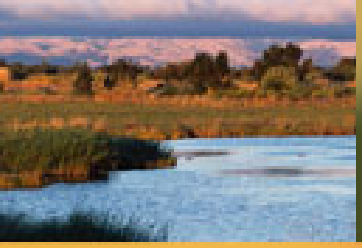
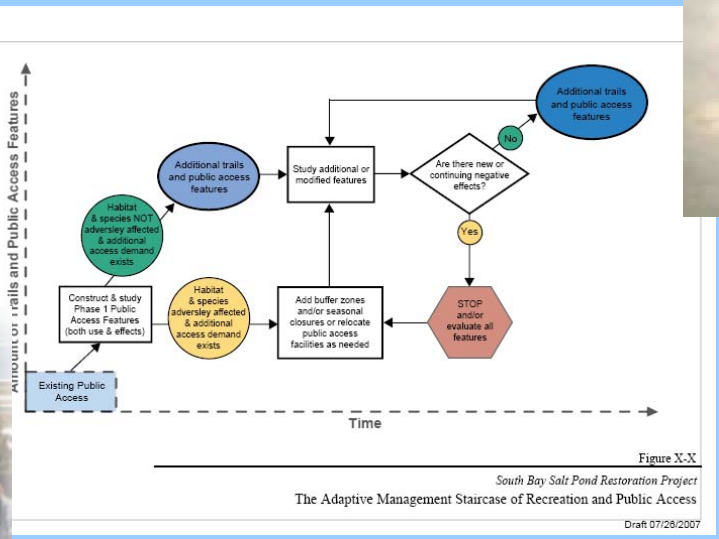
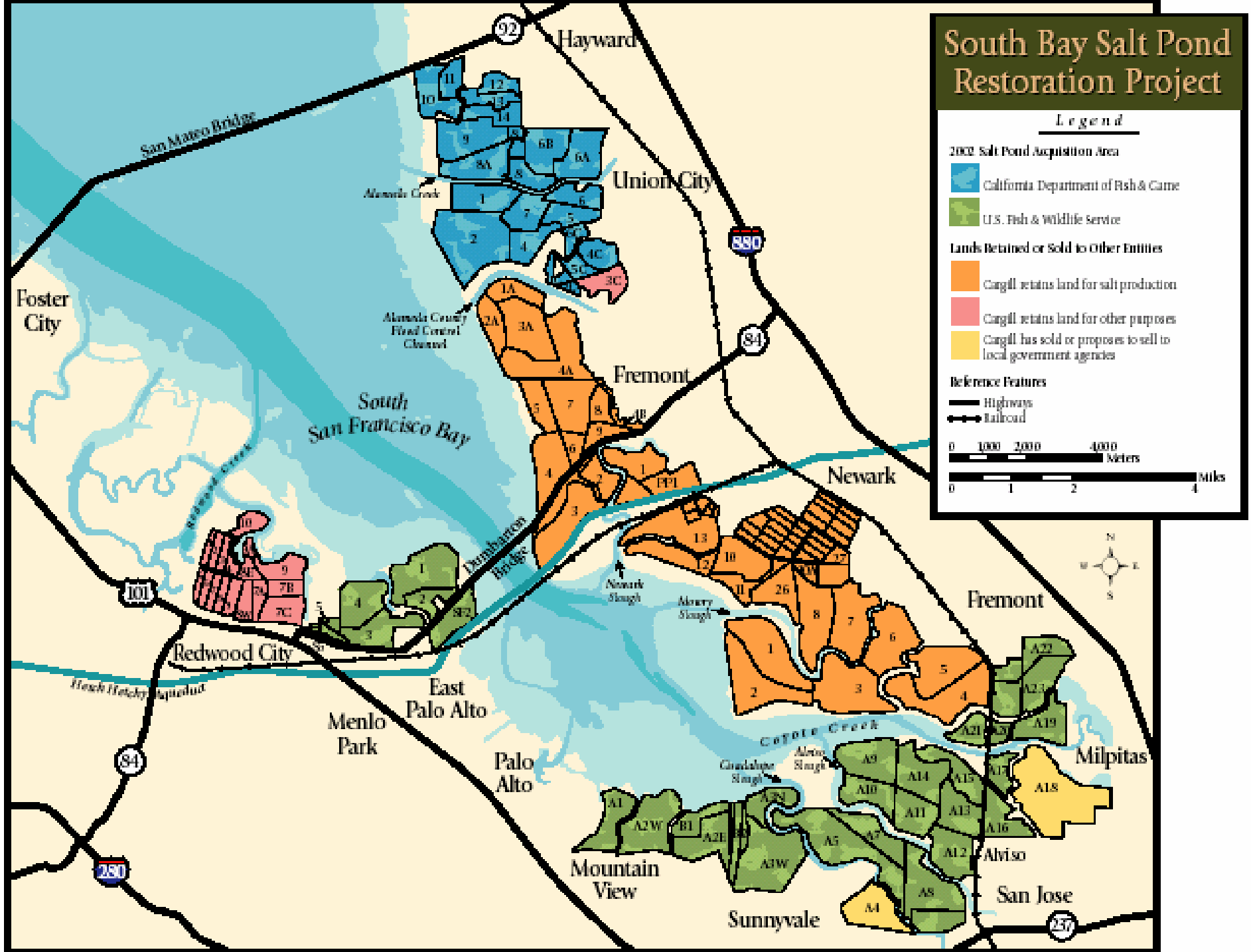


South Bay Salt Pond Restoration Project

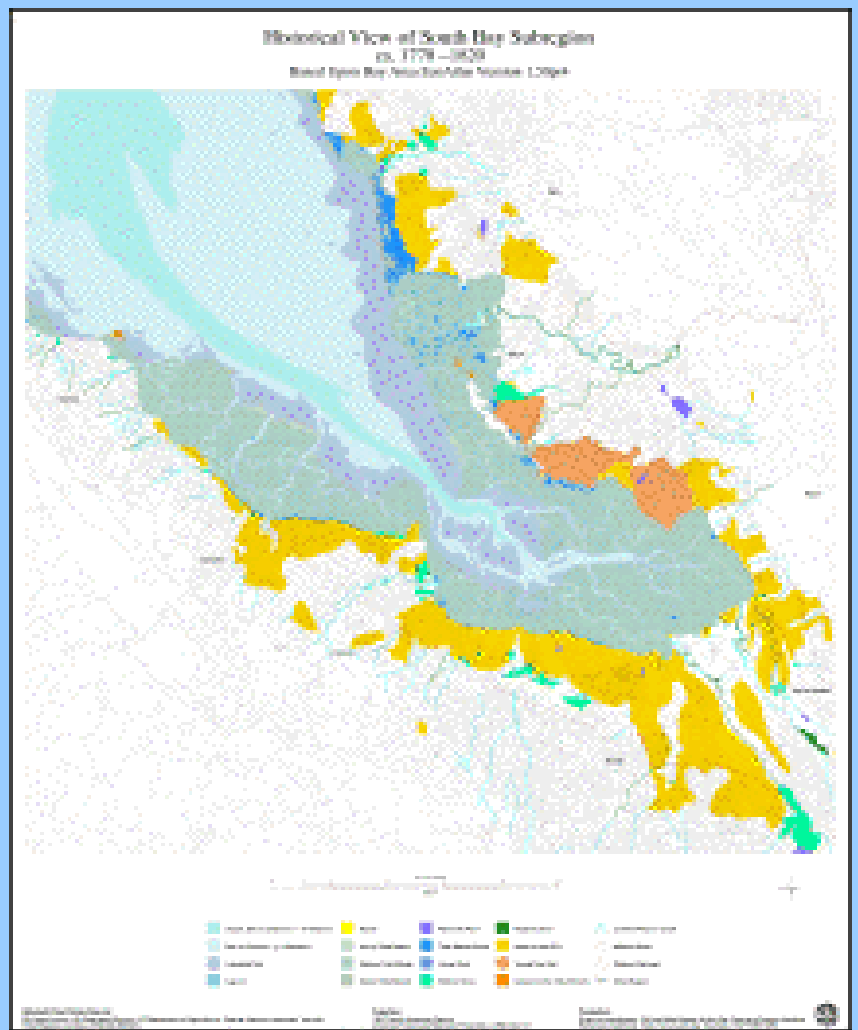
South Bay Salt Pond Restoration: Public Access and Wildlife Technical Workshop

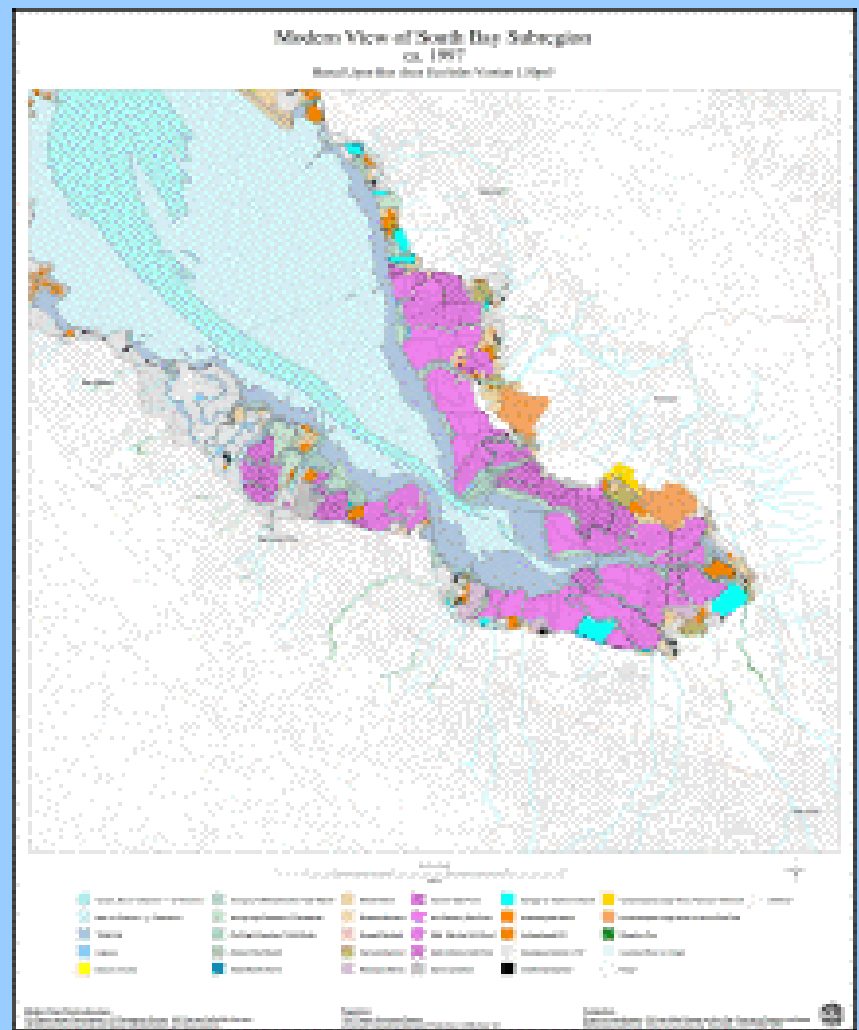


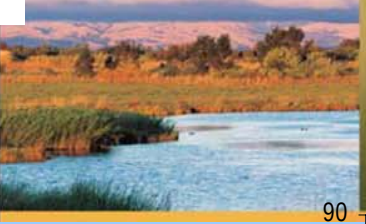
Lynne Trulio
Lead Science Team
May 20, 2008


South Bay Salt Pond Restoration Project
Legend
2002 Salt Pond Acquisition Area
California Department of Fish & Game
U.S. Fish & Wildlife Service
Lands Retained or Sold to Other Entities
Cargill retains land for salt production
Cargill retains land for other purposes
Cargill has sold or proposes to sell to local government agencies
Reference Features
Highways
Railroad
0 1000 2000 4000 Meters
0 1 2 4 Miles
Hayward
Union City
Fremont
Newark
Fremont
Milpitas
Alviso
San Jose
Sunnyvale
Mountain View
Palo Alto
Menlo Park
East Palo Alto
Redwood City
Foster City
South San Francisco Bay
San Mateo Bridge
Dumbarton Bridge
Alameda Creek
Alameda County Flood Control Channel
Newark Slough
Alviso Slough
Guadalupe Slough
Coyote Creek
Redwood Creek
Hayward Shoreline
92
880
84
101
237
280

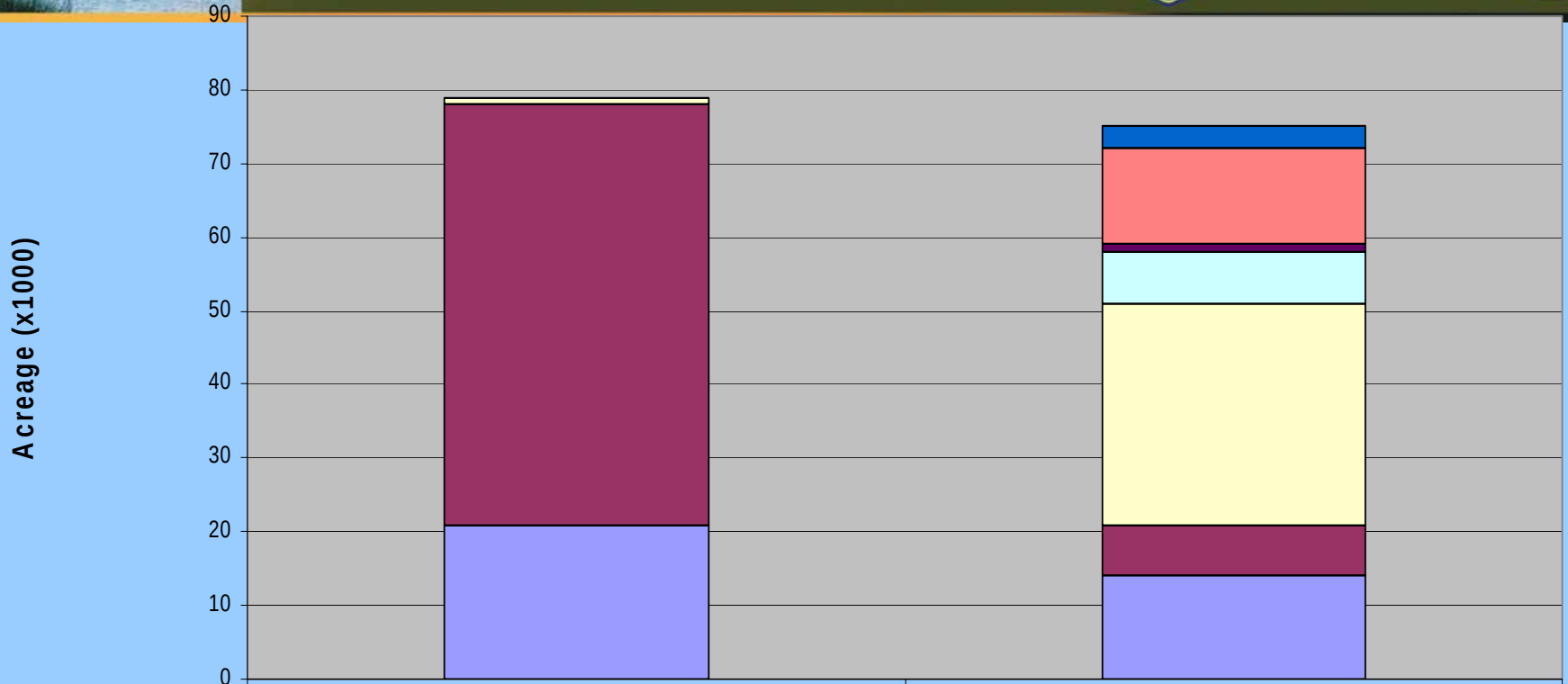
South Bay: Then and Now







South Bay Salt Pond Restoration Project



	Past	Present
Other	0	3
Bay Fill	0	13
Agriculture	0	1
Diked Wetland	0	7
Salt Pond	1	30
Tidal Marsh	57	7
Tidal Flat	21	14

Tidal marsh restoration a Primary Goal

Two endangered species of tidal marsh habitat:

- California Clapper Rail (*Rallus longirostris obsoletus*)

- Salt Marsh Harvest Mouse (*Reithrodontomys raviventris raviventris*)

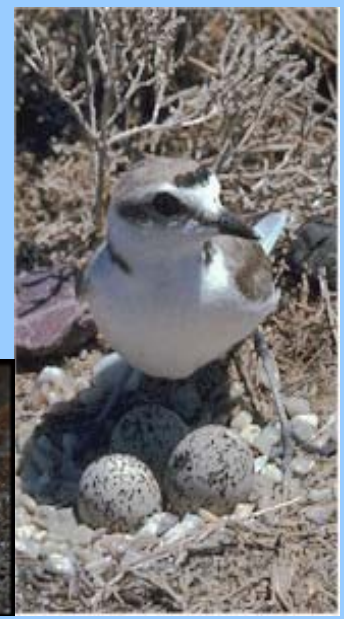
Bay Ecosystem Improvement

- Water Quality
- Native Oysters
- Fish
- Harbor Seals


Chronicle / Brant Ward

Pond Management: another ecological goal

- Shorebirds and waterfowl—nesting & foraging



- Western Snowy Plover (*Charadrius alexandrinus nivosus*)

- California Least Tern (*Sterna antillarum browni*)

Six Project Objectives

Ecological Objectives

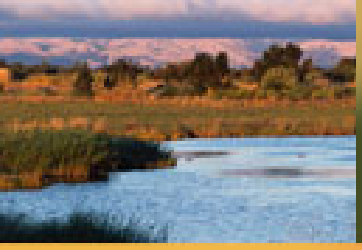
Water and Sediment Quality

Infrastructure

Invasive and Nuisance Species

Flood Protection

Public Access



South Bay Salt Pond Restoration Project

8 Key Project Uncertainties

- Mercury
- Sediment Dynamics/Mudflats
- Water Quality
- Bird Use of Changing Habitats
- Invasive and Problem Species
- Benefits to Non-Avian Species
- Public Access and Wildlife
- Social Dynamics

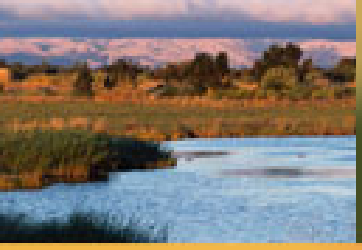
Developed 21 Applied Studies Questions

- **Focused research**
- **Reduce uncertainties**
- **Direct management application**

South Bay Salt Pond Restoration Project

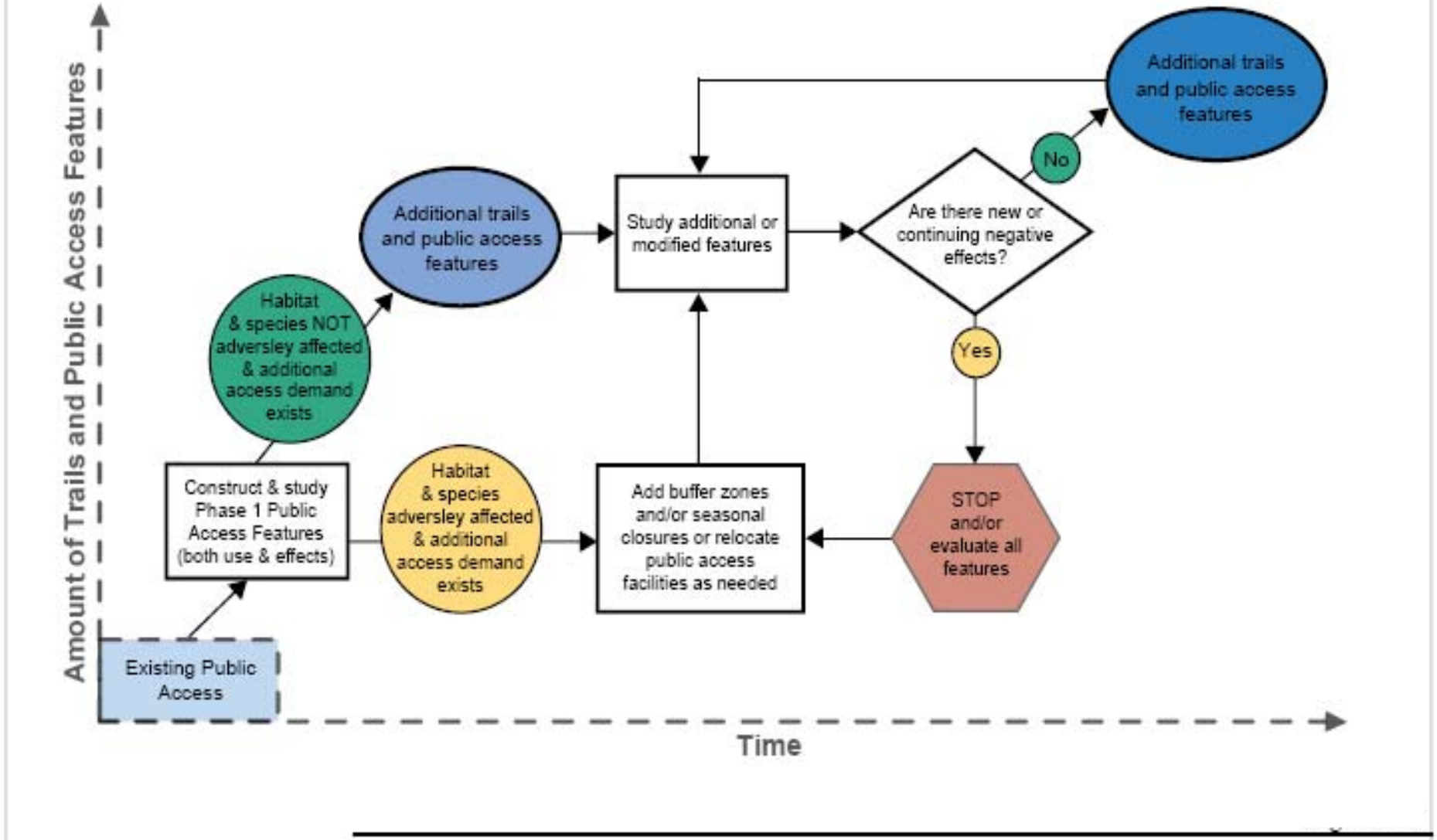
Balancing Public Access and Wildlife Needs

- Project is planning new trails, overlooks, kayak launches, hunting
- Will these public access features reduce the Project's ability to reach its species protection goals?



Adaptive Management Is the Answer!

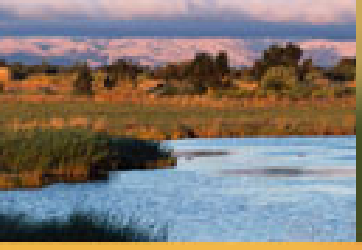
- A **cyclic process** for learning from management decisions and applying that knowledge to current and future decisions.
- **Project managers** will use this information to:
  - Determine if the Project is meeting its Objectives
  - Correct current actions and design future phases



South Bay Salt Pond Restoration Project

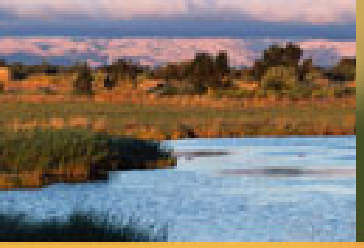
The Adaptive Management Staircase of Recreation and Public Access

Draft 07/26/2007



Public Access Applied Studies

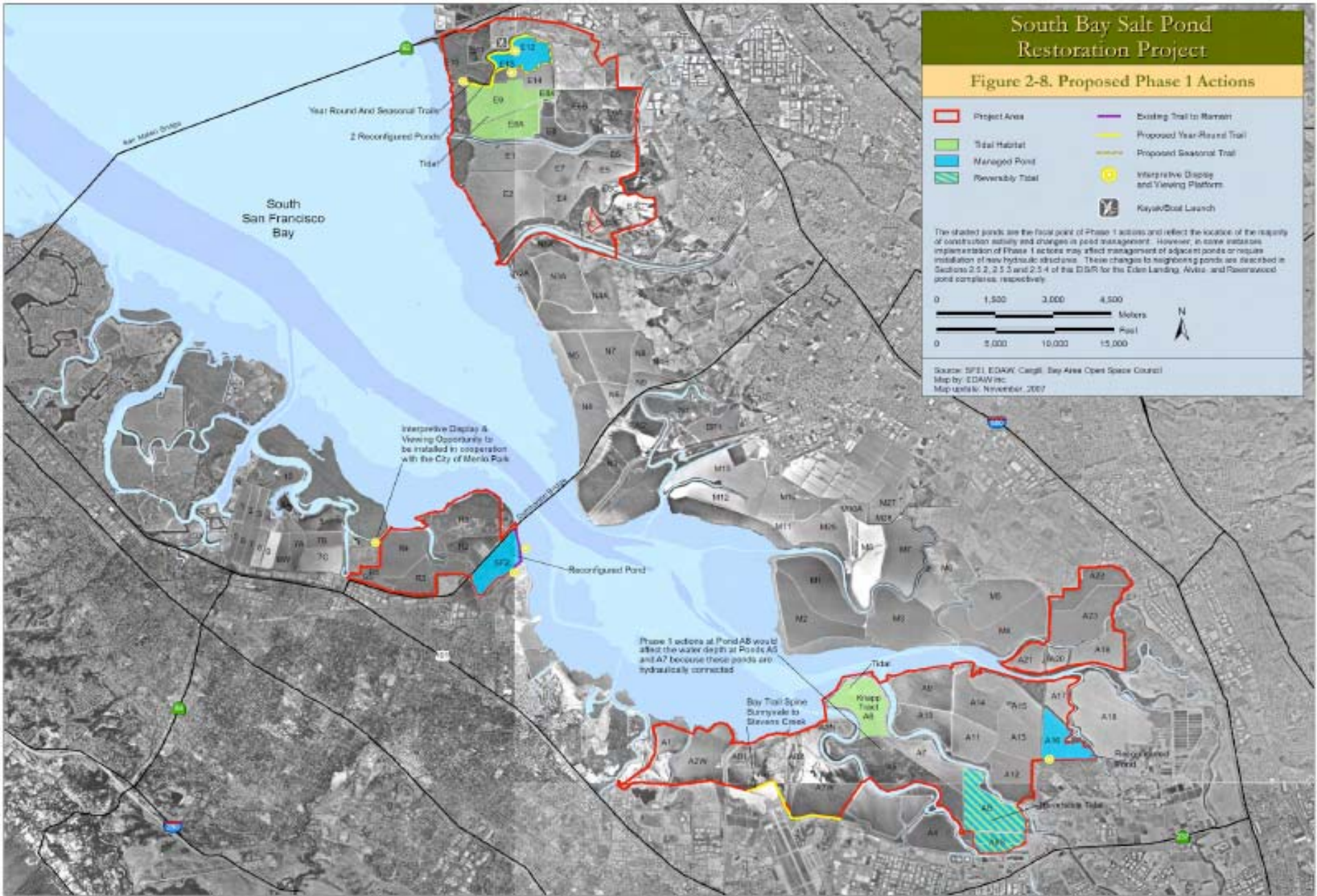
- Trails and shorebirds → Migratory & resident
- Boating and waterbirds → Nesting, loafing, foraging
- Boating and harbor seals → Haul-out and pupping sites
- Trails and California clapper rails → Nesting, loafing, foraging



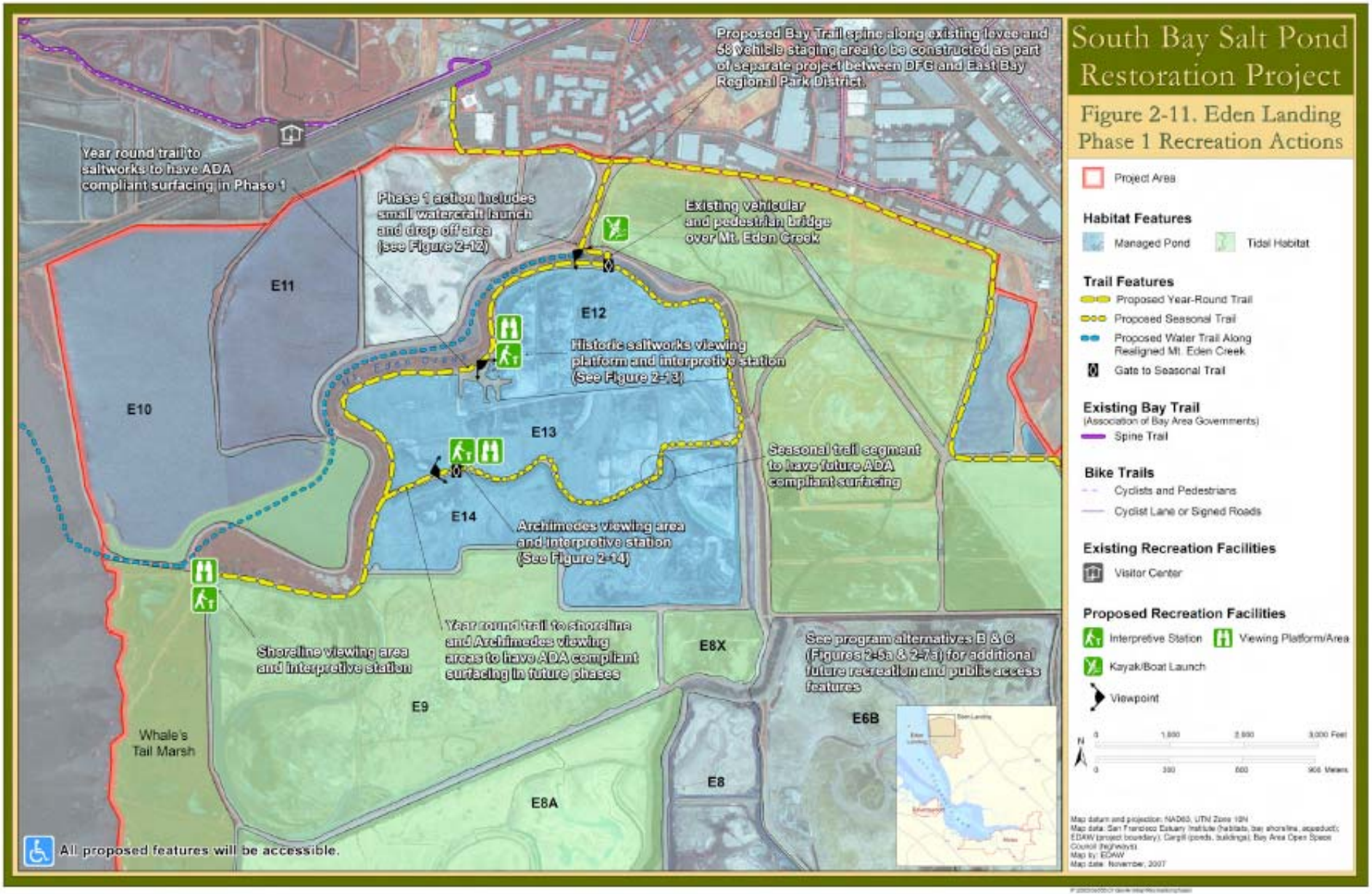
Public Access Features—Phase 1

- Trails, kayak launches, overlooks, interpretive signs, hunting
- Project managers committed to Phase 1 public access
- Information on access impacts on wildlife and access preferences needed for adaptive management
- So, each Phase 1 action requires study

Phase 1 Actions

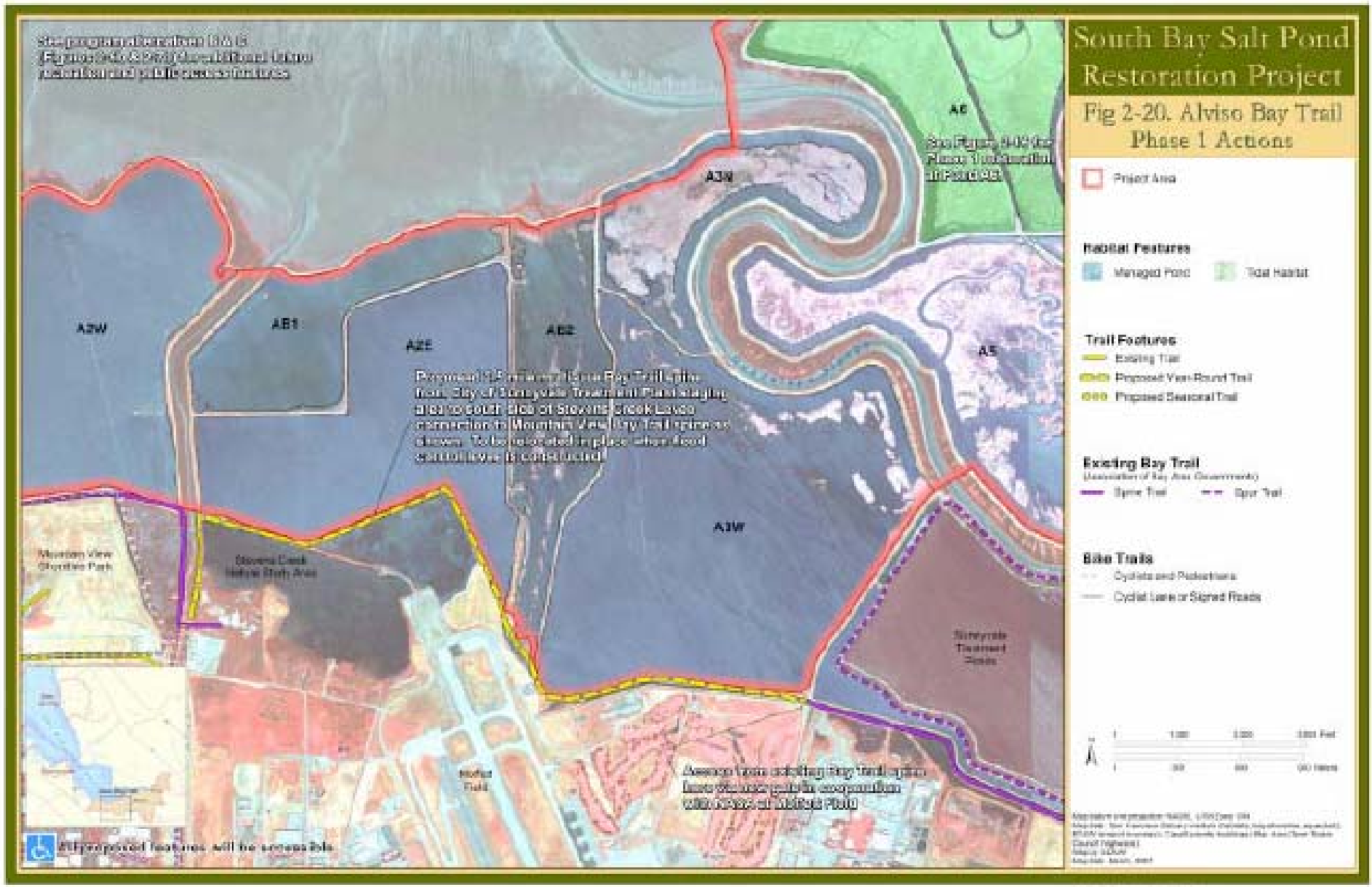


Phase 1 Eden Landing Public Access

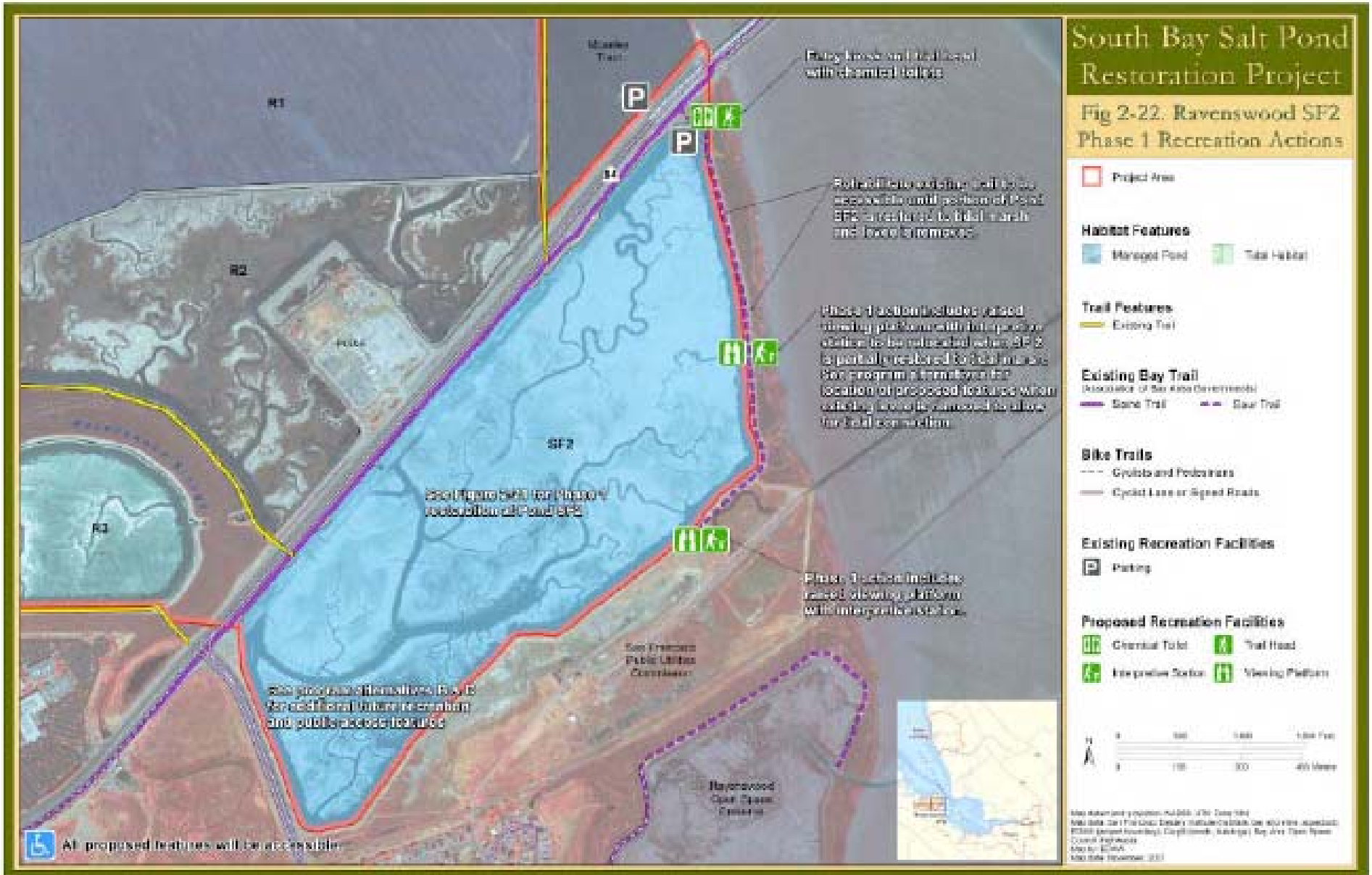


Phase 1 Alviso Public Access—Pond A16

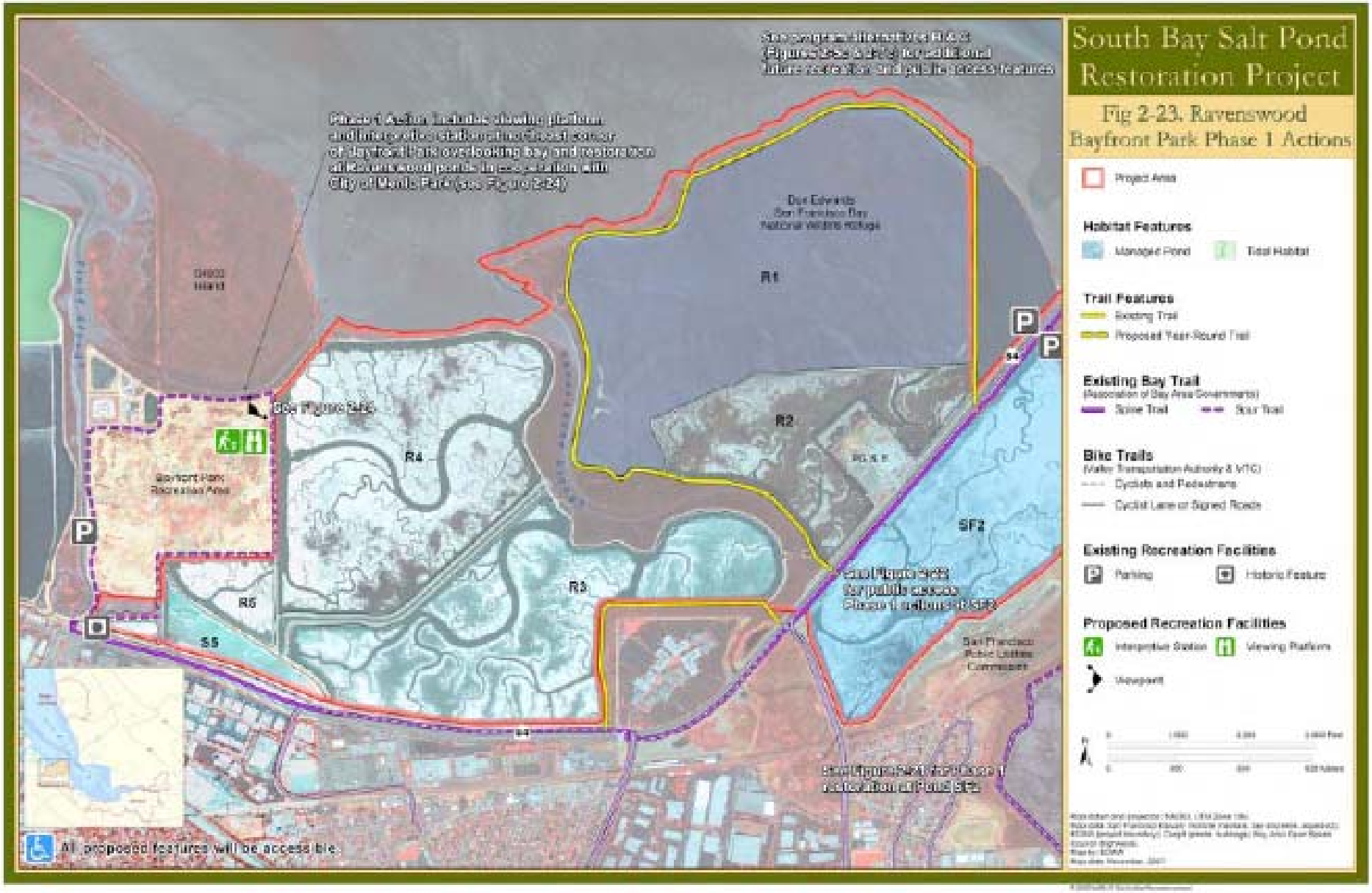
Phase 1 Alviso Public Access—Other Ponds



Phase 1 Ravenswood Public Access—SF2



Phase 1 Ravenswood Public Access--Other



Questions to Address Today

- What do we know about the interaction of key species and recreationists?
- Given the goals of the SBSP Project, what key public access and wildlife interaction issues need study?
- How should the Phase 1 studies be designed to provide the most relevant information?

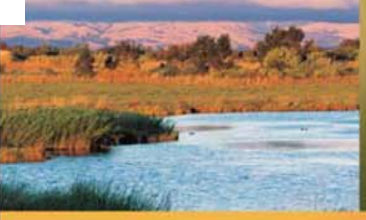
Today's Agenda

- **Summary of knowledge on key issues**
  - Jules Evens—Boating and waterfowl
  - Lynne Trulio—Trails and foraging shorebirds
  - Kevin Lafferty—Public access and snowy plovers
- **In-put from Workshop participants**
- **Phase 1 public access and wildlife studies**
- **Comments from observers**

Today's Agenda

- Lunch
- Discussion with Workshop Participants
  - Based on the information presented, what studies should be undertaken to achieve Project Objectives?
  - How should the Phase 1 public access and wildlife studies be designed to address key issues?
- Comments from Observers

South Bay Salt Pond Restoration Project



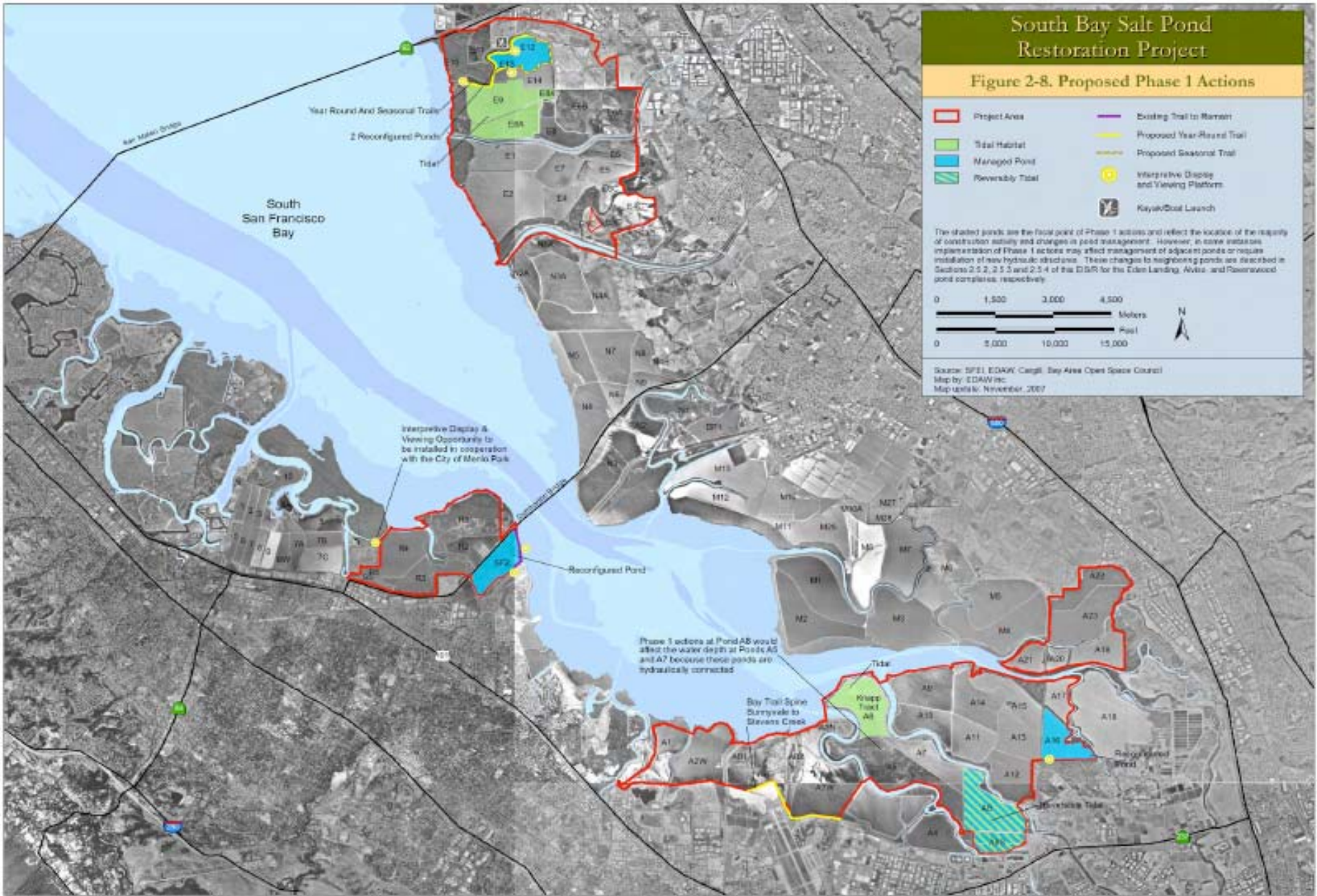
Phase 1 Applied Studies

A16 and SF2: **Nesting & foraging shorebirds**

E12/13: **Foraging shorebirds**

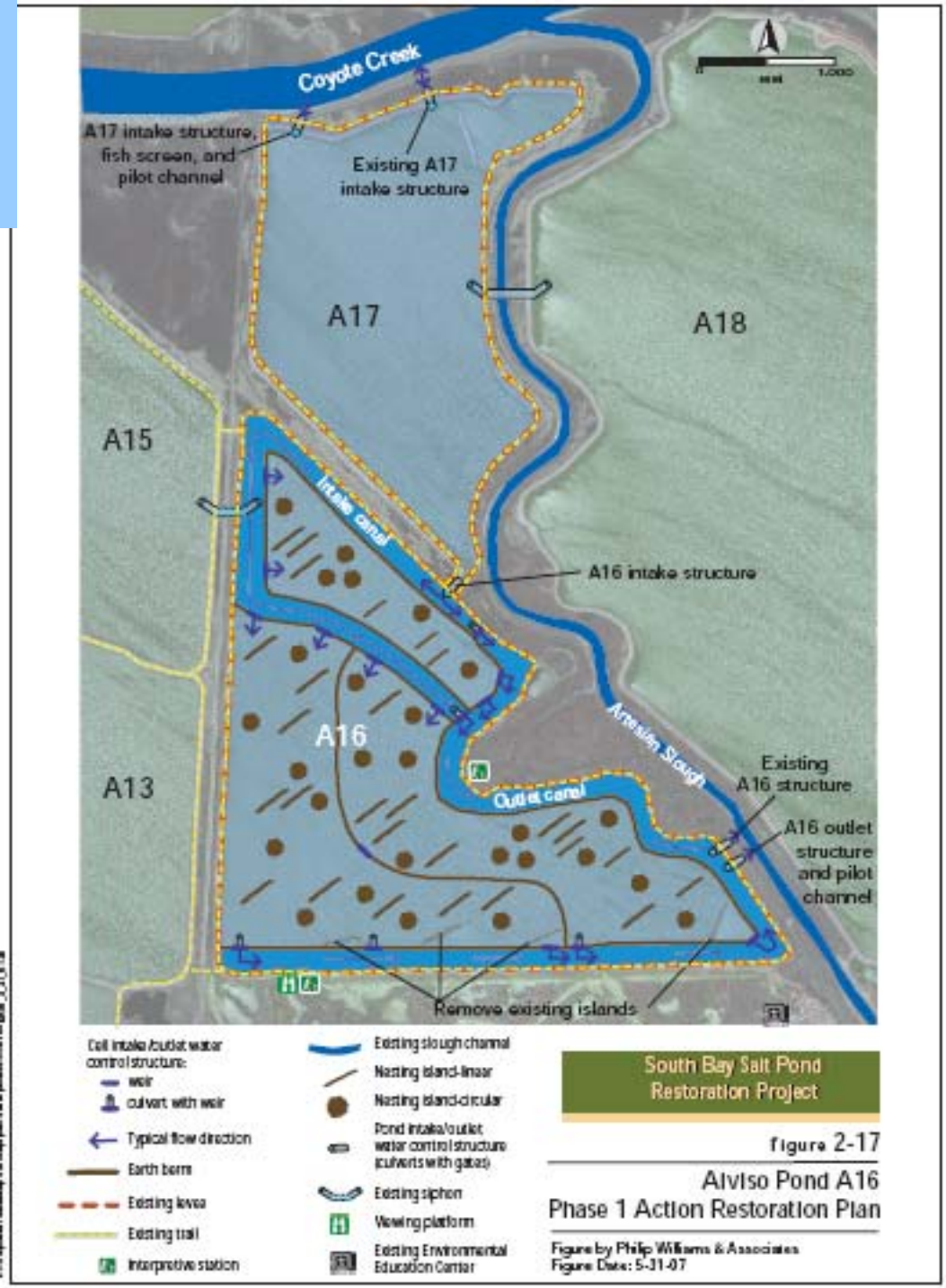
A3W: **Foraging waterfowl**

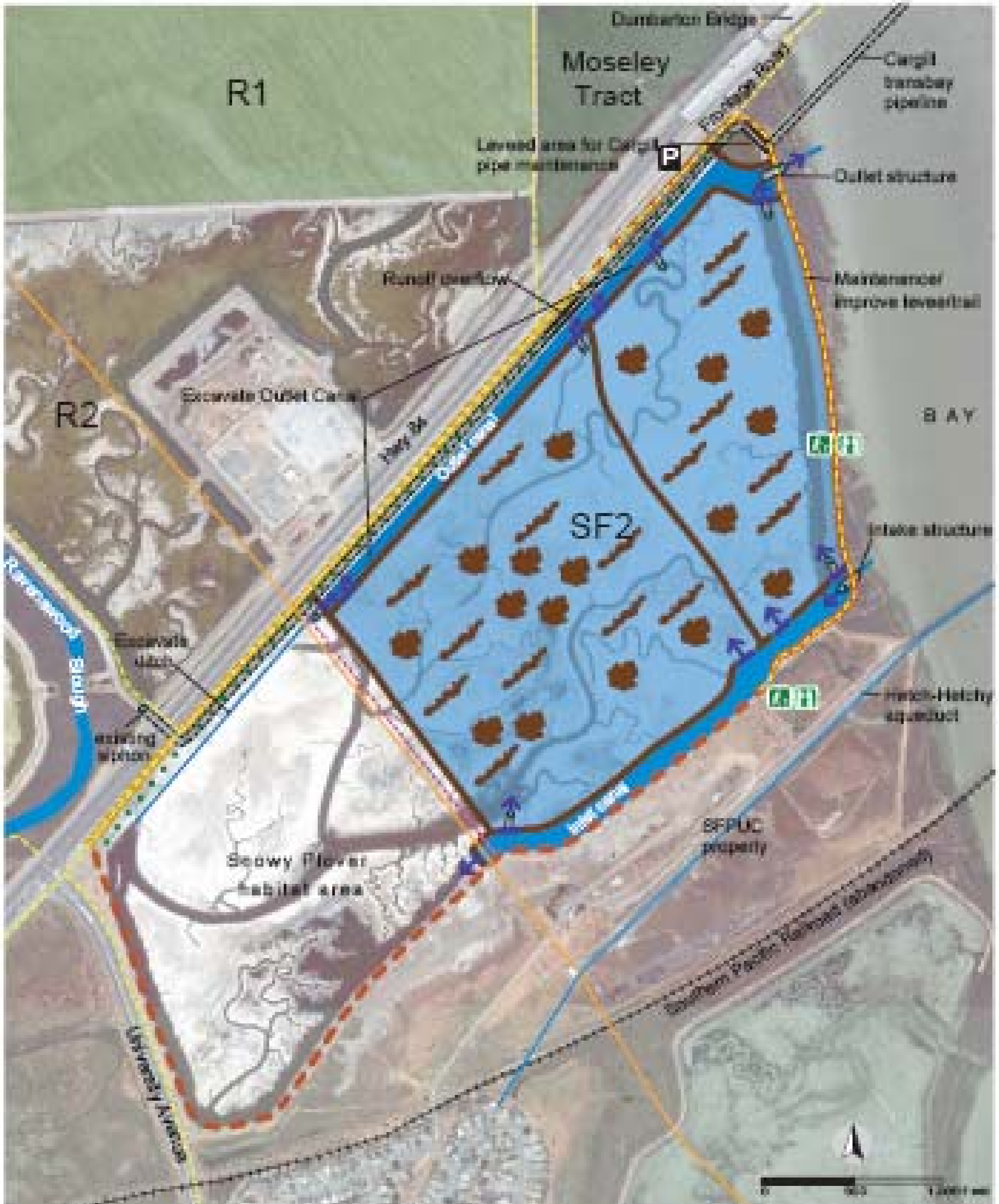
Phase 1 Actions



A16/SF2 Nesting and Foraging Bird Study

- Assess nesting and foraging bird response to trail
- General design (BACI-type):
  - Build islands
  - Close part of trail first year
  - Measure species richness, nesting success, foraging use (other parameters?) along open & closed sections
  - Open trail next year and measure parameters along sections closed & open the previous year
  - Compare to non-trail ponds





South Bay Salt Pond Restoration Project

figure 2-21

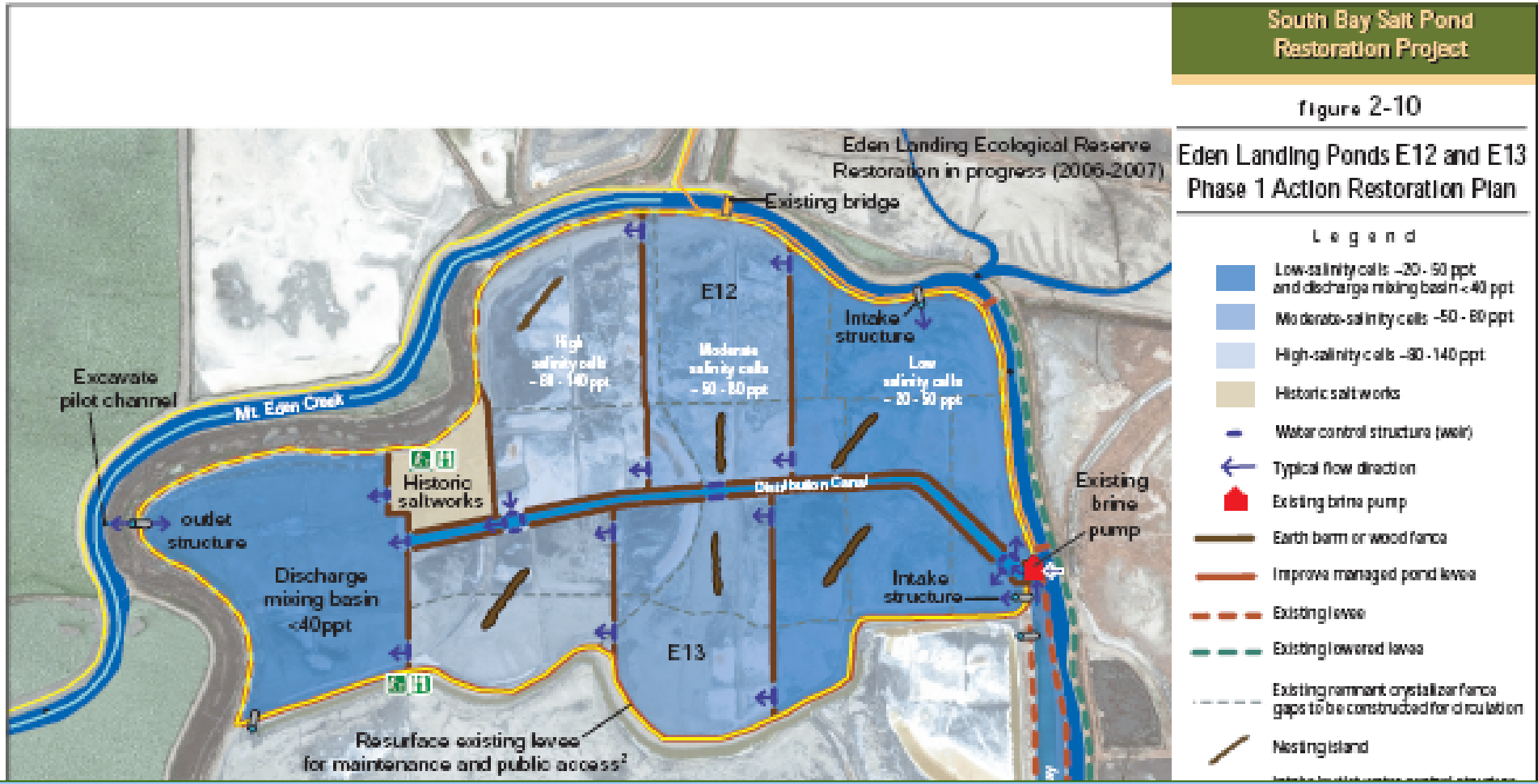
Ravenswood Pond SF2 Phase 1 Action Restoration Plan

- Earth berm
- Existing levee, to remain
- Levee/trail maintenance improvement
- Existing high ground
- Plantings
- Pilot channel
- Typical flow direction
- Pond intake/outlet water control structure (culverts with gates)
- Cell intake/outlet water control structures:
  - Weir
  - Culvert with weir
- Existing above ground pipe, to remain
- Existing buried pipe, to remain
- Railroad
- Existing trails[1]
- Existing parking[1]
- Interpretive station[1]
- Viewing platform[1]
- PG&E overhead power transmission line
- Existing PG&E boardwalk
- Nesting island - linear (25)
- Nesting island - circular (25)

[1] See EIS/R Figure 2-22 for public access and recreation features.

Figure by Philip Williams & Associates
Figure Date: 11-03-07

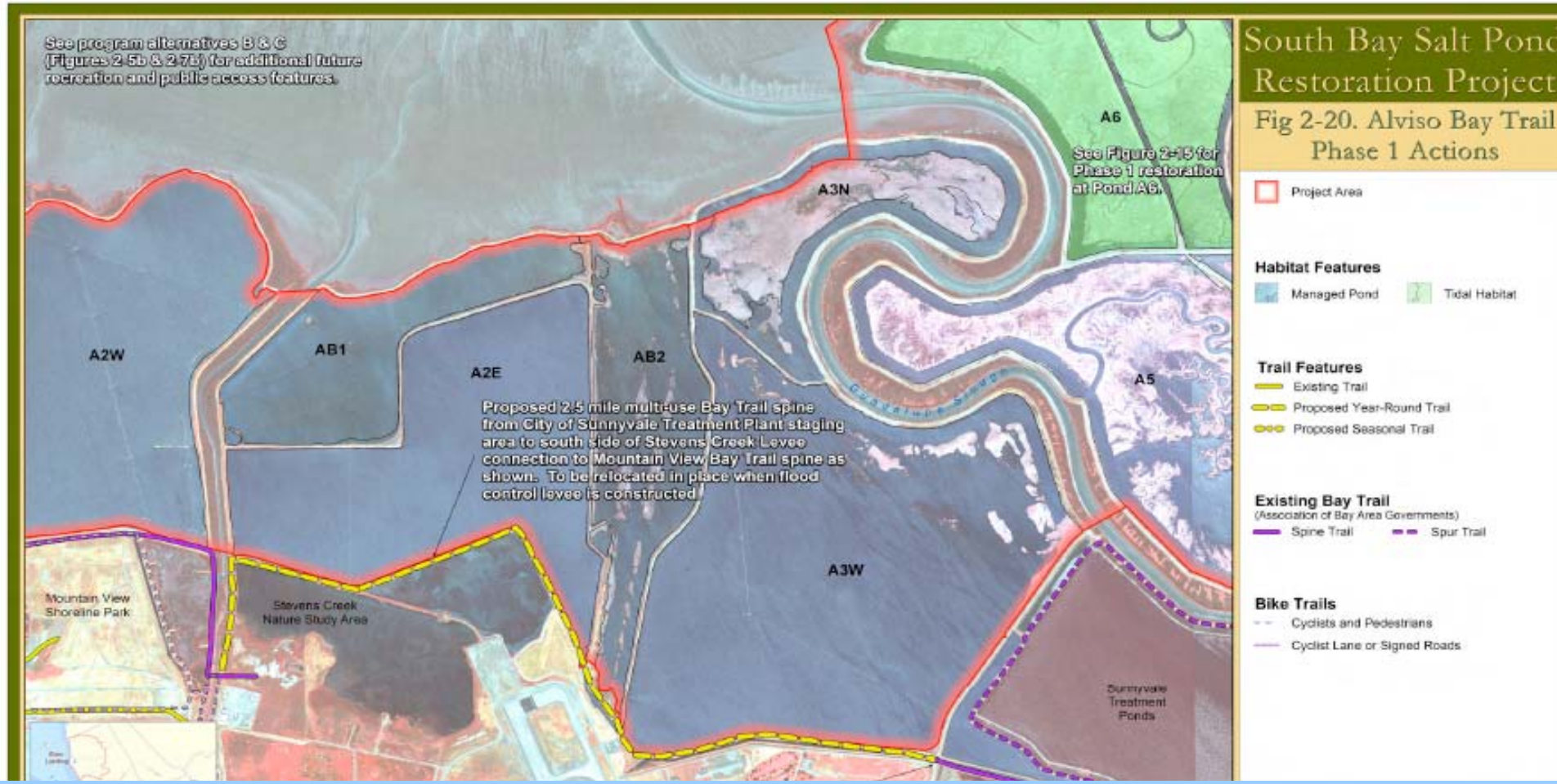
PWA



E12/13 Foraging Shorebird Study

* Build ponds
* Assess response parameters w/o trail and at reference ponds
* Open trail to public
* Assess response parameters at E12/13 and reference ponds

A3W Foraging Waterfowl Study



- Collect data on distance from levee, behavior before trail is opened
- Open trail and collect data
- Compare to pre-trail data and non-trail data collected at other ponds