



# South Bay Salt Pond Restoration Project

*Restoring the Wild Heart of the South Bay*



**Annual Stakeholder Forum meeting, September 24, 2012**

# Today's Topics

- Phase 1 Progress
- Phase 2 Planning
- South Bay Shoreline Study
- Science Program
- Funding Strategies

# Tracking Our Progress: Phase 1



# Key uncertainties

- Wildlife use of changing habitats
- Habitat evolution and sediment dynamics
- Mercury methylation
- Water quality
- Invasive species
- Public access
- Infrastructure support
- Sea level rise and climate change



R. Wilming

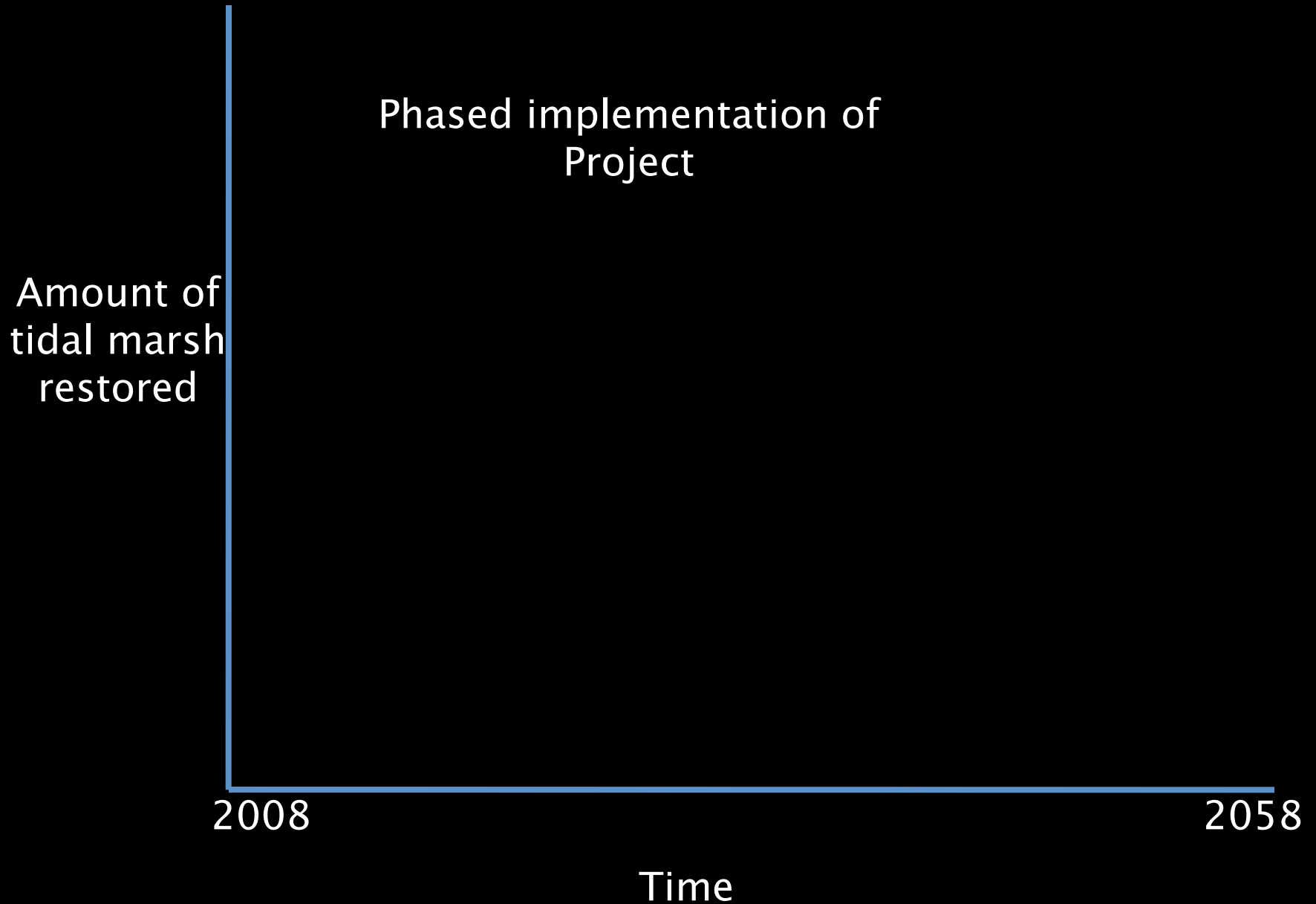


# Ecological Trade-offs

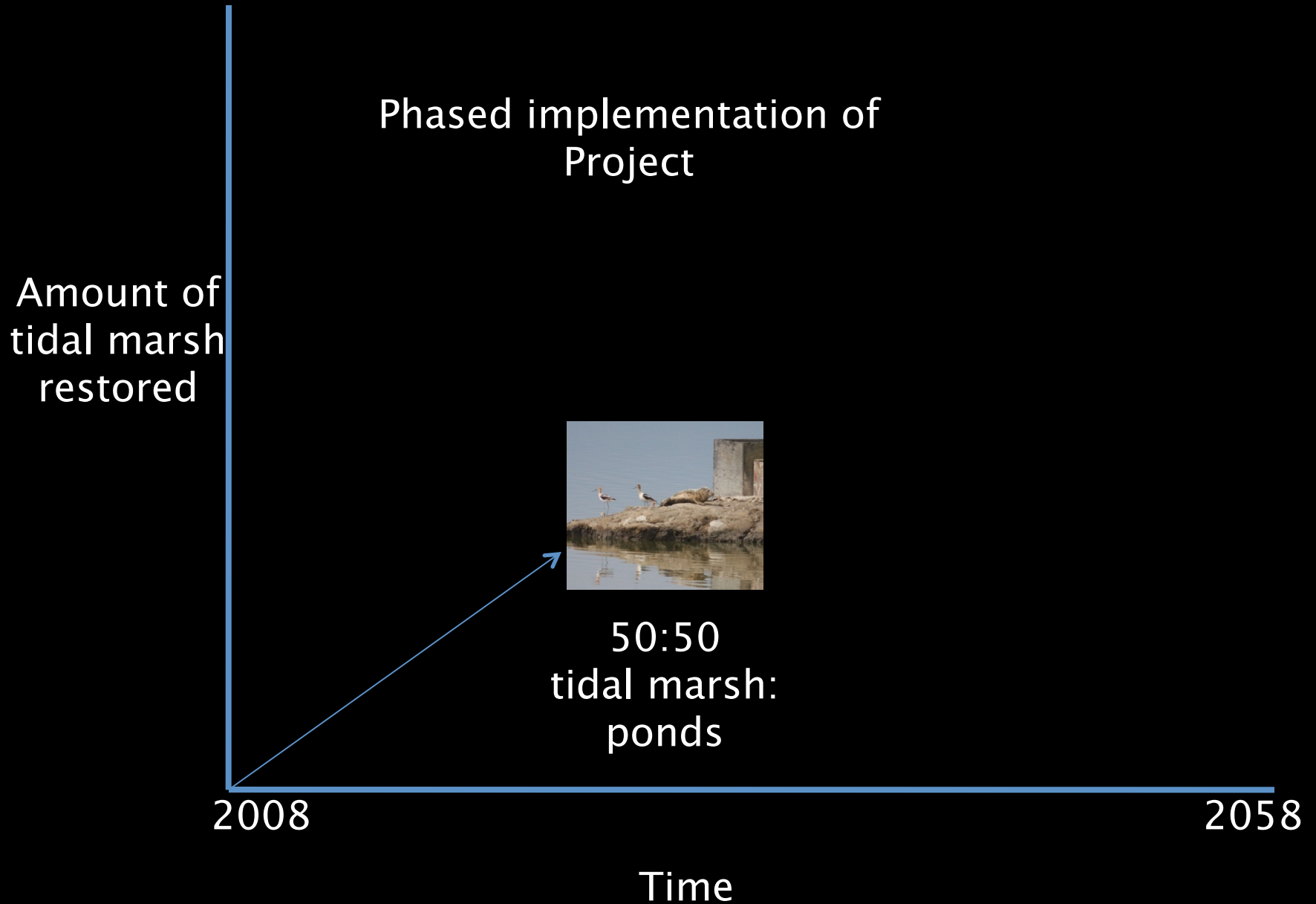
- Tidal Marsh species vs. Salt Pond species



# Adaptive Management Restoration

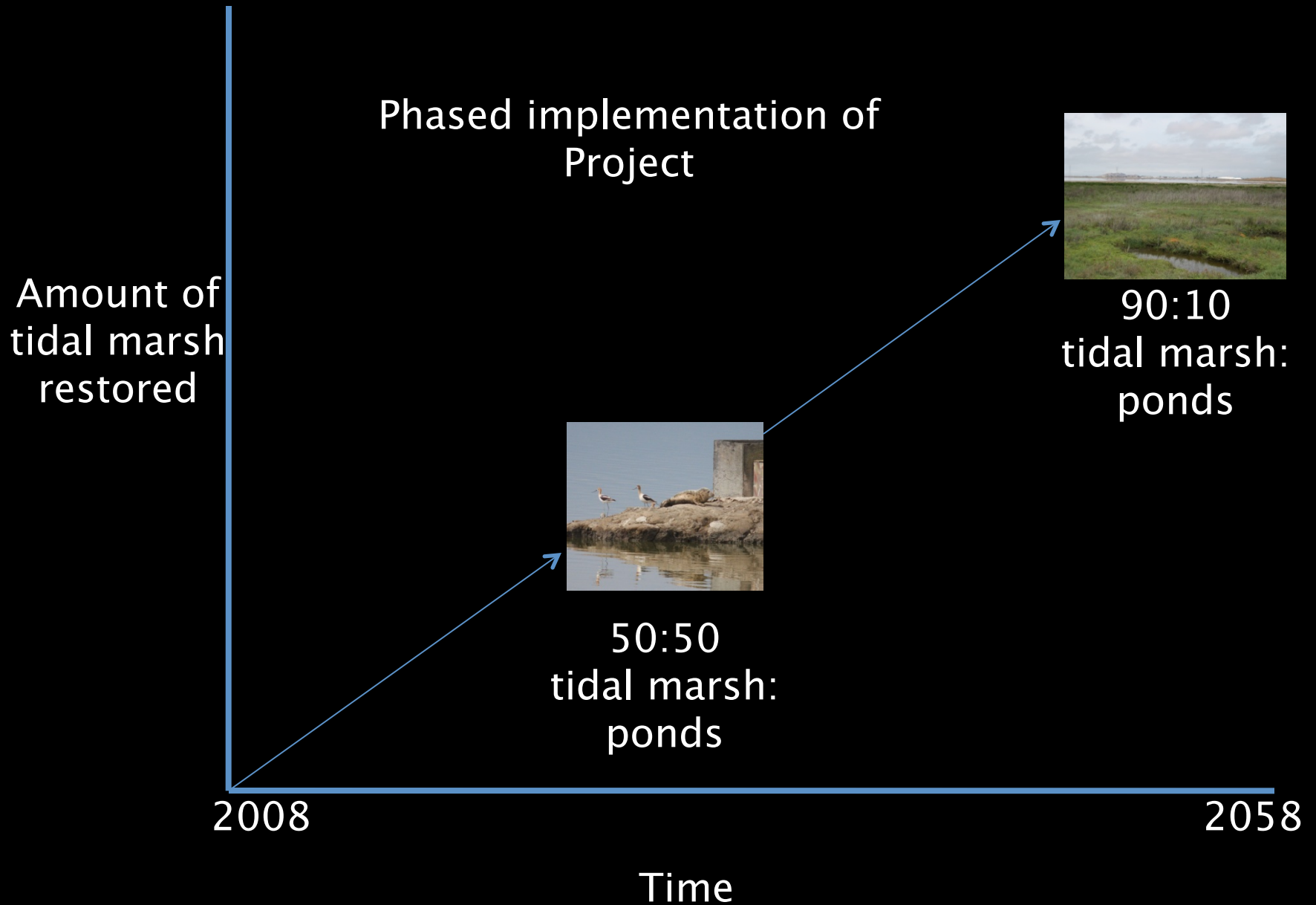


# Adaptive Management Restoration

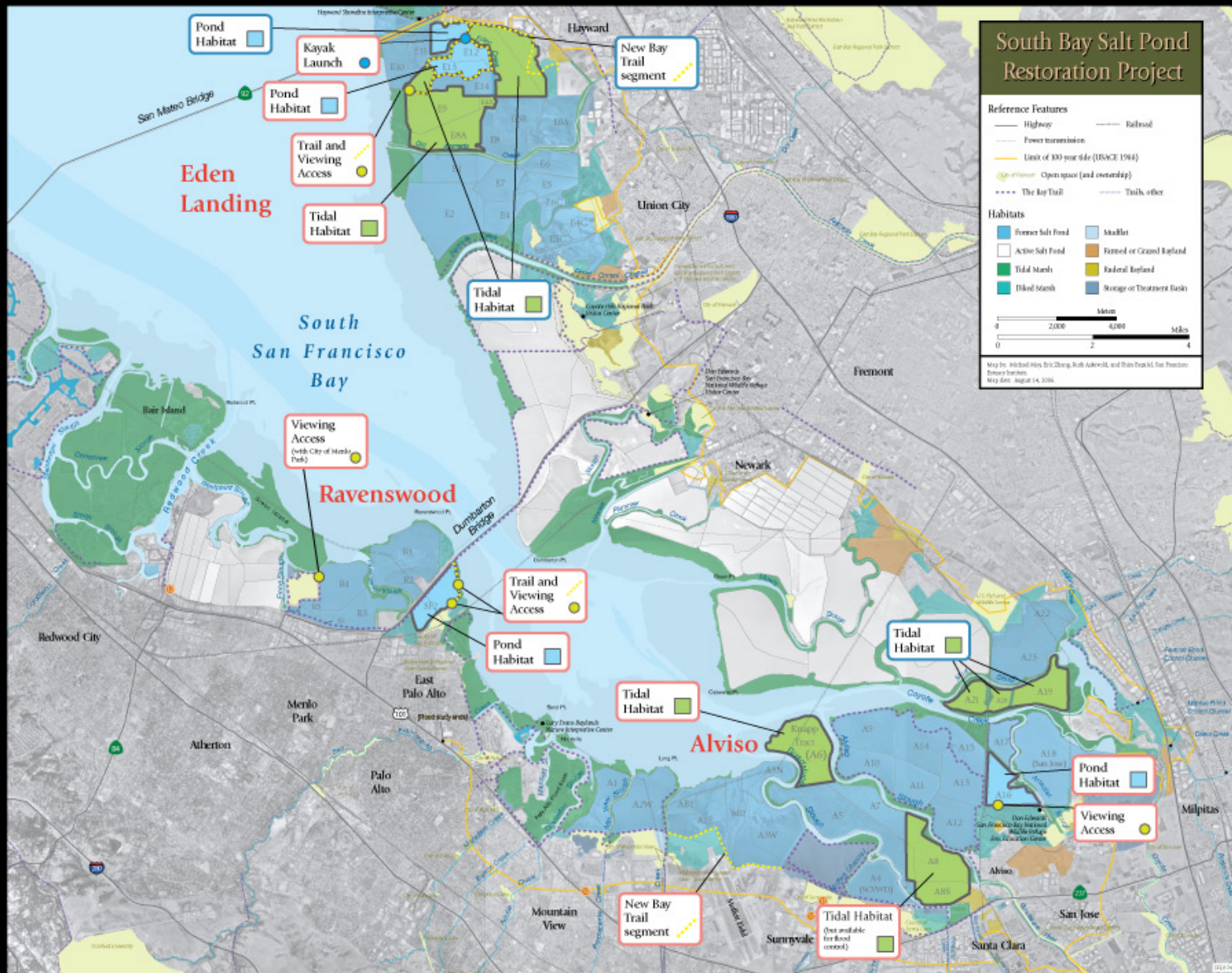




# Adaptive Management Restoration



# Tracking our Progress: Phase One Actions



## Initial Restoration Actions

South Bay Salt Pond Restoration Project

2006 - 08      SBSP Phase 1

**Alviso: A16/17**















## Extreme LIVING

You'll need a microscope to see the most abundant life in the ponds. Billions of bacteria and algae float in these waters and are an important food source for many, both marine and many other organisms. (Microscopic life is tiny, important) and a primary energy source for many other organisms. When tide water is low, the ponds are a great place to look for life. Look for evidence of life wherever you see water. Look for evidence of life wherever you see water. Look for evidence of life wherever you see water.

Photo by [unreadable]  
Illustration by [unreadable]

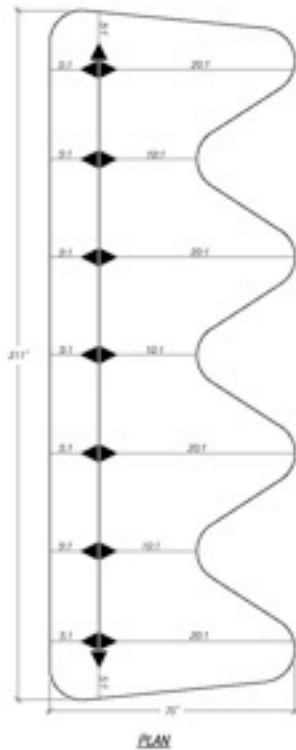


Illustration by [unreadable]  
Photography by [unreadable]

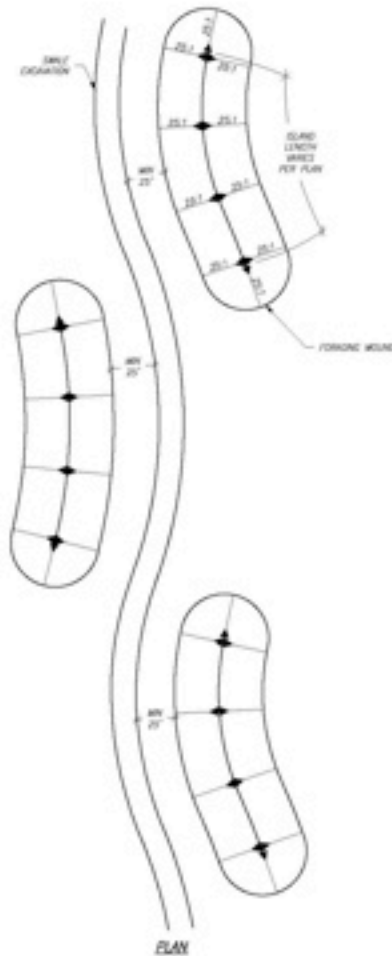
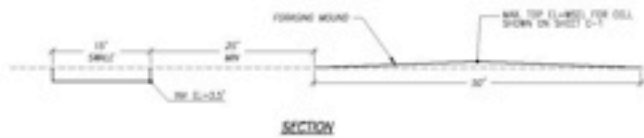
Eden Landing: E12/13







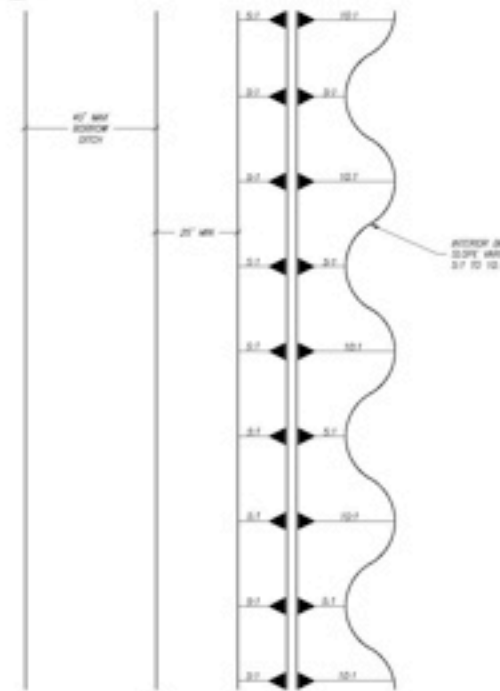
1 TYPICAL DETAIL - NESTING ISLAND  
NOT TO SCALE



2 TYPICAL DETAIL - SWALE & FORAGING MOUNDS  
NOT TO SCALE



3 TYPICAL SECTION - INTERIOR BERM  
NOT TO SCALE



5 TYPICAL DETAIL - INTERIOR BERM  
NOT TO SCALE



9 TYPICAL SECTION - DRIVEABLE BERM  
NOT TO SCALE

SURVEY DATUM

The horizontal datum for this survey is the California Coordinate System of 1983, Zone 2 (NAD83) and 83 U.S. Survey Feet. The vertical datum for this survey is the North American Vertical Datum of 1988 (NAVD88). Project control was established by Town, Inc. and provided to Ducks Unlimited, Inc. by Philip Williams & Associates, Ltd. See PWA plan sheet 2 of 28 for additional notes regarding topographic data and control.

NO.	REVISION	DATE	BY	APP'D



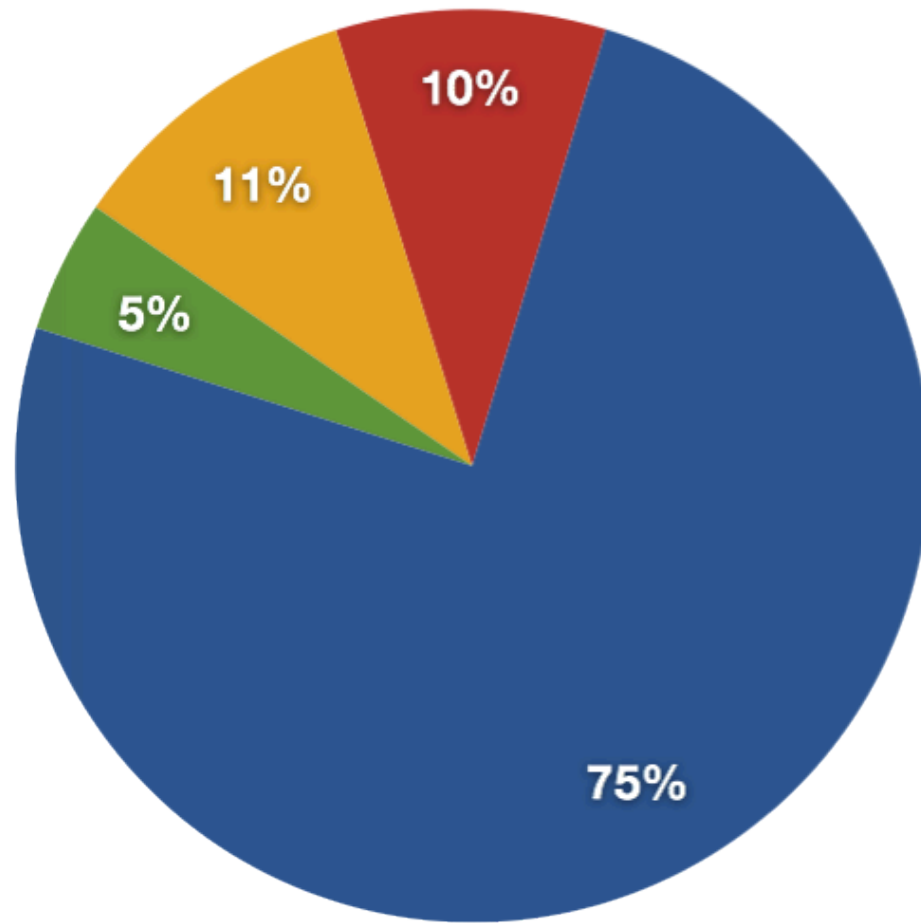
PROJECT NO. US-CA-495-1  
SOUTH BAY SALT POND RESTORATION PROJECT  
EDEN LANDING PONDS E12 & E13

8/13/2012 DETAILS





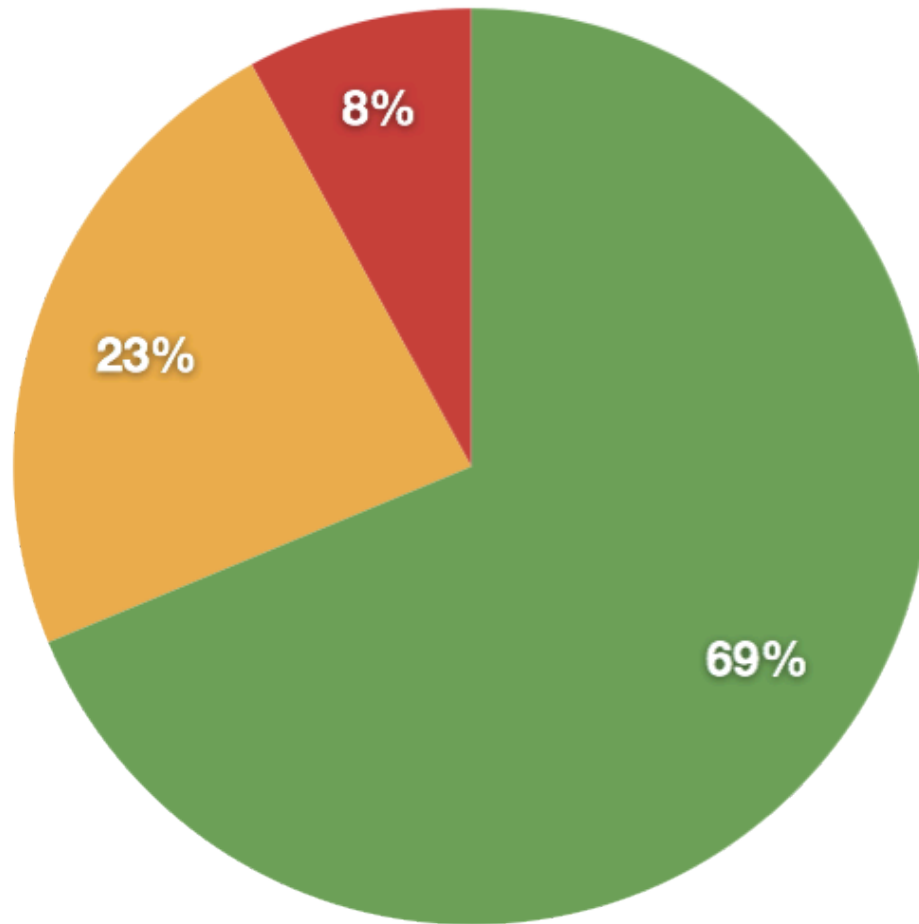
### SBSP Phase 1



- Managed Ponds
- Tidal Restoration
- Reconfigured Ponds
- Muted Tidal



## Phase 1 Costs



- Managed Ponds
- Reconfigured Ponds
- Tidal Restoration
- Muted Tidal

# Phase 2: Overview

# Guiding Principles

No actions that will  
increase flood risk

Progress toward 50–50  
vision (from EIR)

# Primary Evaluation Criteria

- Likelihood of progress toward Project objectives
- Opportunities for Adaptive Management studies
- Value in building Project support
- Readiness to proceed / not dependent on precedent actions (e.g., flood levee)
- Input from Stakeholders (over 2 years)

# South Bay Salt Pond Restoration Project

**Project Area**

**Infrastructure Features**

- Highway
- Railroad
- Wastewater Outfall
- PG & E Access Points
- Hetch Hetchy Aqueduct
- Overhead Power Transmission Line
- Sewer Force Main
- Distribution Line

**Habitat Features**

- Tidal Habitat
- Upland Transition Area
- Managed Pond
- Managed Pond (outside project area)
- Initially Reversibly Tidal; Ultimately Tidal

**Flood Management Features**

- Proposed Flood Protection Levee
- High Ground\*
- Existing Levee Outside Project Area\* (includes engineered flood protection levees and non-engineered levees)

\*Level of flood protection not specified.  
Note: Levees along creeks extend upstream of the endpoints shown. All levee and high ground locations are approximate.

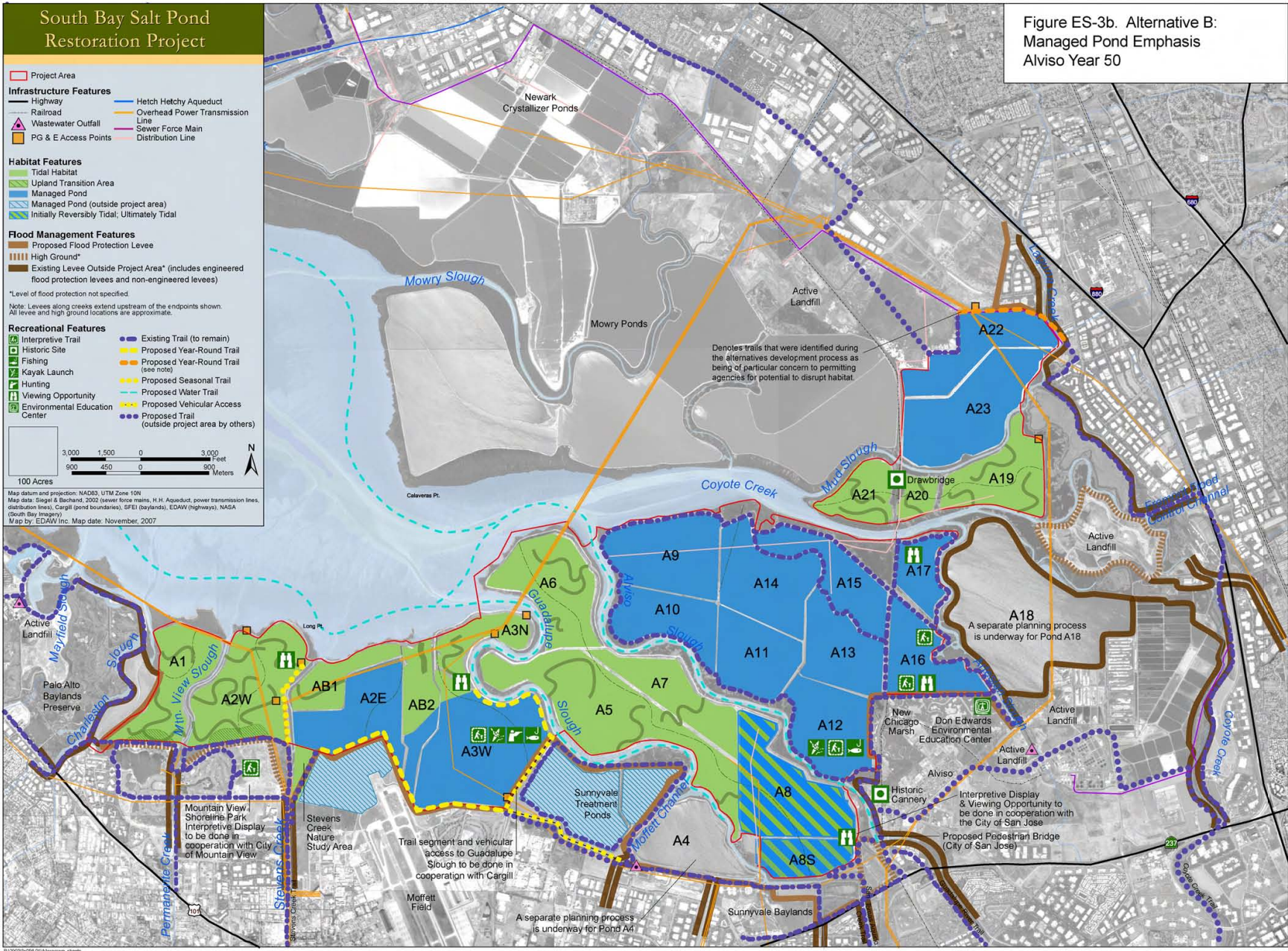
**Recreational Features**

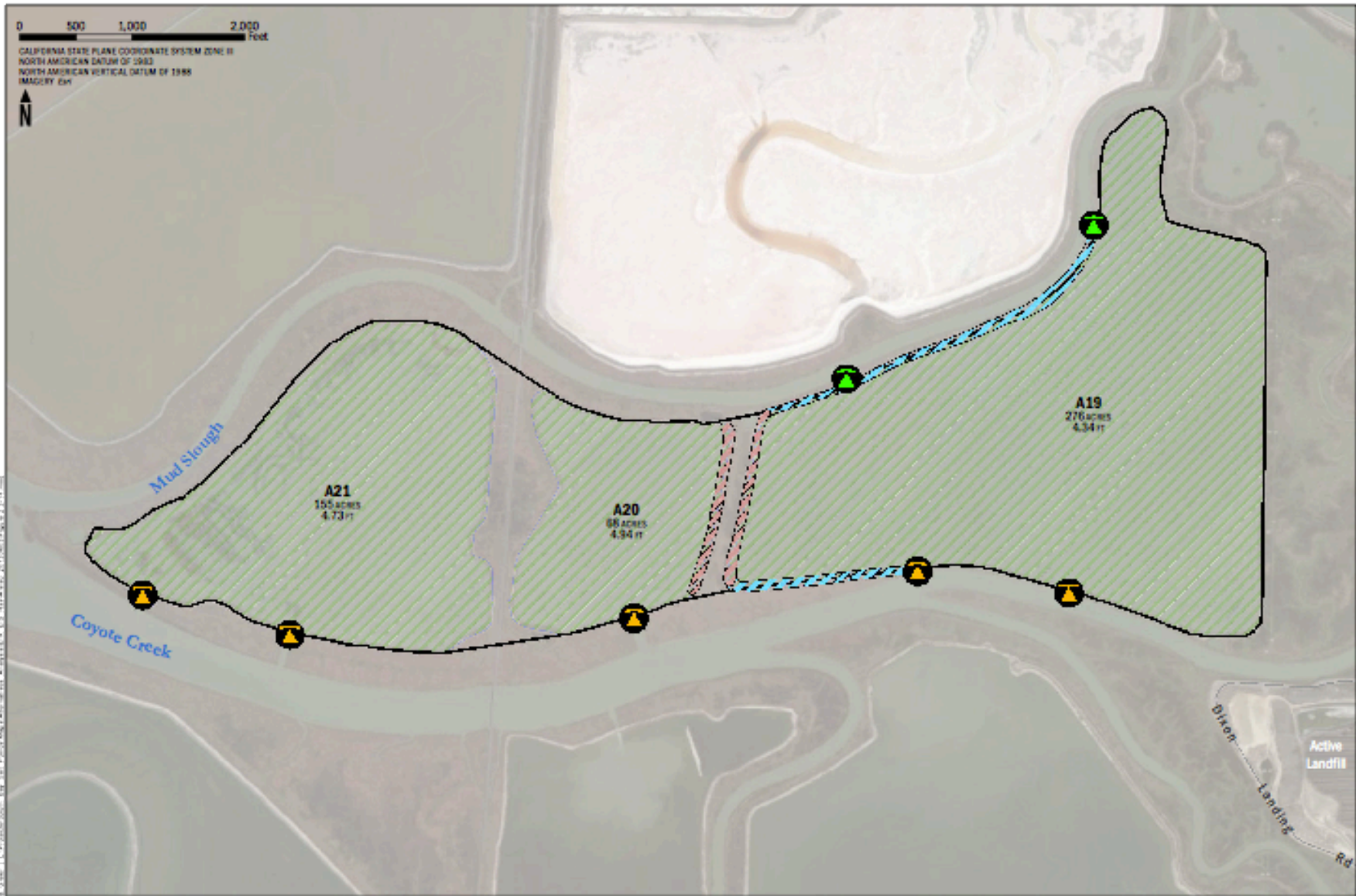
- Interpretive Trail
- Historic Site
- Fishing
- Kayak Launch
- Hunting
- Viewing Opportunity
- Environmental Education Center
- Existing Trail (to remain)
- Proposed Year-Round Trail
- Proposed Seasonal Trail (see note)
- Proposed Water Trail
- Proposed Vehicular Access
- Proposed Trail (outside project area by others)

Scale: 0 to 3,000 feet / 0 to 900 meters. 100 Acres.







Map datum and projection: NAD83, UTM Zone 10N  
Map data: Siegfried & Bachand, 2002 (levee force main, H.H. Aqueduct, power transmission lines, distribution lines), Cargill (pond boundaries), SFEI (baylands), EDAAW (highways), NASA (South Bay Imagery)  
Map by: EDAAW Inc. Map date: November, 2007

Figure ES-3b. Alternative B: Managed Pond Emphasis Alviso Year 50





LEGEND

-  Proposed breach
-  Existing breach
-  Removed levee
-  Lowered levee
-  Tidal marsh
-  Pad boundary



Charleston Slough

Shoreline Lake

© 2011 Google

© 2011 Europa Technologies  
Image © 2011 TerraMetrics

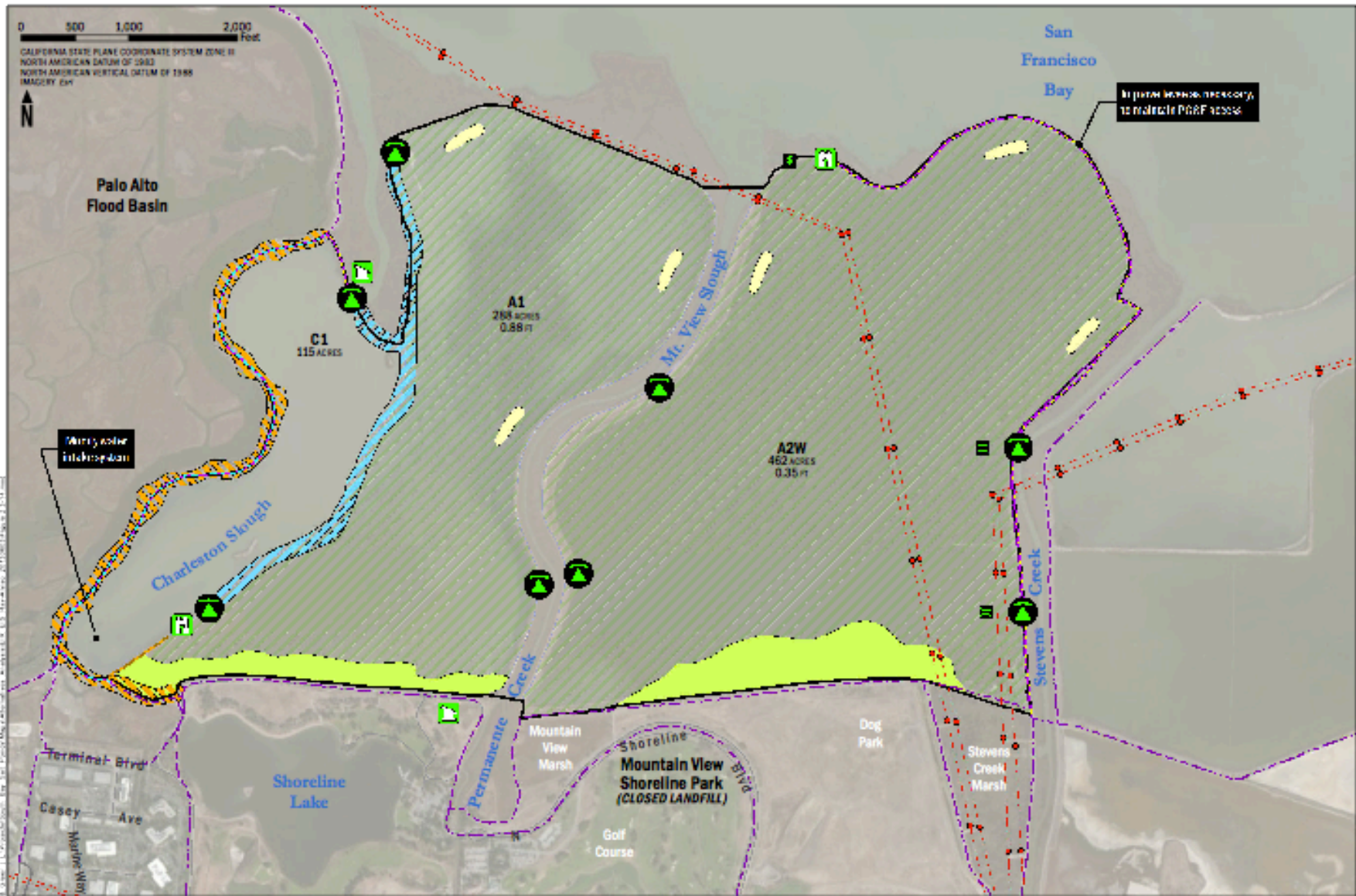
Imagery Date: 6/19/2011

1948

37°26'33.86" N 122°04'47.27" W elev 0 m

Google

Eye alt





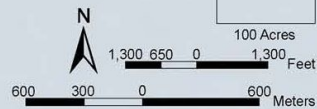
# South Bay Salt Pond Restoration Project

Figure ES-3c. Alternative B:  
Managed Pond Emphasis  
Ravenswood, Year 50

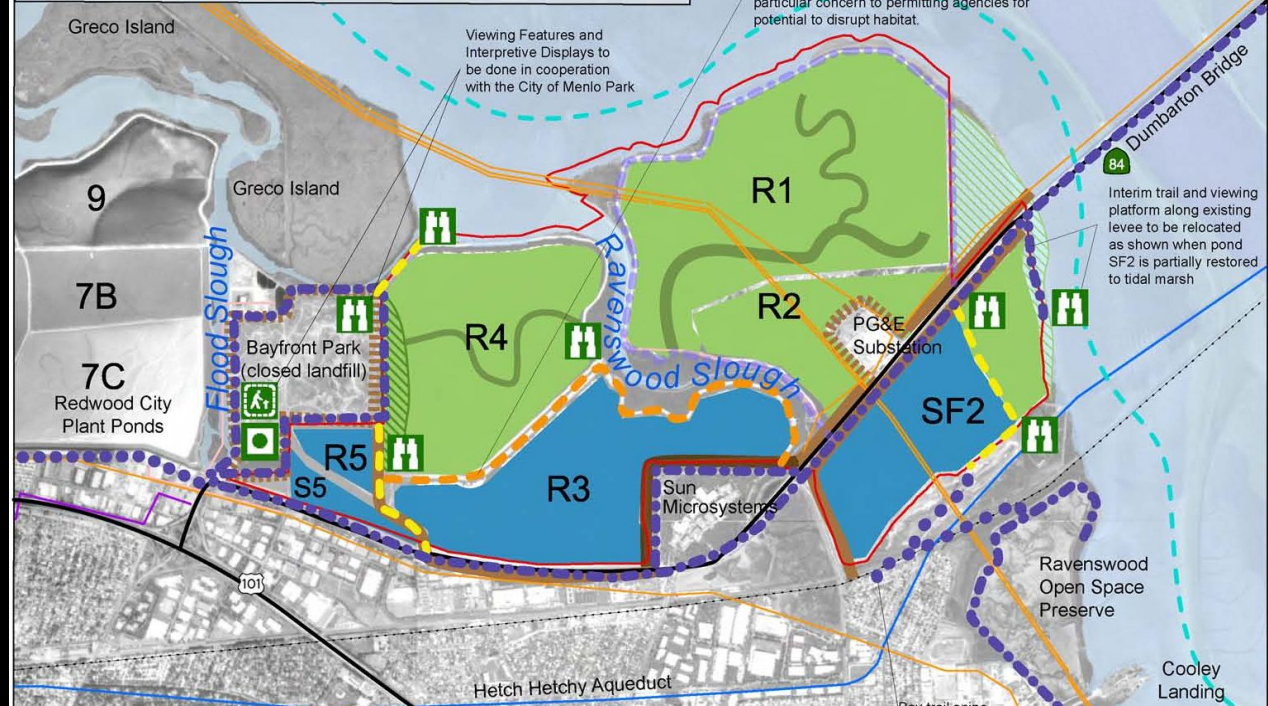
Project Area	<b>Habitat Features</b>
<b>Infrastructure Features</b>	Tidal Habitat
Highway	Upland Transition Area
Railroad	Managed Pond
Overhead Power Transmission Line	Tidal Habitat (outside project area)
Sewer Force Mains	<b>Flood Management Features</b>
Distribution Line	Proposed Flood Protection Levee
<b>Recreational Features</b>	High Ground*
Existing Trail (to remain)	Existing Levee Outside Project Area* (includes engineered flood protection levees and non-engineered levees)
Existing Trail (to be removed)	
Proposed Year-Round Trail	
Proposed Year-Round Trail (see note)	
Proposed Trail (outside project area by others)	
Proposed Water Trail	
Historic Site	
Kayak Launch	
Viewing Opportunity	
Interpretive Trail	

\*Level of flood protection not specified.

Note: Levees along creeks extend upstream of the endpoints shown. All levee and high ground locations are approximate.



Map datum and projection: NAD83, UTM Zone 10N  
 Map data: Siegel & Bachand, 2002 (sewer force mains, H.H. Aqueduct, power transmission lines, distribution lines), Cargill (pond boundaries), SFEI (baylands), EDAW (highways), NASA (South Bay Imagery), Project Boundary taken from SFEI Interactive Map  
 Map by: EDAW Inc. Map date: November, 2007





Marsh Rd

Constitution Dr  
Jefferson Dr

Chico St

Hacker Way

84

11

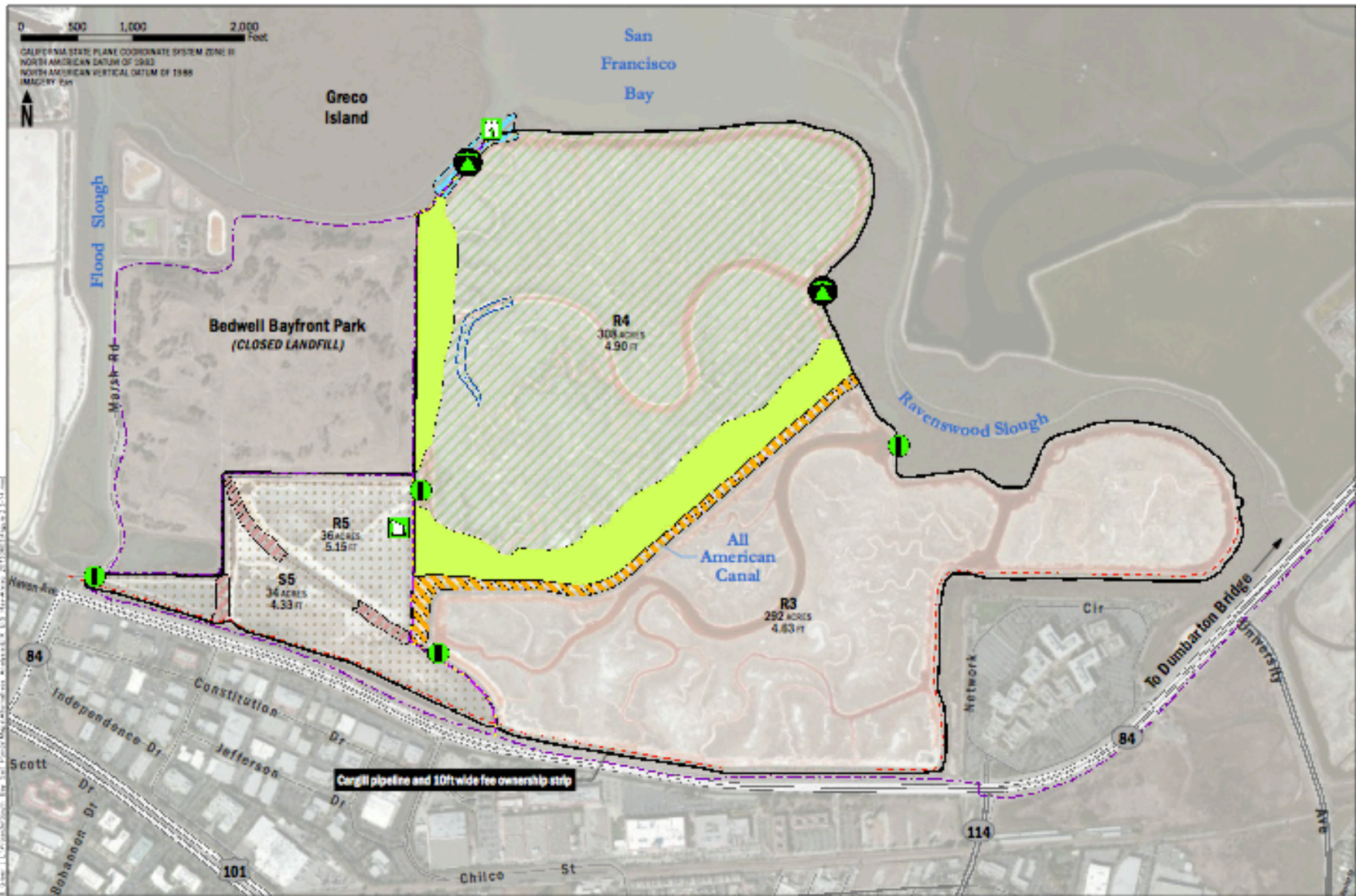
© 2012 Google

Google

Date: 10/31/2011 1948

37°29'24.97" N 122°09'37.69" W elev 1 m

Eye alt 3.1



LEGEND


Questions?

Eden Landing

Figure ES-3a. Alternative B:  
Managed Pond Emphasis  
Eden Landing, Year 50



Hayward Regional Shoreline  
Hayward Shoreline Interpretive Center

E11  
E12  
E13  
E14  
E10  
Oliver Salt Works (formerly Rock Island)

E9  
E8X  
E8  
E6B  
E6A  
E8A  
Old Alameda Creek  
Alvarado Salt Works

E1  
E7  
E5  
E6  
E2  
E4  
E6C  
E4C  
E1C  
E5C  
E2C  
E3C  
Alameda Creek Flood Control Channel  
Newark Ponds

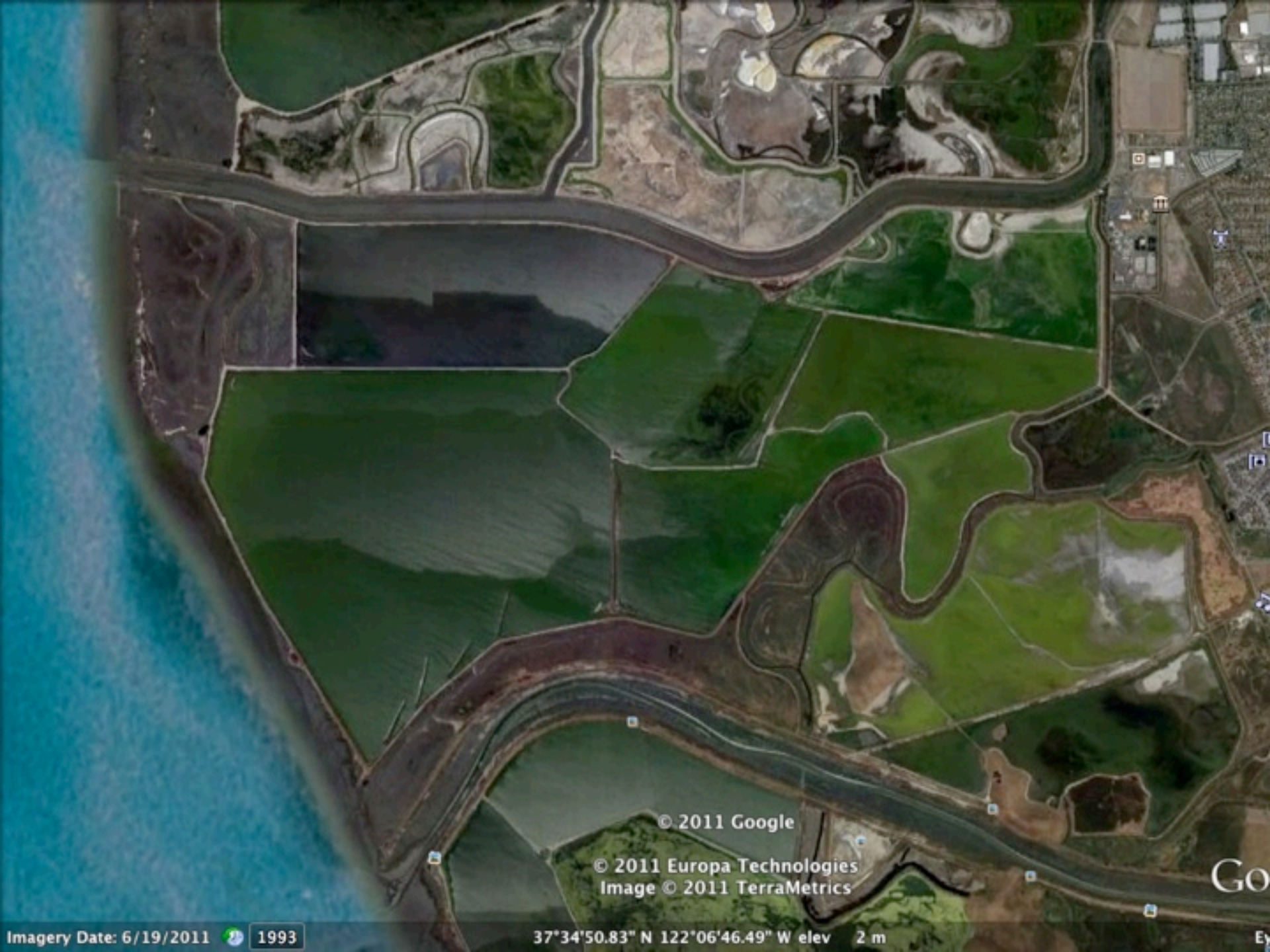
Denotes trails that were identified during the alternative development process as being of particular concern to permitting agencies for potential to disrupt habitat.

Future trail planning to be done in cooperation with Cargill.

Levee would be breached and bridged along the north side of Alameda Creek Flood Control Channel

Bridge crossing channel to be done in cooperation with Alameda County Flood Control and Water Conservation District

Coville Hills Regional Park



© 2011 Google

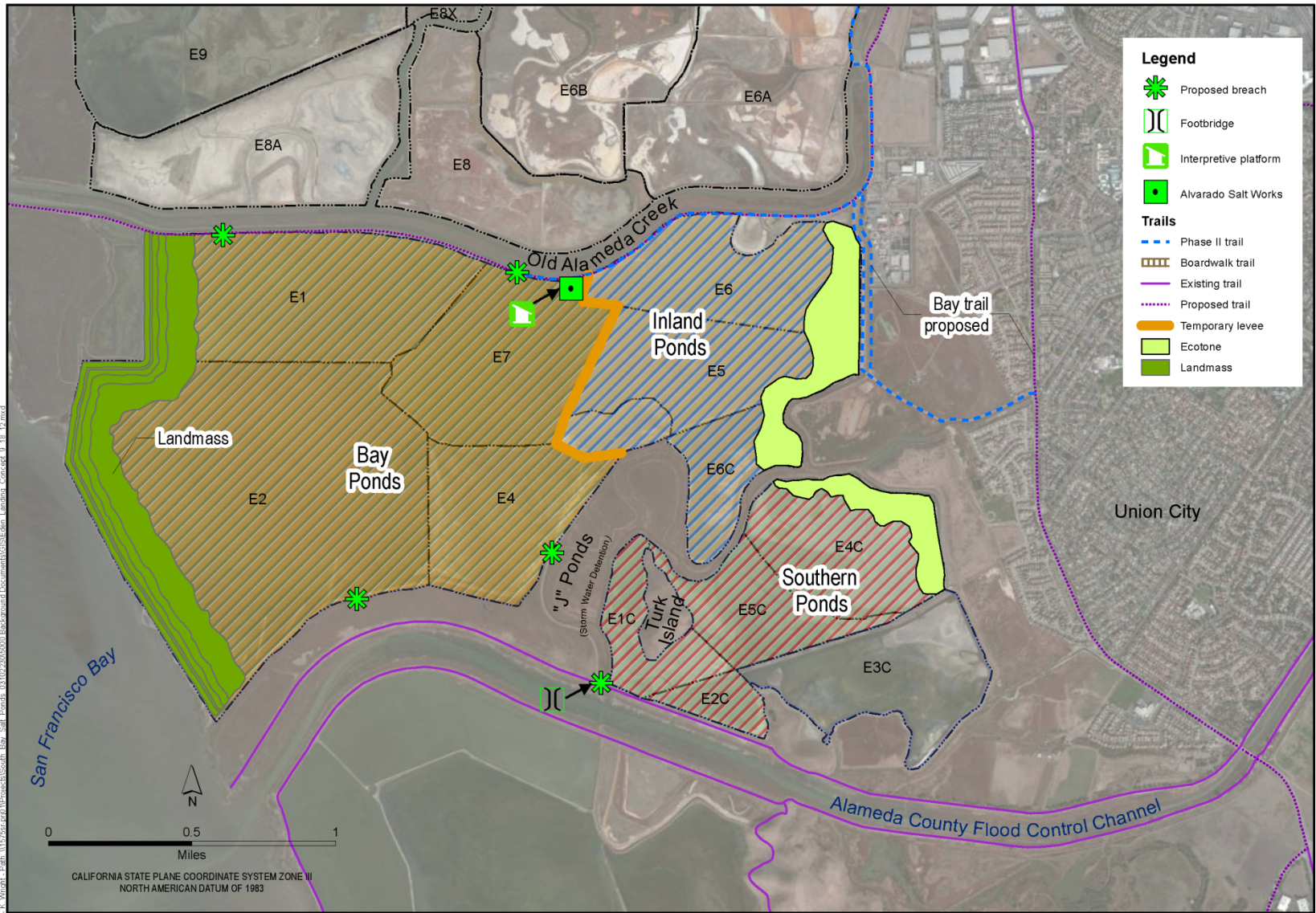
© 2011 Europa Technologies  
Image © 2011 TerraMetrics

Imagery Date: 6/19/2011 1993

37°34'50.83" N 122°06'46.49" W elev 2 m

Go

Eye



URS Oakland, CA, K. Wright, Path: \\11575rser01\Projects\South Bay Salt Ponds\_03102204\5000 Background Documents\GIS\Eden Landing\_Concept\_9\_18\_12.mxd



SOUTH BAY SALT PONDS  
 EDEN LANDING  
 ALAMEDA COUNTY, CA

DATE OF PREPARATION: 9/18/2012  
 DRAFT, FOR INTERNAL USE ONLY  
 URS PROJECT NO. 26818346

**DRAFT PREFERRED ALTERNATIVE  
 EDEN LANDING POND COMPLEX**

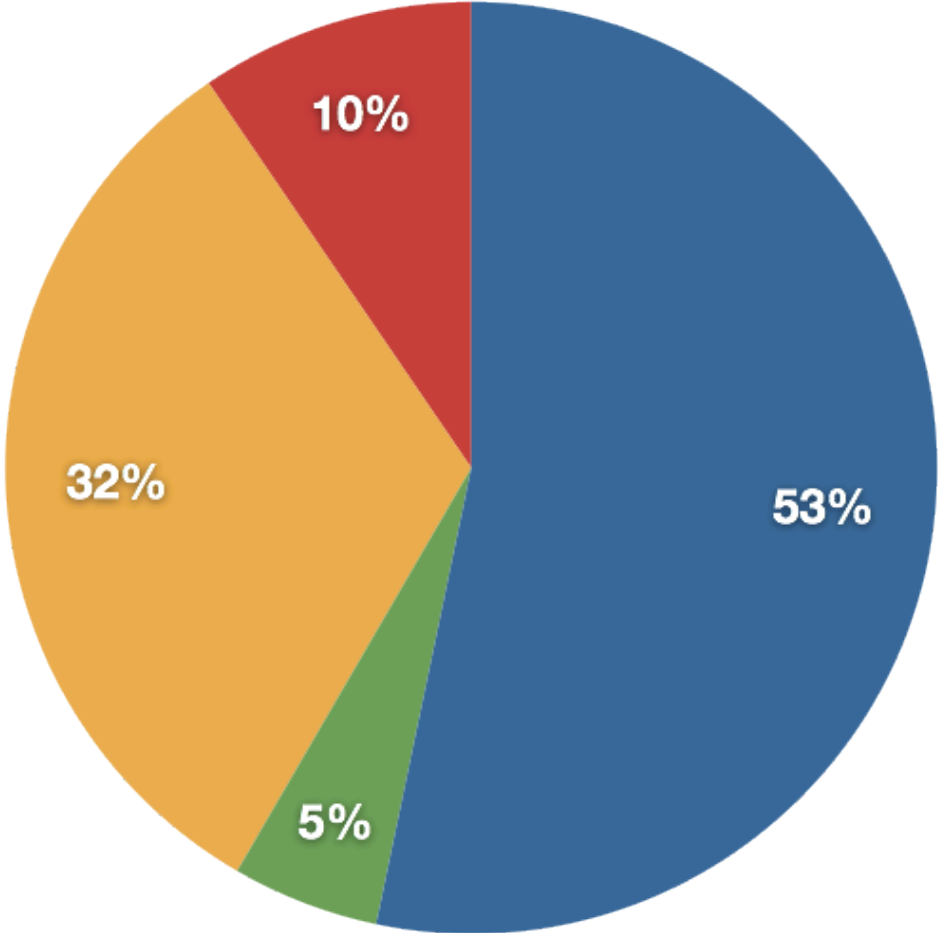


Rohin Saleh  
Alameda County



Questions?

### SBSP Phases 1+2



- Managed Ponds
- Tidal Restoration
- Reconfigured Ponds
- Muted Tidal

# Transition Zone Creation

## Issues:

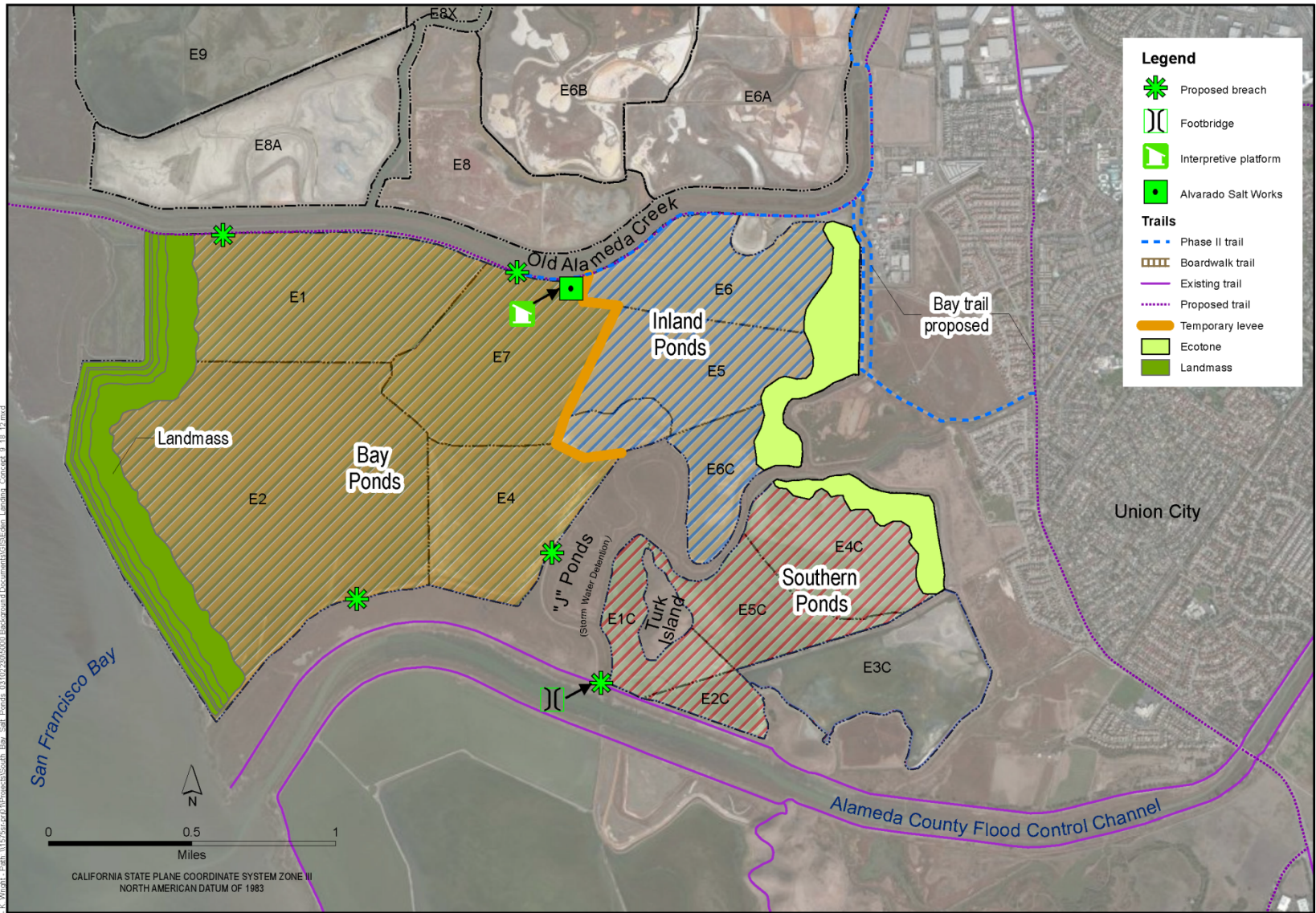
- Sources (upland vs. dredged material)
- Placement methods (traffic, cost, etc.)
- Draft Plan in development











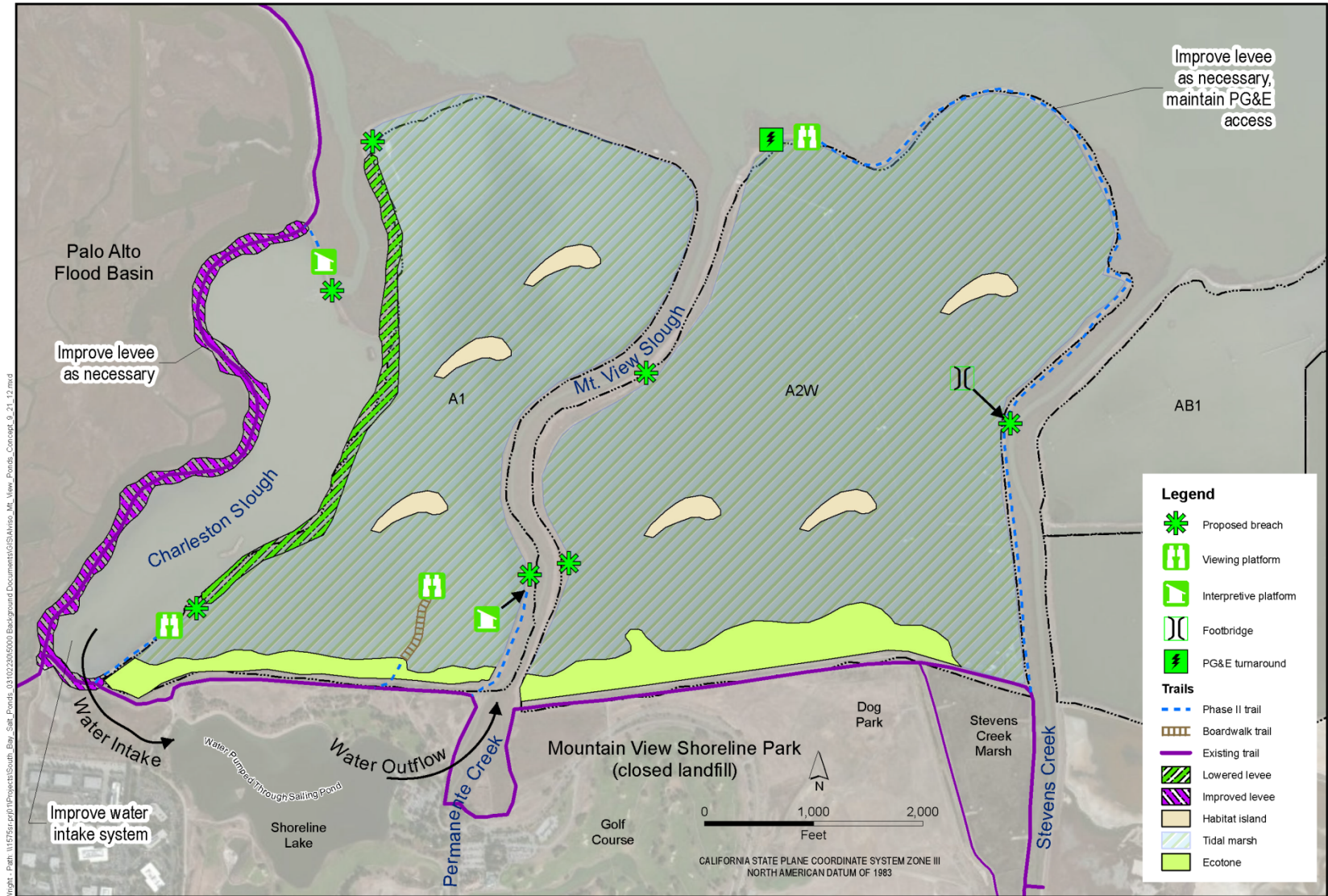
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SOUTH BAY SALT PONDS  
 EDEN LANDING  
 ALAMEDA COUNTY, CA

DATE OF PREPARATION: 9/18/2012  
 DRAFT, FOR INTERNAL USE ONLY  
 URS PROJECT NO. 26818346

**DRAFT PREFERRED ALTERNATIVE  
 EDEN LANDING POND COMPLEX**



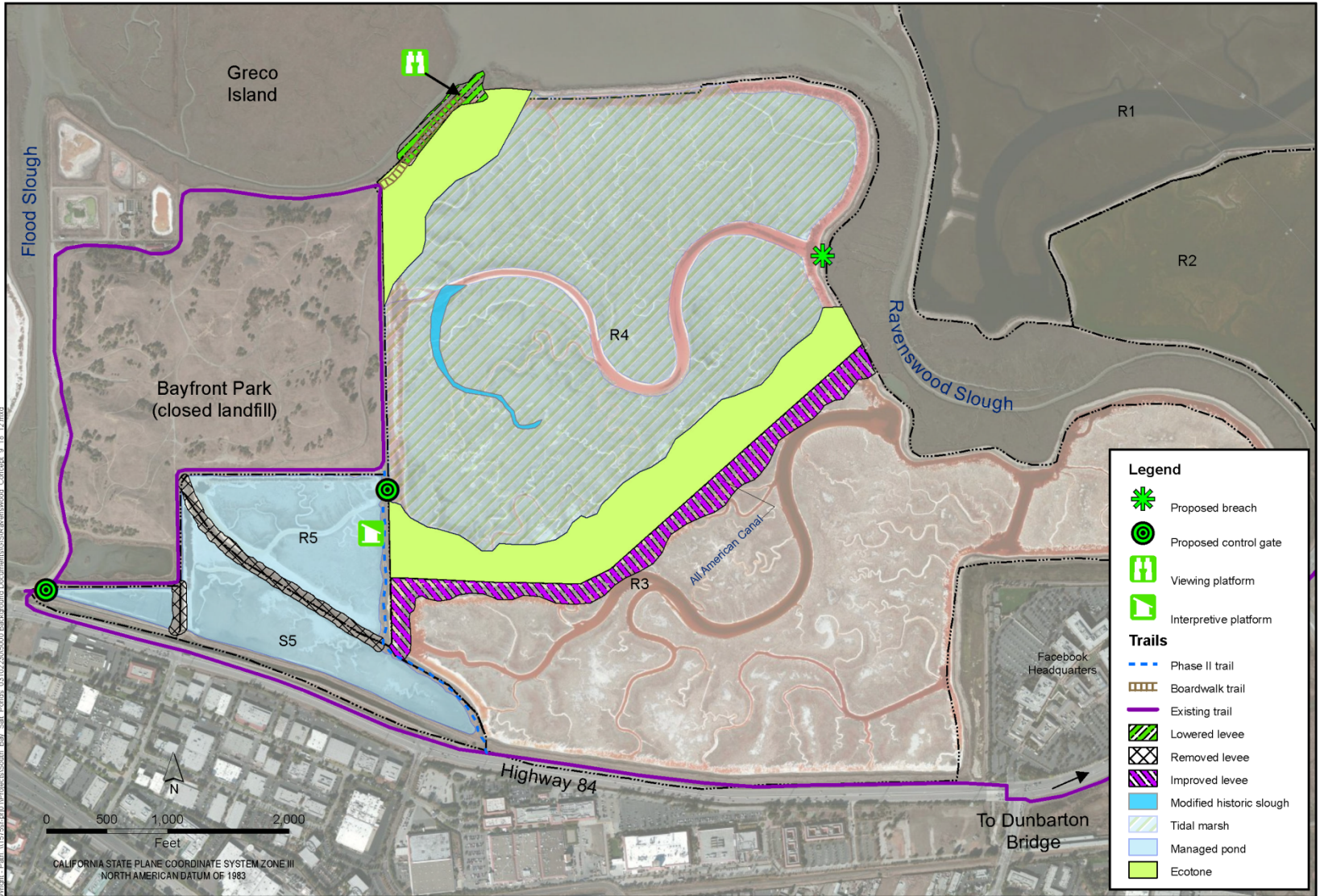
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SOUTH BAY SALT PONDS  
 ALVISO: MT. VIEW PONDS  
 SANTA CLARA COUNTY, CA

DATE OF PREPARATION: 9/18/2012  
 DRAFT, FOR INTERNAL USE ONLY  
 URS PROJECT NO. 26818346

**DRAFT PREFERRED ALTERNATIVE**  
**ALVISO POND COMPLEX-**  
**MT. VIEW PONDS**



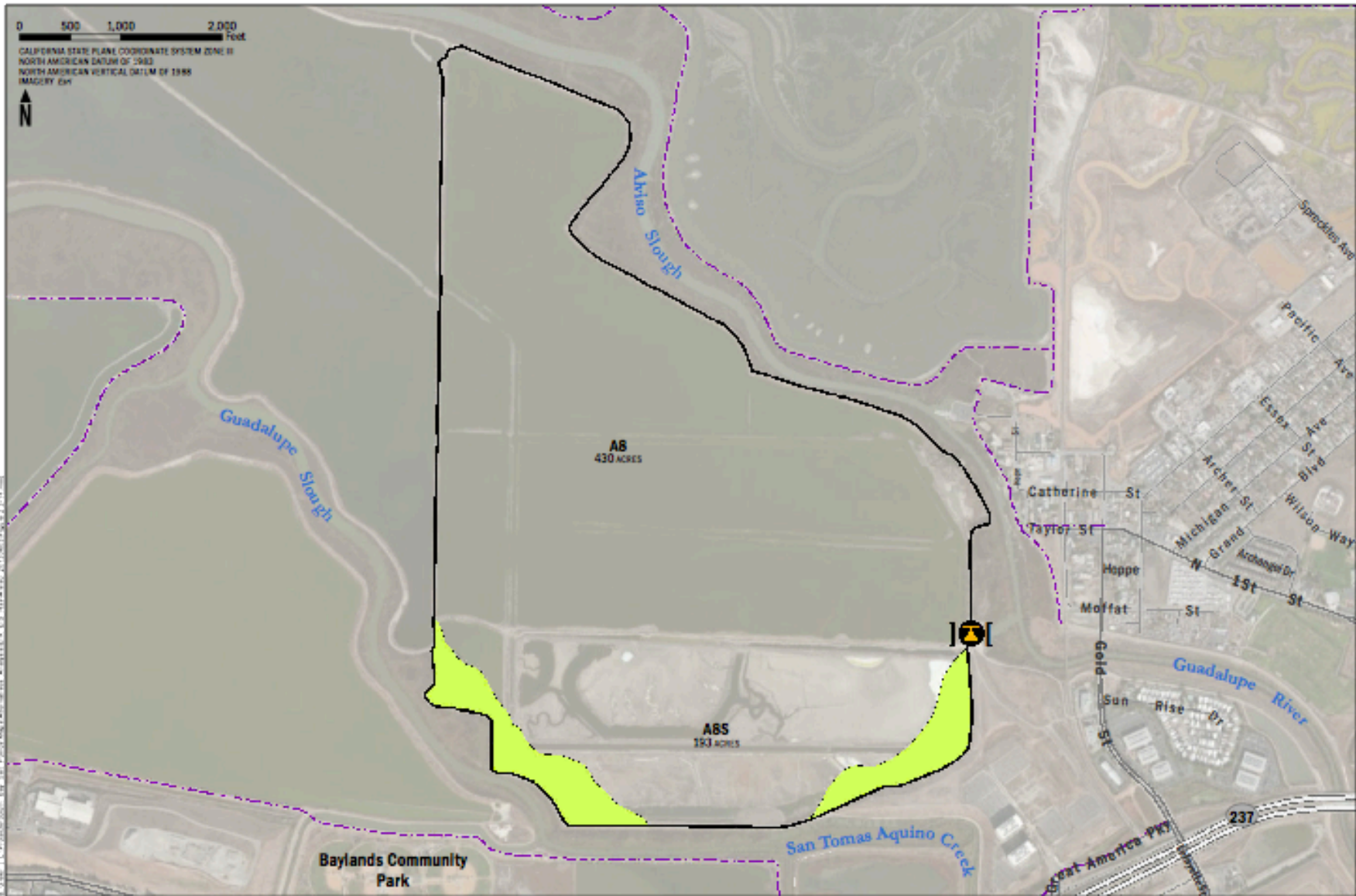
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SOUTH BAY SALT PONDS  
 RAVENSWOOD  
 SAN MATEO COUNTY, CA

DATE OF PREPARATION: 9/18/2012  
 DRAFT, FOR INTERNAL USE ONLY  
 URS PROJECT NO. 26818346

**DRAFT PREFERRED ALTERNATIVE  
 RAVENSWOOD POND COMPLEX**



LEGEND

-  Existing Reversible Armored Notch
-  Existing trail
-  Upland Transition Zone
-  Pond boundary

10 minute break...

Science Update  
Stakeholder Forum  
September 24, 2013

Laura Valoppi  
Lead Scientist



Shoreline Study Update  
Stakeholder Forum  
September 24, 2013

Brenda Buxton  
Coastal Conservancy



Insert Brenda's slides here

Funding Update  
Stakeholder Forum  
September 24, 2013

Amy Hutzel  
Coastal Conservancy



# Next Steps

- Complete Phase I at Eden Landing (Summer 2014)
- Draft environmental documents for Phase II Alviso and Ravenswood (Early 2014)
- Alternatives development for Phase II at Eden Landing (Early 2014)
- Continue Monitoring and Adaptive Management (Ongoing)



# South Bay Salt Pond Restoration Project

*Restoring the Wild Heart of the South Bay*

facebook



Name:  
South Bay Salt  
Pond Restoration  
Project