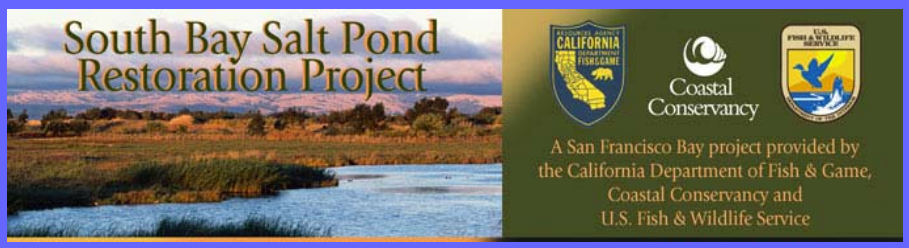


Habitat Restoration Work Group

Friday, March 26, 2004

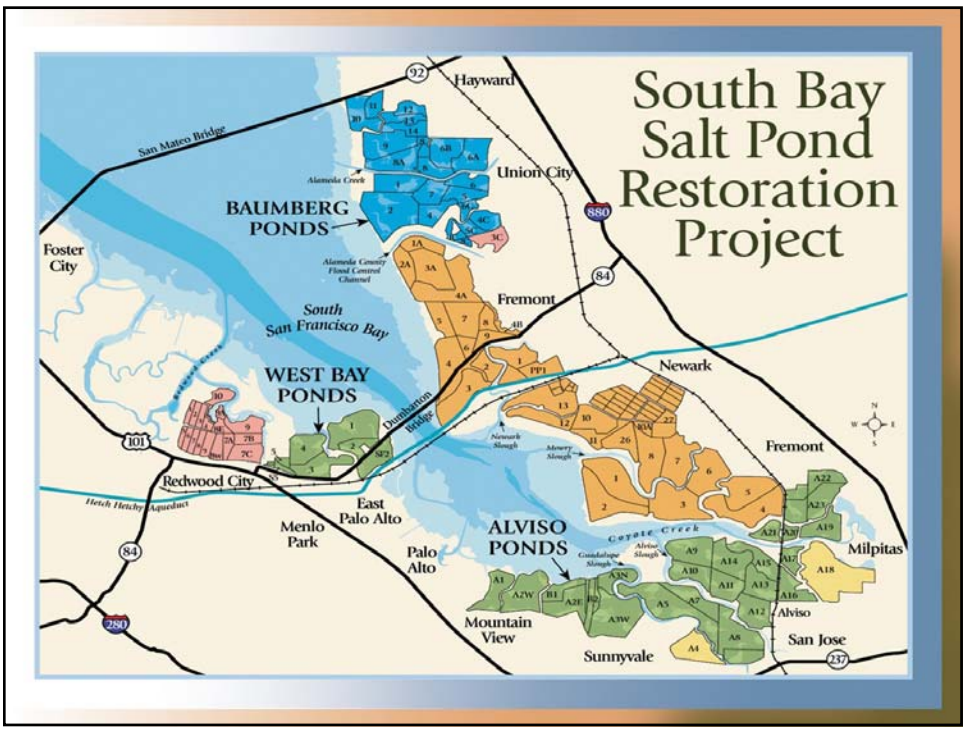
9:30 a.m.-12:30 p.m.

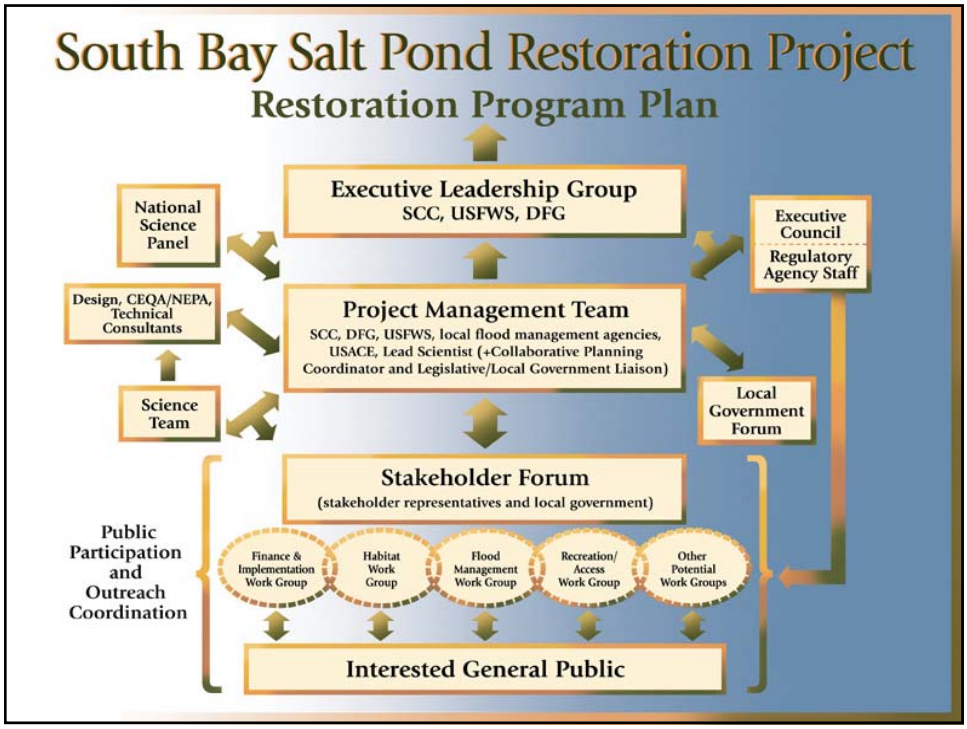
Meeting Objectives:

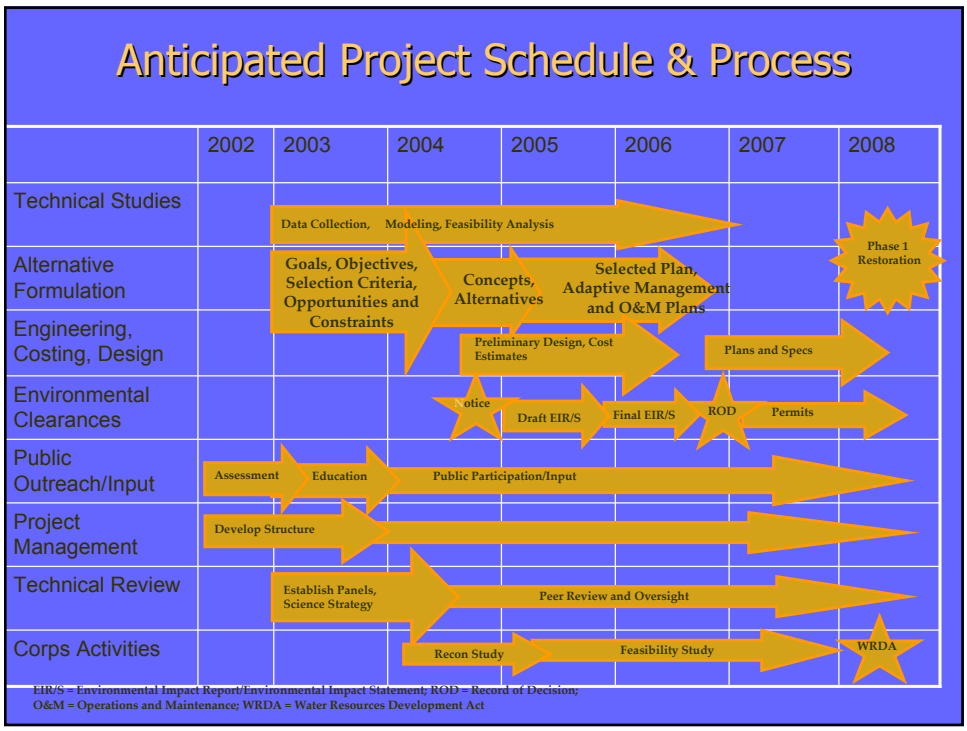
- Education on historical context of the salt ponds and current "lay of the land"
- Briefing and dialogue on approach to key restoration issues and emerging project restoration objectives
- Briefing and feedback on data collection efforts to date

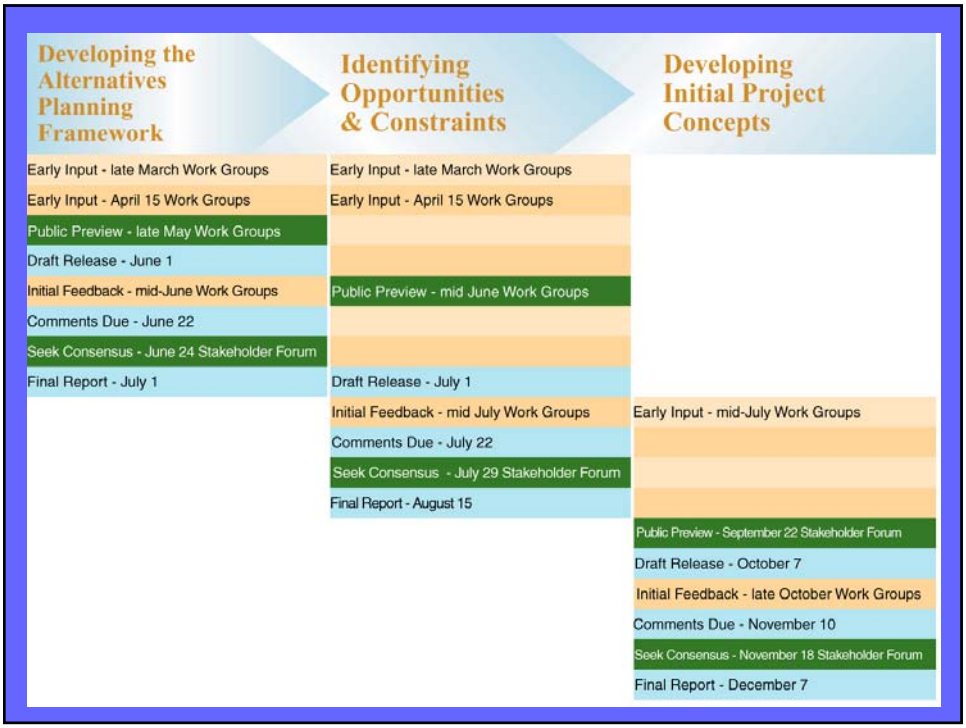
Today's Agenda

- 9:30-9:45 Welcome and project overview
- 9:45-10:30 History of the salt ponds
- 10:30-11:15 What do we have to work with today?
- 11:15-11:20 Break
- 11:20-11:30 Data collection to date
- 11:30-12:25 Detailed project objectives
- 12:25-12:30 Next steps




South Bay Salt Pond Restoration Project
Restoration Program Plan
Executive Leadership Group
SCC, USFWS, DFG
National Science Panel
Executive Council
Regulatory Agency Staff
Design, CEQA/NEPA, Technical Consultants
Project Management Team
SCC, DFG, USFWS, local flood management agencies, USACE, Lead Scientist (+Collaborative Planning Coordinator and Legislative/Local Government Liaison)
Science Team
Local Government Forum
Stakeholder Forum
(stakeholder representatives and local government)
Public Participation and Outreach Coordination
Finance & Implementation Work Group
Habitat Work Group
Flood Management Work Group
Recreation/ Access Work Group
Other Potential Work Groups
Interested General Public


Anticipated Project Schedule & Process
2002
2003
2004
2005
2006
2007
2008
Technical Studies
Data Collection, Modeling, Feasibility Analysis
Alternative Formulation
Goals, Objectives, Selection Criteria, Opportunities and Constraints
Concepts, Alternatives
Selected Plan, Adaptive Management and O&M Plans
Phase 1 Restoration
Engineering, Costing, Design
Preliminary Design, Cost Estimates
Plans and Specs
Environmental Clearances
Notice
Draft EIR/S
Final EIR/S
ROD
Permits
Public Outreach/Input
Assessment
Education
Public Participation/Input
Project Management
Develop Structure
Technical Review
Establish Panels, Science Strategy
Peer Review and Oversight
Corps Activities
Recon Study
Feasibility Study
WRDA
EIR/S = Environmental Impact Report/Environmental Impact Statement; ROD = Record of Decision; O&M = Operations and Maintenance; WRDA = Water Resources Development Act



Upcoming Meetings

- **Flood Management: March 29, 2-5 p.m.**
  Alameda County Flood Control District's field office, 951 Turner Court, Hayward - (vicinity of Chabot College)
- **Public Access/Recreation: April 1, 2-5 p.m.**
  Auditorium of the Don Edwards National Wildlife Refuge Headquarters, Newark
- **Stakeholder Forum & Work Groups: April 15 10 a.m. - 3:30 p.m.**
  NASA Ames Research, Moffett Field, Mountain View

Initial Information Gathering

South Bay Salt Pond Restoration Project

- Develop Data Acquisition Plan
- Gather Information
- Provide Bibliography to Project Website (May 2004)
- Prepare Data Summary Report (June 1, 2004)

Initial Data Collection Topics

- Wildlife Use of Ponds, Marshes, Sloughs, Mudflats and Bay
- Vegetation/Plankton in Ponds, Marshes, Sloughs, Mudflats and Bay
- Design of habitat and landscape
- Lessons learned from prior restoration projects
- Invasive species
- Seasonal pond/groundwater interactions
- Species-specific data
- Wildlife/Human interaction effects
- Species resilience/response during restoration
- Predation
- Contaminants in Wildlife
- Food Resources
- Water and Sediment Quality

Data Collection, cont'd.

- Infrastructure
- Sediment
- Imported sediment supply and quality
- In-place sediment quality (ponds,sloughs,Bay)
- Sediment characteristics for imported sediment
- Hydrodynamics and Related Data
- Effects of Cargill operations
- Vector control
- Flood protection issues
- Levee conditions
- Recreational and public access: current and potential
- Physical distribution of Mercury and other contaminants in project and adjacent and upstream areas

Sample Bibliographic Entries

A manual for assessing restored and natural coastal wetlands with examples from Southern California
Zedler et al: Pacific Estuarine Research Laboratory 1990 Reference type: Report
Full reference: Zedler et al.: Pacific Estuarine Research Laboratory. 1990 A manual for assessing restored and natural coastal wetlands with examples from Southern California. California Sea Grant Report No. T-CSGCP-021

A Review of the Physical and Biological Performance of Tidal Marshes Constructed with Dredged Material in San Francisco Bay, California, Draft Report.
Long-Term Management Strategy (LTMS) 1994 Reference type: Report View details
Results summary or abstract Previous studies have correlated dredged sediment placed at high elevations (approximately 0.5 ft below MHHW) with poor tidal channel formation (LTMS 1994); if the high marsh goal does not depend on extensive channel formation, then such a concern would not apply.

Information Sources

- Sources of "Gray" Literature, Data, Experts
- Contacts
- -Private Firms
  -Academic Institutions
  -Government Agencies (Federal, State, County, Local, Including Water Districts)
  -Non-Profit Organizations
  -Independent Specialists
  -Data Gaps Workshop Attendees
- Handout list

- **Are there additional information sources we should be including?**

- **E-mail:** mbusnardo@harveyecology.com

Proposed Alternatives Formulation and Evaluation Methodology

- Develop a tool to help systematically identify, evaluate and contrast alternatives
- Ensure that all reasonable alternatives are evaluated
- Provide a basis for selection of the range of alternatives and the preferred alternative
- Applicable at Landscape, Pond Complex or Pond Scale

Overview of Plan Development

Goals → Objectives → Detailed Objectives →

Evaluation Criteria → Various Metrics →

Tool to help evaluate concepts/alternatives

Questions for Discussion

- Are we missing something big?
- Are there other detailed objectives we should consider?
- Are there other evaluation criteria we should consider?

Overall Restoration Project Objectives

(approved by Stakeholder Forum 2/18/04)

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 through management, and take into account ecological risks from 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).

Objective 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.

Purpose of Detailed Project Objectives

- Help provide specific, implementable project actions and direction
- Help with early critical decisions
- Help screen restoration concepts and alternatives
- Carry through the NEPA/CEQA process

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	Evaluation Criteria	Scale*
Recover the south bay subspecies of the salt marsh harvest mouse	Aerial extent of complete salt marshes, with broad marshplain (*i.e.*, pickleweed) habitat and broad upland/peripheral halophyte transitional zones, and interconnected restored marsh areas.	L PC P
Meet the South Bay portions of the recovery plan for the California Clapper Rail	Aerial extent of broad tidal marshes with extensive, dendritic channel systems and appropriate vegetation structure.	L PC P
Re-establish populations of *Cordylanthus maritimus* ssp. *palustris* and *Sueda californica*	Aerial extent of high marsh/upland transitional zones	L PC P
Meet recovery goals for Snowy Plovers	Aerial extent of suitable breeding habitat (salt pan)	L PC P

* L = Landscape PC = Pond Complex P = Individual Pond

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

Detailed Objectives	Evaluation Criteria	Scale
Maintain current populations of birds breeding at the salt ponds	Estimate of numbers of breeding birds	L PC P
Maintain habitat for salt pond specialized birds (*e.g.*, Wilson's Phaleropes)	Area of pond habitat with somewhat elevated salinities	L PC P
Maintain current population levels for foraging shorebirds	Estimate of foraging habitat area	L PC P

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

Detailed Objectives	Evaluation Criteria	Scale
Maintain or enhance the populations of shorebirds currently using intertidal mudflat habitat	Area of mudflat habitat available in the South Bay through the life of the project	L
Enhance South Bay fish populations	Area of tidal channel habitat within marshes	L PC
Enhance habitat for intertidal invertebrate populations by contributing to the detrital food web.	Area of intertidal habitat.	L
Enhance harbor seal habitat for foraging and isolated haul-out areas	Area of new, large tidal channels	L PC

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	Evaluation Criteria	Scale
Minimize colonization of mudflats and marshplain by non-native *Spartina* and its hybrids	Area of potentially colonizable mudflat	PC P
Maintain or improve the current levels of vector management	Area of potential mosquito habitat	PC P
Improve protection from predators and reduce need for Predator Management	Area of isolated tidal marshes	PC P

Questions for Discussion

- Are we missing something big?
- Are there other detailed objectives we should consider?
- Are there other evaluation criteria we should consider?