



South Bay Salt Ponds Restoration Project

Flood Management Planning Overview

**Presentation to the
Flood Management Work Group
of the Stakeholder Forum**

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Time Line & Deliverables

- a. Flood Management Work Group Meeting, PWA to attend**
 - 1. Held on February 18, 2004
 - 2. March 29, 2004 (this meeting)
 - 3. April 15, 2004 (tentative)
 - 4. May 25, 2004 (tentative)
 - 5. Other ?

- b. Focused Technical Meeting (April/ May ,2004)**
 - 1. Alameda County Flood Control and Water Conservation District
 - 2. Santa Clara Valley Water District
 - 3. San Mateo County Flood Control District
 - 4. USACE

- c. Detailed Project Objectives – May 1, 2004**

- d. Opportunities and Constraints – June 1, 2004**

- e. Next Stage Work Plan – June 1, 2004**

- f. Stage1 Memorandum – July, 2004**

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Approach

- a. Detailed Project Objectives, Alternative screening criteria
- b. Develop Conceptual flood management options
- c. Identify Opportunities and Constraints
- d. Modeling approach and criteria
- e. Scope next stage

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Technical Approach

GIS Based Evaluation of Alternatives

- Interactive GIS database
- Spatial analysis of Flood Management Attributes
 - Levee
 - Pond
 - Channel

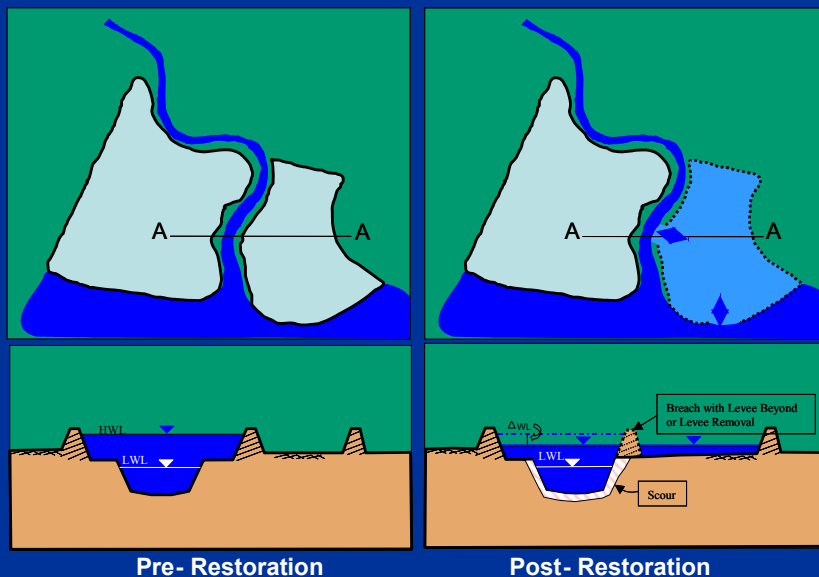
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Opportunities with wetland restoration

- a. Tidal conversion of ponds – enhanced flood storage and conveyance
- b. Expansion of sloughs (levee setbacks) – enhanced flood storage and conveyance
- c. Managed ponds (pond, muted tidal or seasonal habitat) – flood flow diversion
- d. Mudflat and marsh – natural wave breaks

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Opportunities: Salt Pond Converted to Tidal Marsh – an example



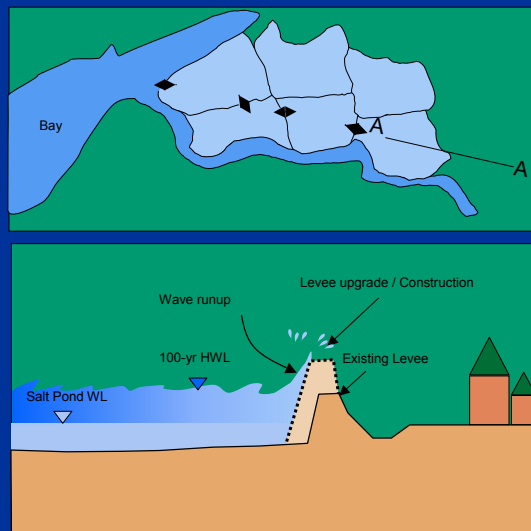
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Opportunities: Salt Pond Converted to Tidal Marsh

1. Increase tidal prism
2. Expansion of channel cross-section
3. Increase channel conveyance
4. Increase flood storage
5. Decrease water level downstream
6. Reduction of flood hazard upstream

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Constraint: Increased coastal flood potential- an example



Short-term Effects

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Constraints

- a. Relocate tidal boundary at under-designed levee – increased erosion and overtopping
- b. Introduce or increase tidal action – reduce flood water storage at high tide / increase ground water elevation
- c. Others