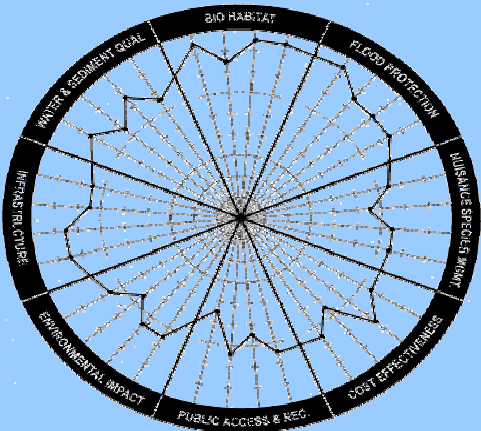
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## South Bay Salt Pond Restoration Project

### Display of how an alternative responds to each detailed objective



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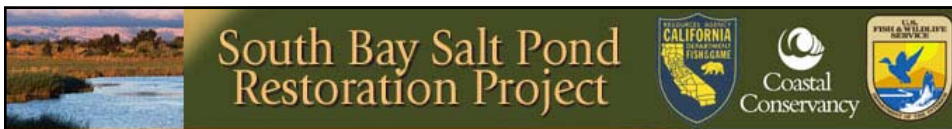


## South Bay Salt Pond Restoration Project

### Opportunities & Constraints

- Next phase of the planning process
- Opportunities and constraints may be the same feature, simply viewed from a different perspective
- Today is an early input opportunity, varied by Work Group

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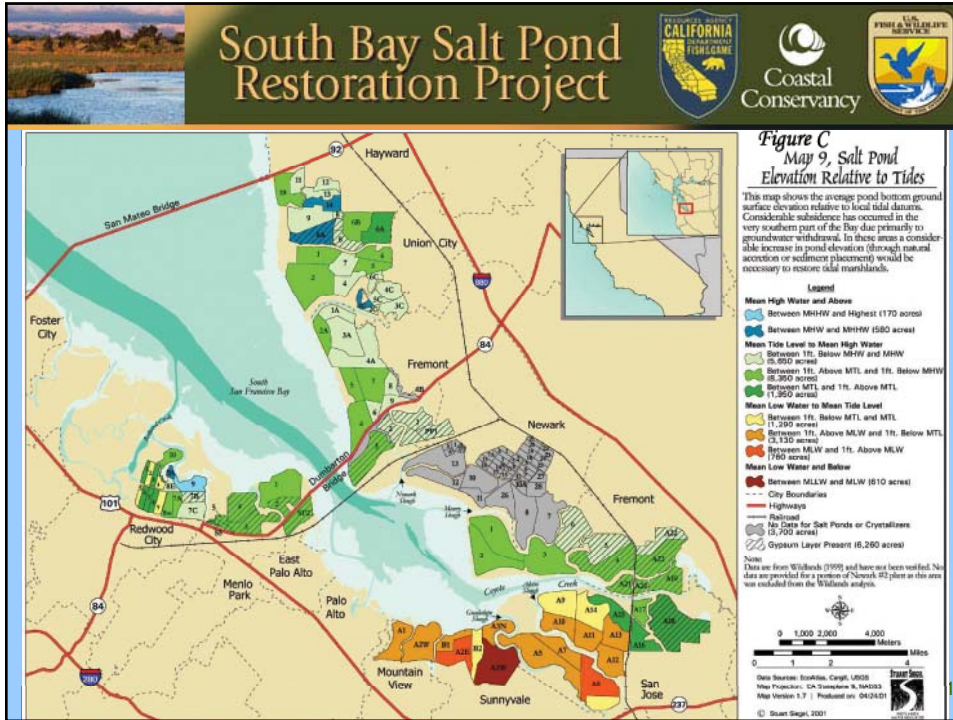


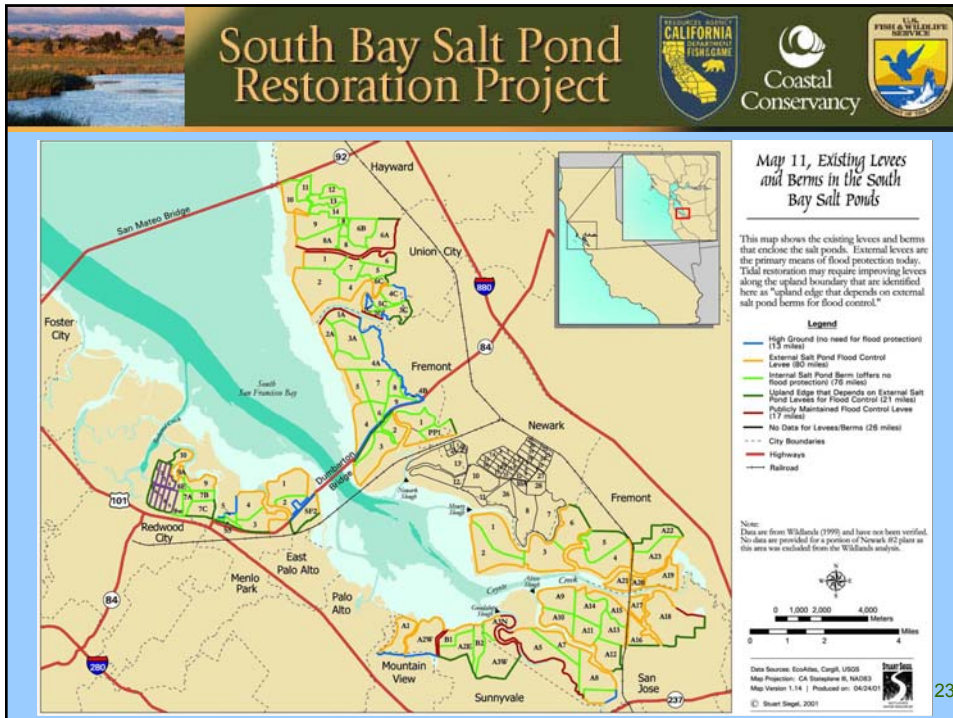
## South Bay Salt Pond Restoration Project

### Examples

- Topography: areas at appropriate elevations for rapid colonization by emergent marsh vegetation and areas that are deeply subsided
- Public access and recreation
- Flood management and habitat

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**South Bay Salt Pond Restoration Project**

**Give us your constructive feedback on:**

- **Where are specific opportunities for mutual benefit among habitat, public access and flood management?**
- **Which detailed objectives do you think may be in conflict with one another and why?**
- **How do you think these conflicts should be resolved in the restoration planning?**

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The banner features a photograph of a salt pond on the left. To the right, the text "South Bay Salt Pond Restoration Project" is displayed in a gold serif font. Further right are three logos: the California Department of Fish and Game, the Coastal Conservancy, and the U.S. Fish and Wildlife Service.

## Upcoming Meetings / Next Steps

- **Stakeholder Forum: June 24, 1-4 p.m.(tentative)**  
Weekes Park Community Center, Hayward
- **Review and provide written comments on Alternatives Development Framework Document (released June 1)**
- **Visit the project website for updates and upcoming meeting information**

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