



Brenda Buxton, Project Manager, State Coastal Conservancy
BAFPAA Conference February 21, 2013



April 2008



September 2009



May 2010



October 2010

SALT POND A21 SOUTH BAY SALT POND RESTORATION PROJECT

Kite aerial photographs of a small channel in the northeast corner following the 2006 breach to tidal flow. Field of view is ~ 120 feet. . C. Benton

Kite photography of Pond A21 courtesy of Cris Benton

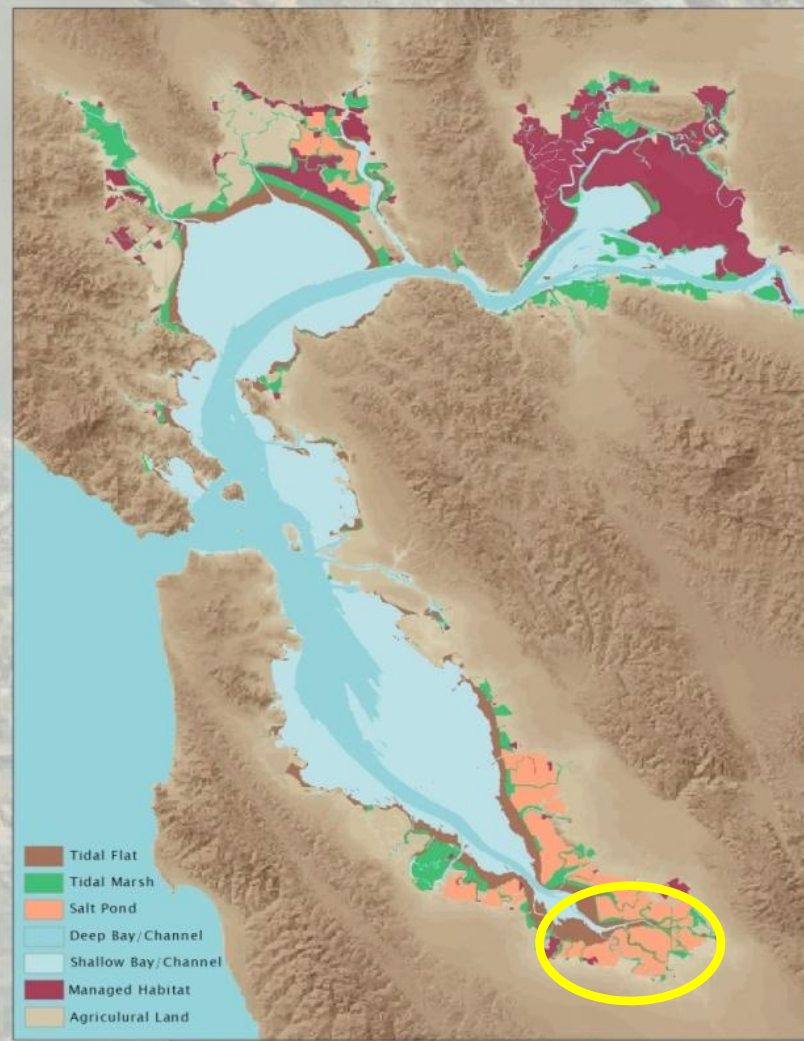


Photo credit: ESA Associates website, Feather and Bear River Levee Setback Project

Frenemies?



~1850



~2000

Salt Pond Acquisition in 2003

16,500 total acres

1,400 along Napa River

15,100 in South Bay

\$100 million cost



South Bay Salt Pond Restoration Project

- Project Areas
- Lands Sold to Local Government

Reference Features

- Highway
- Power transmission
- Potential limit of 100-year high tide (USACE 1988)
- Aqueduct (above and below ground)
- Stormwater pump, outfall, gate
- Municipal wastewater discharge and pipeline
- City of Fremont Ownership (open space)
- The Bay Trail
- Trails, other

Habitats

- Former Salt Pond
- Active Salt Pond
- Tidal Marsh
- Diked Marsh
- Mudflat
- Lagoon
- Farmed or Grazed Bayland
- Ruderal Bayland
- Storage or Treatment Basin
- Upland open space (selected)



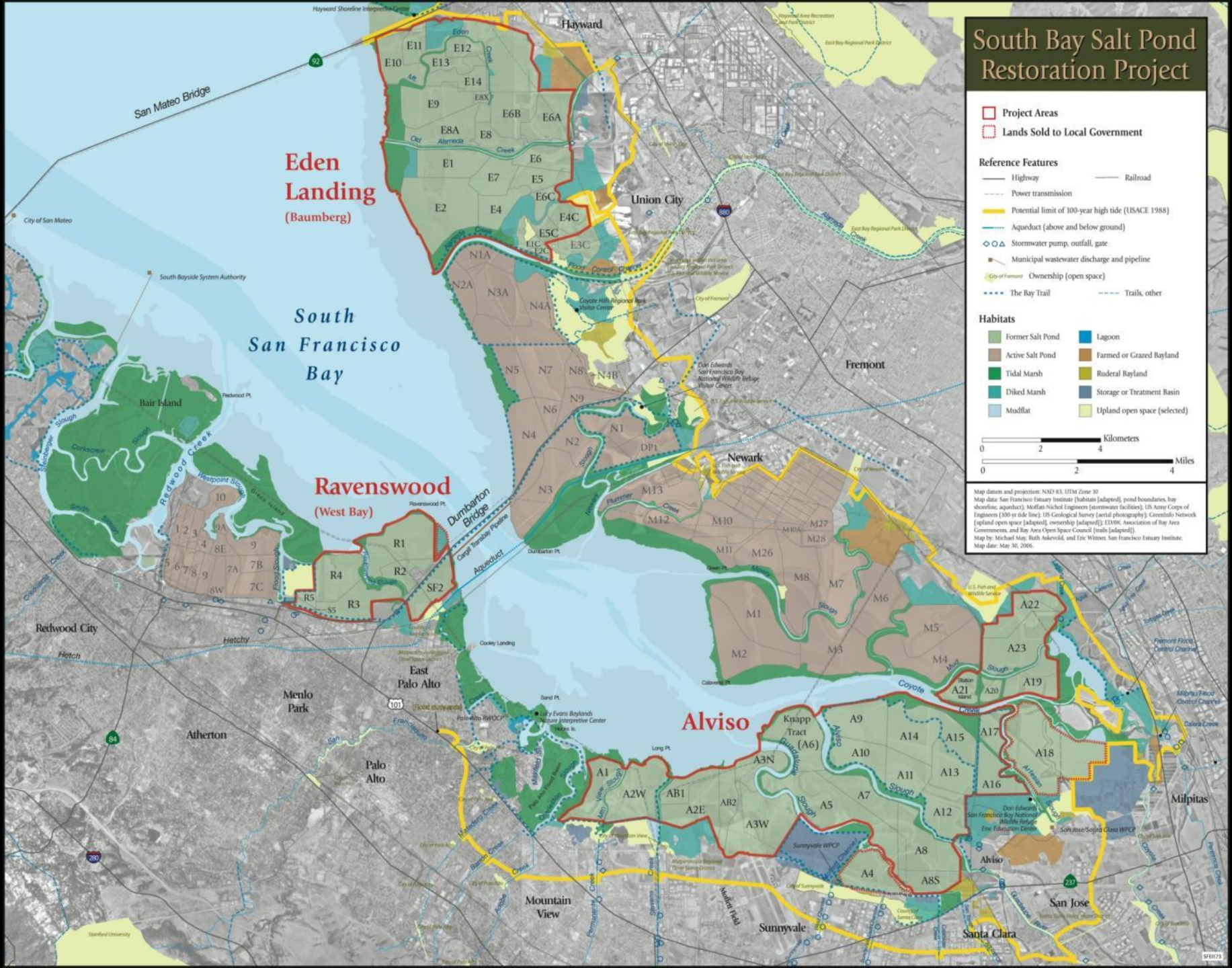
Map datum and projection: NAD 83, UTM Zone 10
 Map data: San Francisco Estuary Institute (Habitat [adapted], pond boundaries, bay shoreline, aqueducts), Moffatt-Nichol Engineers (stormwater facilities), US Army Corps of Engineers (100-year high tide line), US Geological Survey (aerial photography), Greenfield Network (upland open space [adapted]), ownership [adapted], EEMAC, Association of Bay Area Governments, and Bay Area Open Space Council (trails [adapted]).
 Map by: Michael Map, Ruth Akeveld, and Eric Wimmer, San Francisco Estuary Institute.
 Map date: May 30, 2006.

Eden Landing
(Baumberg)

South San Francisco Bay

Ravenswood
(West Bay)

Alviso



Project Goals:



Docent-led Interpretive Tour



Least Sandpipers



1983 Alviso Floods

Ecological Trade-offs

- Tidal Marsh species vs. Salt Pond species





Ravenswood Ponds: SF2 September 7, 2010 opening



Alviso: Pond A6

Levees
breached in
December
2010



Moffett Field Bay Trail Grand Opening

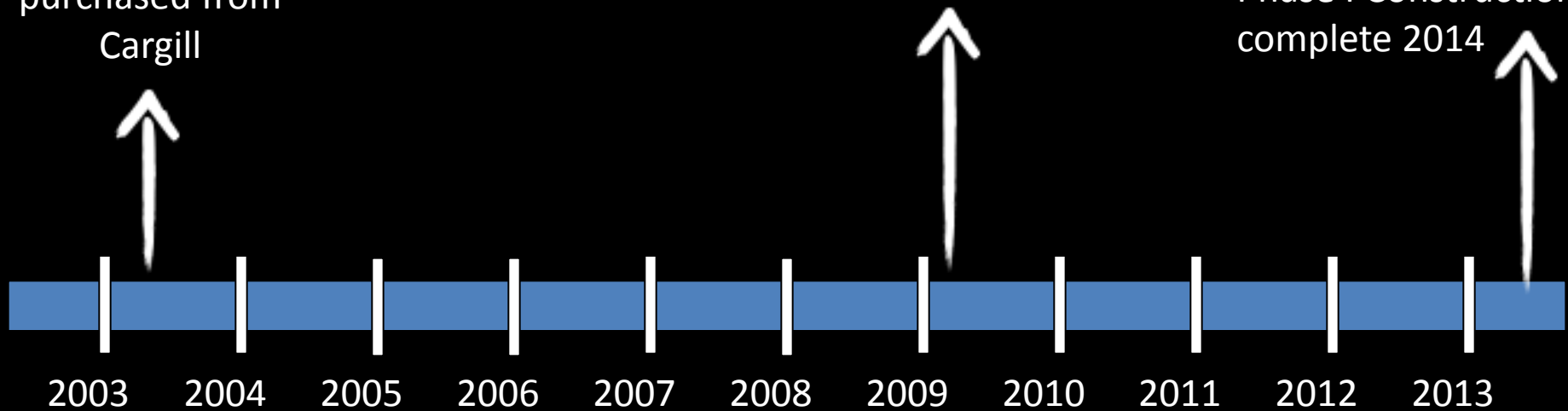
Monday September 20, 2010



16,500 acres
purchased from
Cargill

Planning
complete

Phase I Construction
complete 2014



Restored to Date

Tidal: 1,600 ac

Muted Tidal: 1,440 ac

Reconfigured Ponds: 710 ac

Total: 3,750 ac

New Trails: 7 miles



Flood Protection???







Eden Landing E8A/9/8X construction

photo credit: Judy Irving



SBSP Project Management Team

Photo credit: Judy Irving

South Bay Salt Pond Restoration Project

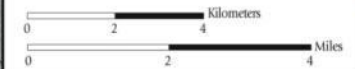
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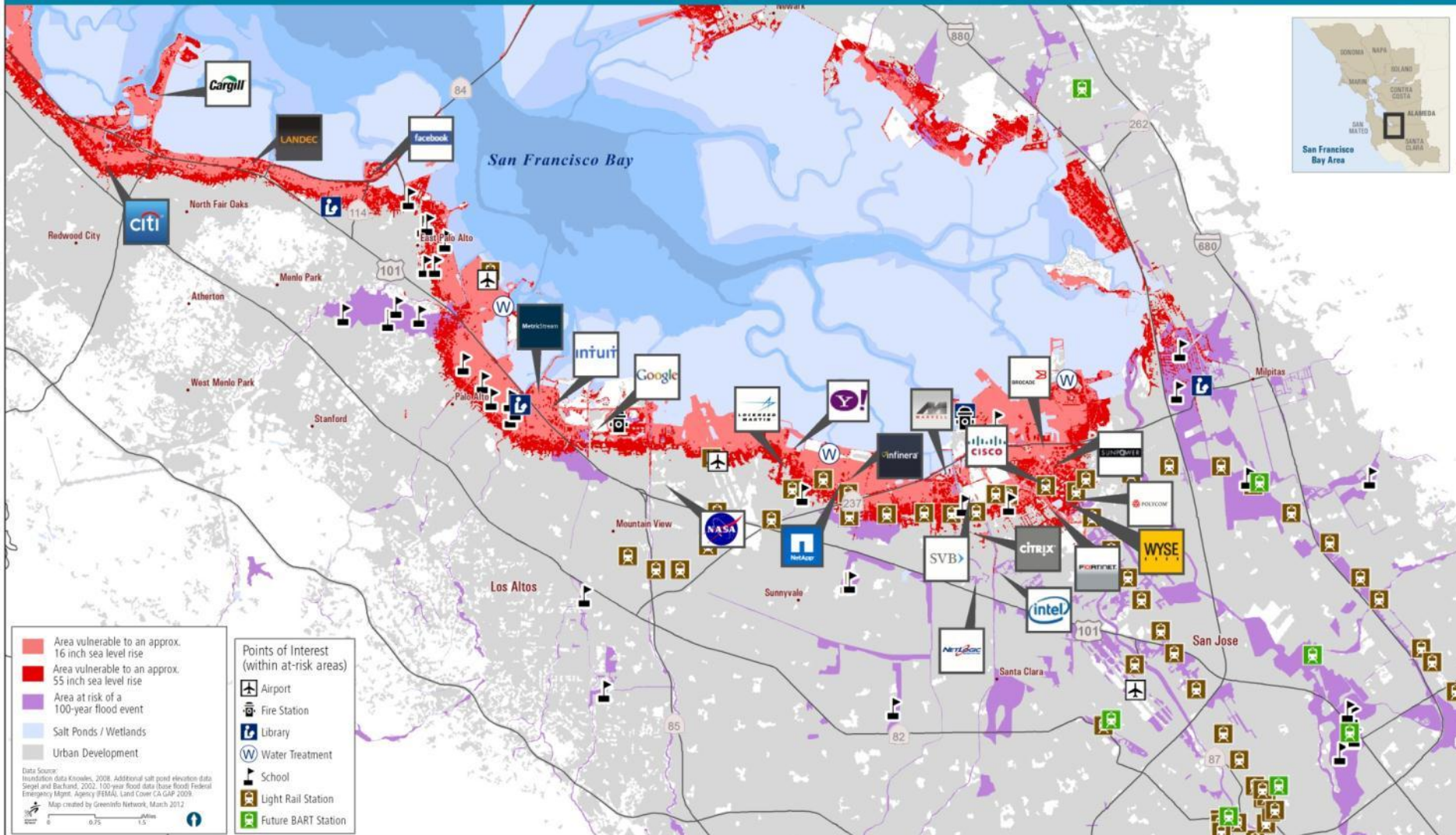
South
San Francisco
Bay

Ravenswood
(West Bay)

Alviso

Flood Risk and Sea Level Rise – South Bay

Economic Impact, San Francisco Bay Area





A map of the San Francisco Bay Area. A red rectangle highlights the study area, which includes Alameda County, San Francisco County, and parts of Contra Costa County. The map shows the San Francisco Bay, major highways (Interstates 5, 8, 805, 680, 580, 5, 205, 205, 205), and various cities and towns including San Francisco, Alameda, Berkeley, Oakland, Fremont, Union City, Newark, San Jose, and Cupertino. The map also shows the San Francisco Peninsula and the San Francisco Bay Bridge.

Background Map Data Sources:
NAIP Color Orthophoto, 2006.
ESRI Roads, Cities, and Counties, 2008.

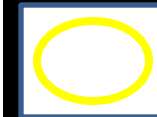
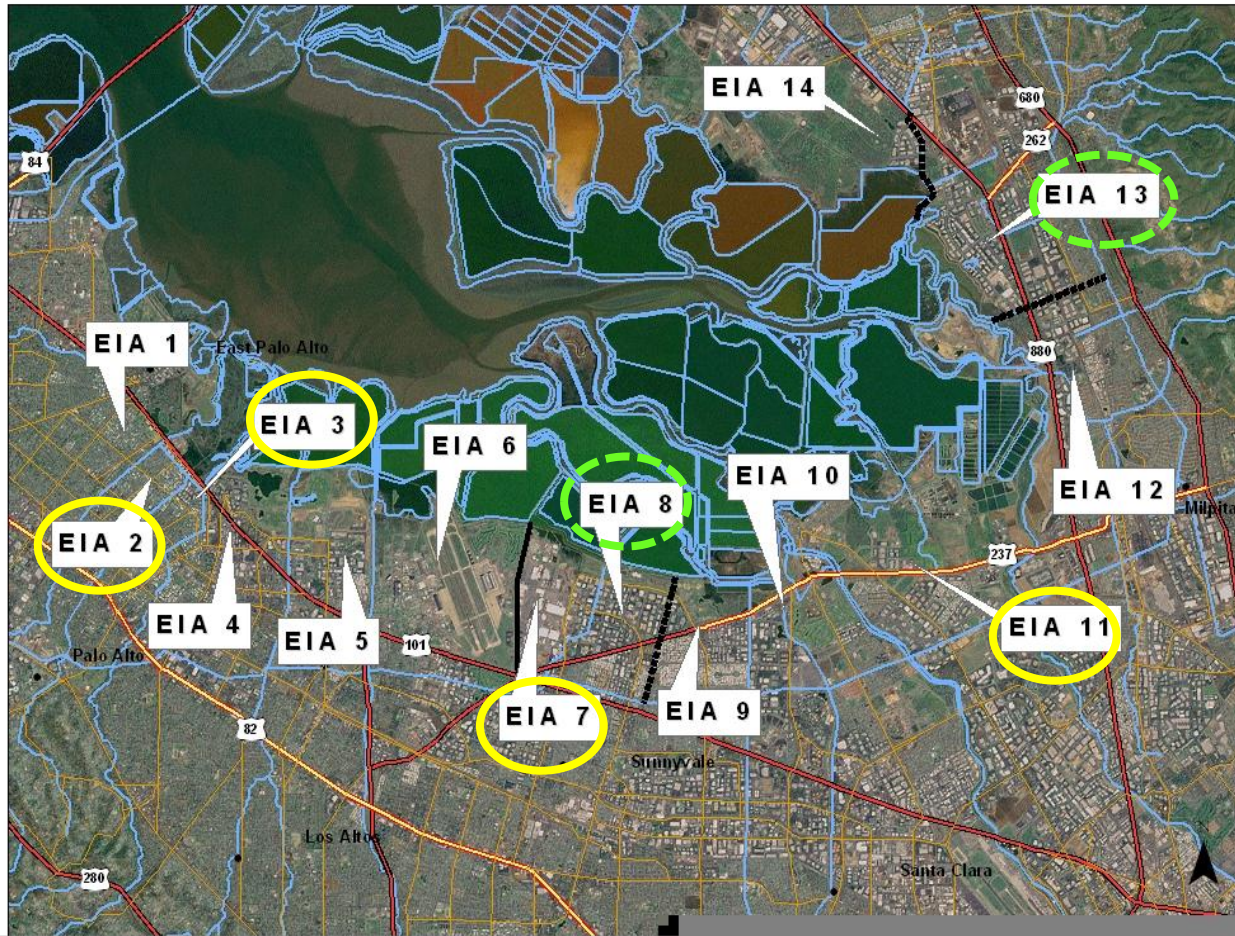
Sea Level Rise Assumptions

Year 50 (2017 – 2067)

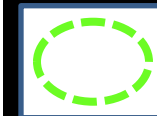
- Historic: +0.34 ft
- NRC I: +0.72 ft
- NRC III: +2.13 ft



Flood Risk Assessment



EIAs with
highest damages



EIAs with high
damages under
NRC Curve III



South San Francisco Bay Shoreline Study

Alviso Ponds & Santa Clara County Interim Feasibility Study

Santa Clara Valley
Water District

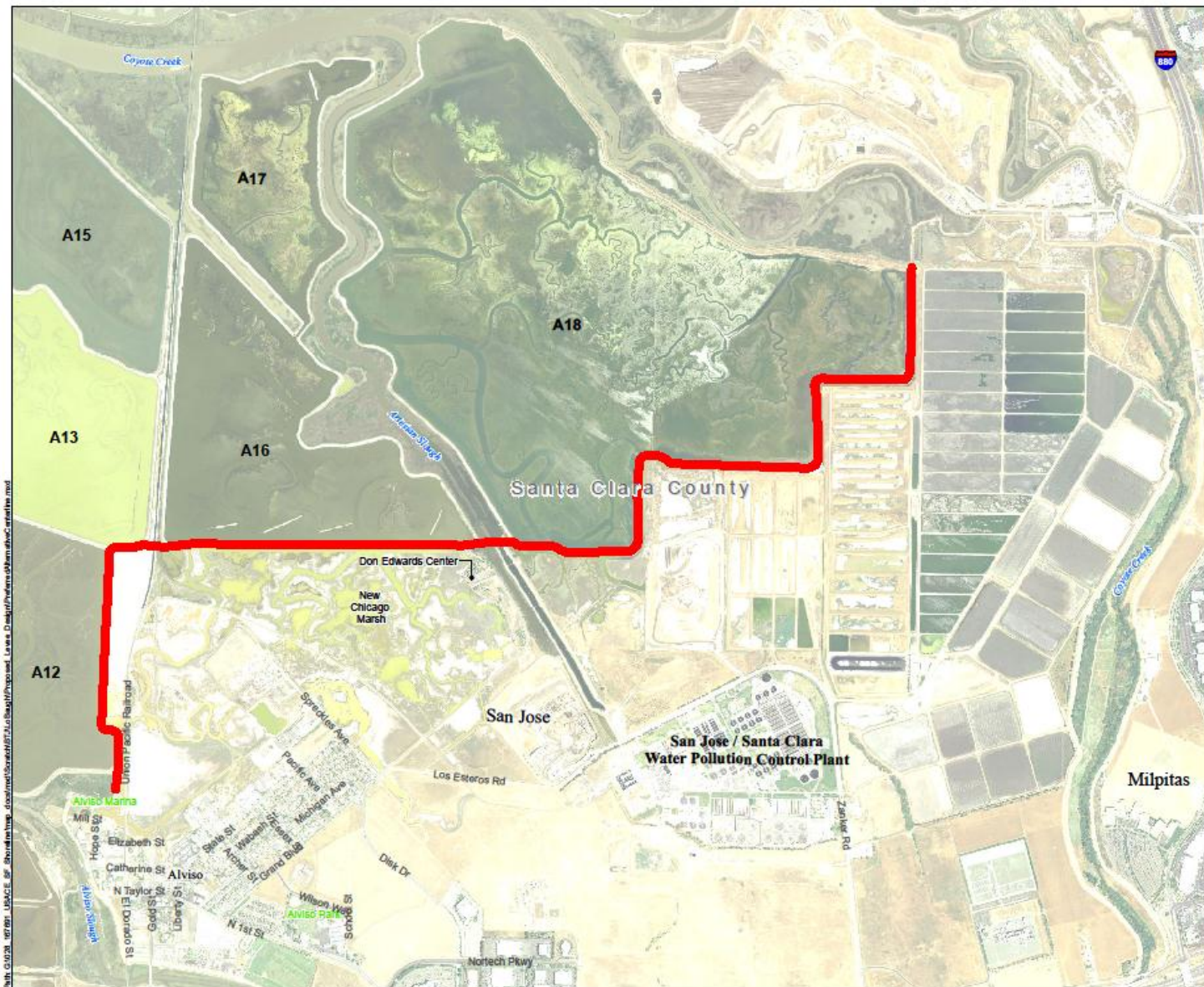


US Army Corps
of Engineers
San Francisco District



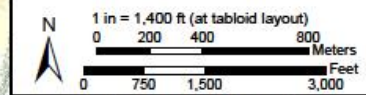
Coastal
Conservancy

Other Participating Agencies: US Fish & Wildlife Service; California Department of Fish & Game; Alameda County Flood Control District



2/8/2013


 Preferred Levee Centerline



Preferred Levee Alternative Footprint

**US Army Corps of Engineers
San Francisco District
South Bay Shoreline Levee Project**

Data Sources: Map information was compiled from the best available sources. No warranty is made for the accuracy or completeness. Aerial photography from Digital Globe 2004. Data in State Plane Feet, NAD83 Zone 10.

HDR 2365 Iron Point Road, Suite 300
Folsom, CA 95630-8709 

Path: C:\Users\H123456\Documents\Projects\San Jose\San Jose\Preferred Levee\Display\PreferredLeveeFootprint.mxd



CO = 200 mg/L, NRC-III, organics = 1 mm/yr
 Start A12 in 2017, A9-11 in 2022, A18 in 2027,
 and A13-15 in 2030. Fill 1:30



- | | |
|-----------------------------|--------------------------|
| Deep Subtidal | Intertidal Mudflat high |
| Shallow Subtidal A | Cordgrass Dominated low |
| Shallow Subtidal B | Cordgrass Dominated high |
| Intertidal Mudflat low | Pickleweed Dominated |
| Intertidal Mudflat mid low | Upland |
| Intertidal Mudflat mid high | |

figure 15

Shoreline Study Alternatives
**2067 Marsh Elevations with Prelim
 Alt 2 Transitional - Upland Fill Footprint**

Proj. # 211259

ESA PWA

Terraced levee



Estimated Costs

Tentatively Selected Plan	Estimated Total Project Cost	Estimated Non-Federal Cost Share	Estimated Federal Cost Share
Alviso North + WPCP South + Phased Restoration	\$112M	\$39M	\$73M

Estimated Quantities

Tentatively Selected Plan	Estimated Total Project Quantities	Estimated Ecotone Quantity	Estimated Engineered Levee Quantity
Alviso North + WPCP South + Phased Restoration	3.358 mcy	2.248 million cy	1.1 million cy

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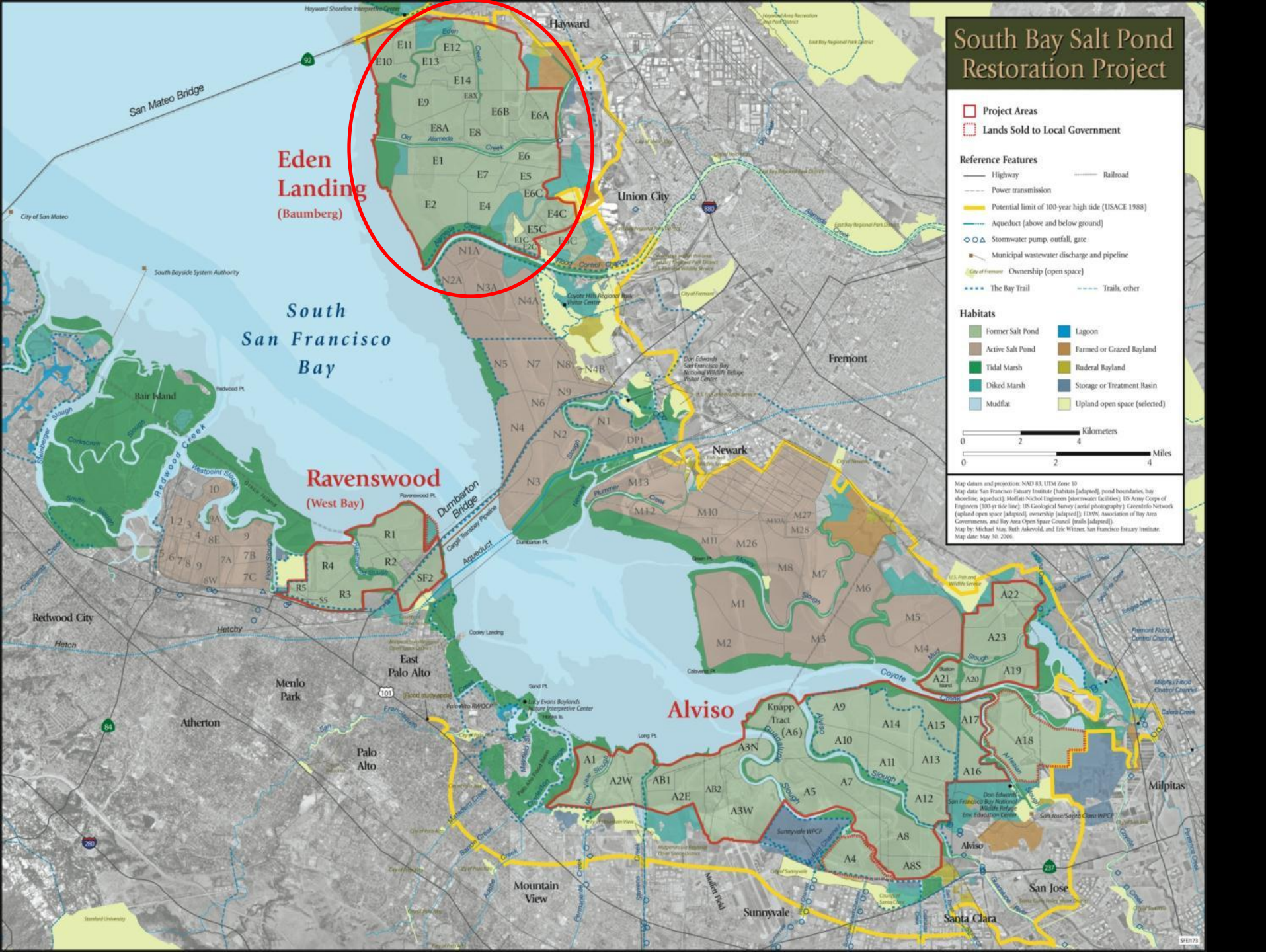
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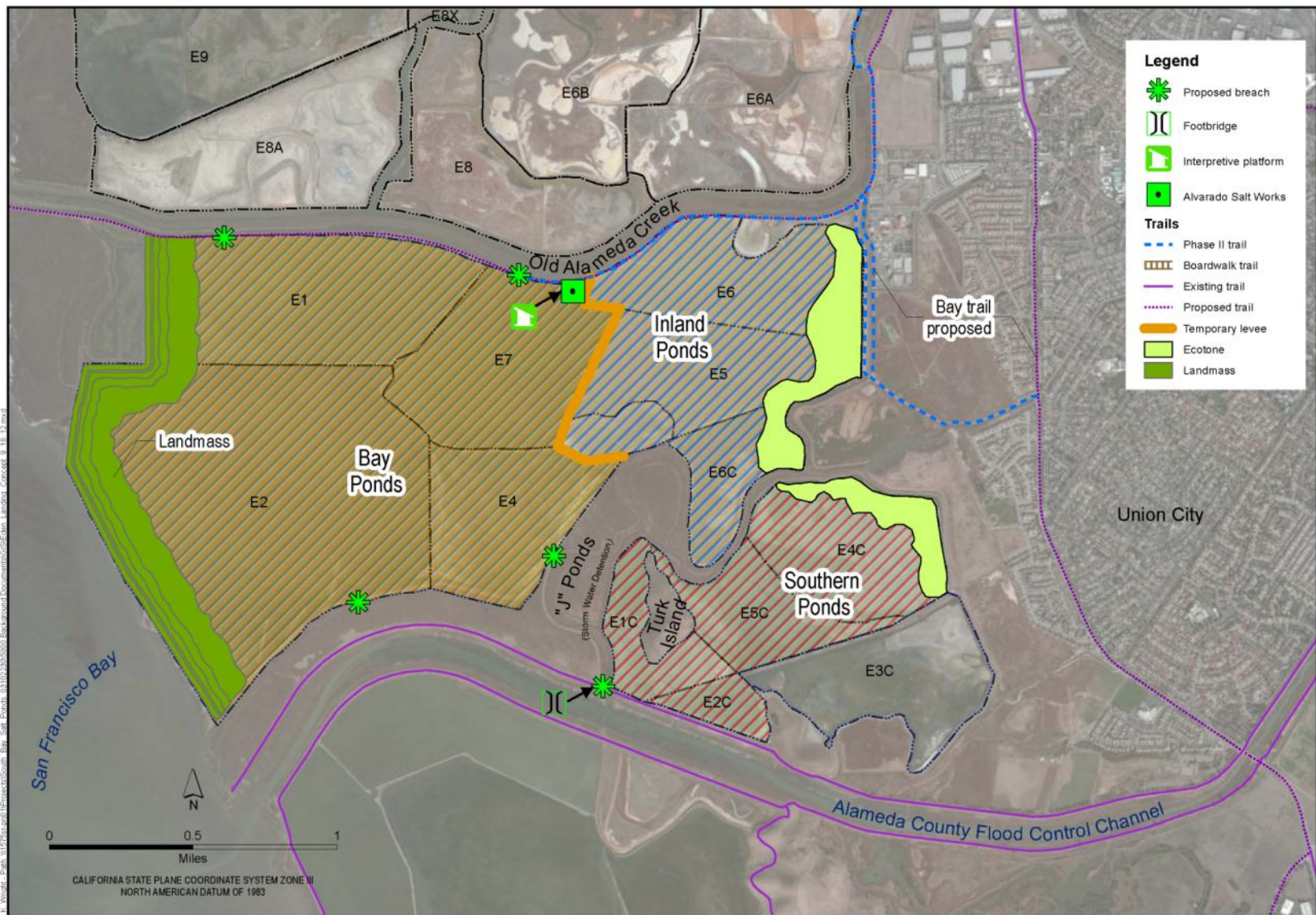
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Map by: Michael Map, Ruth Stakeford, and Eric Wimmer, San Francisco Estuary Institute.
Map date: May 30, 2006.





URS

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**

South Bay Salt Pond Restoration Project

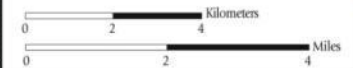
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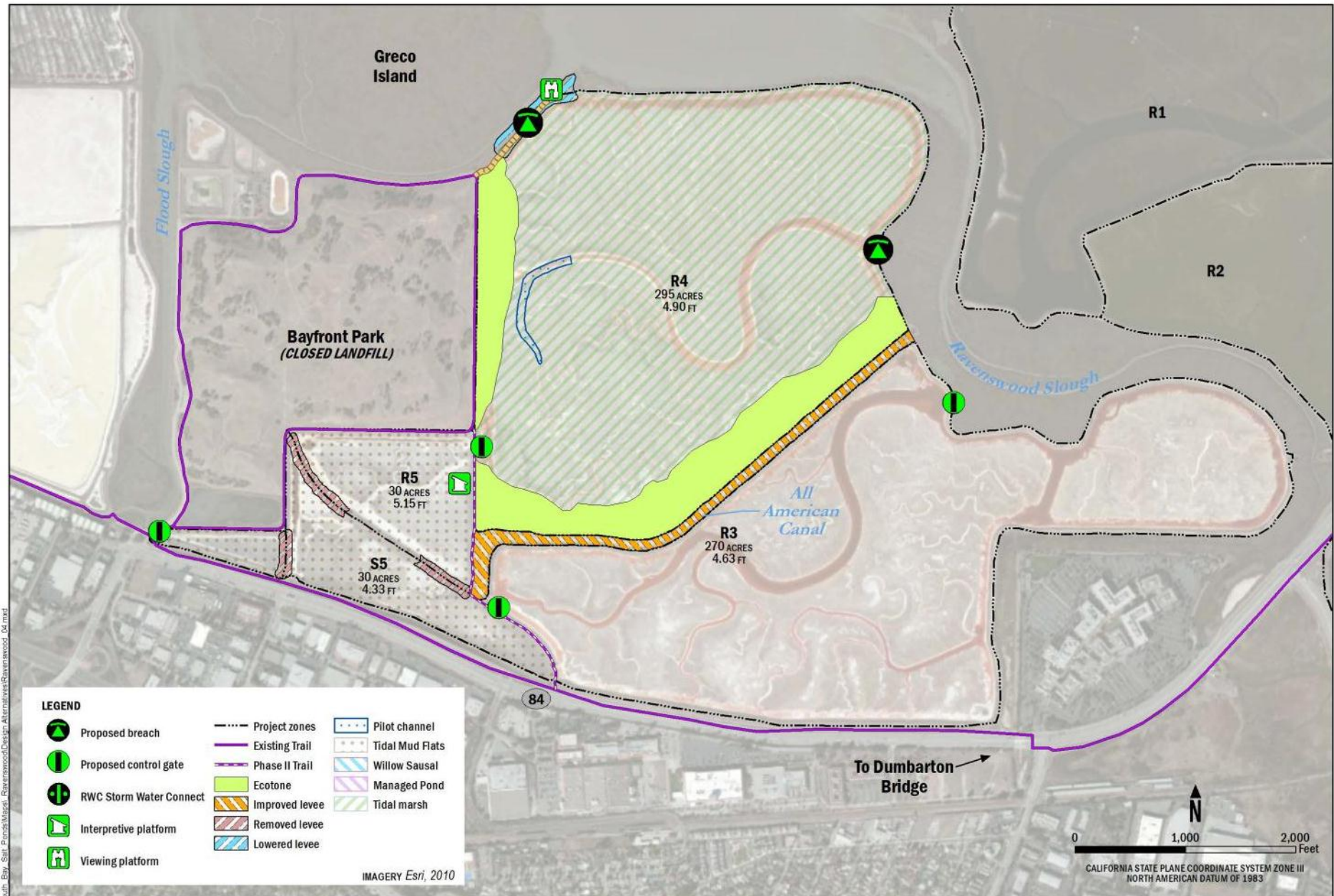
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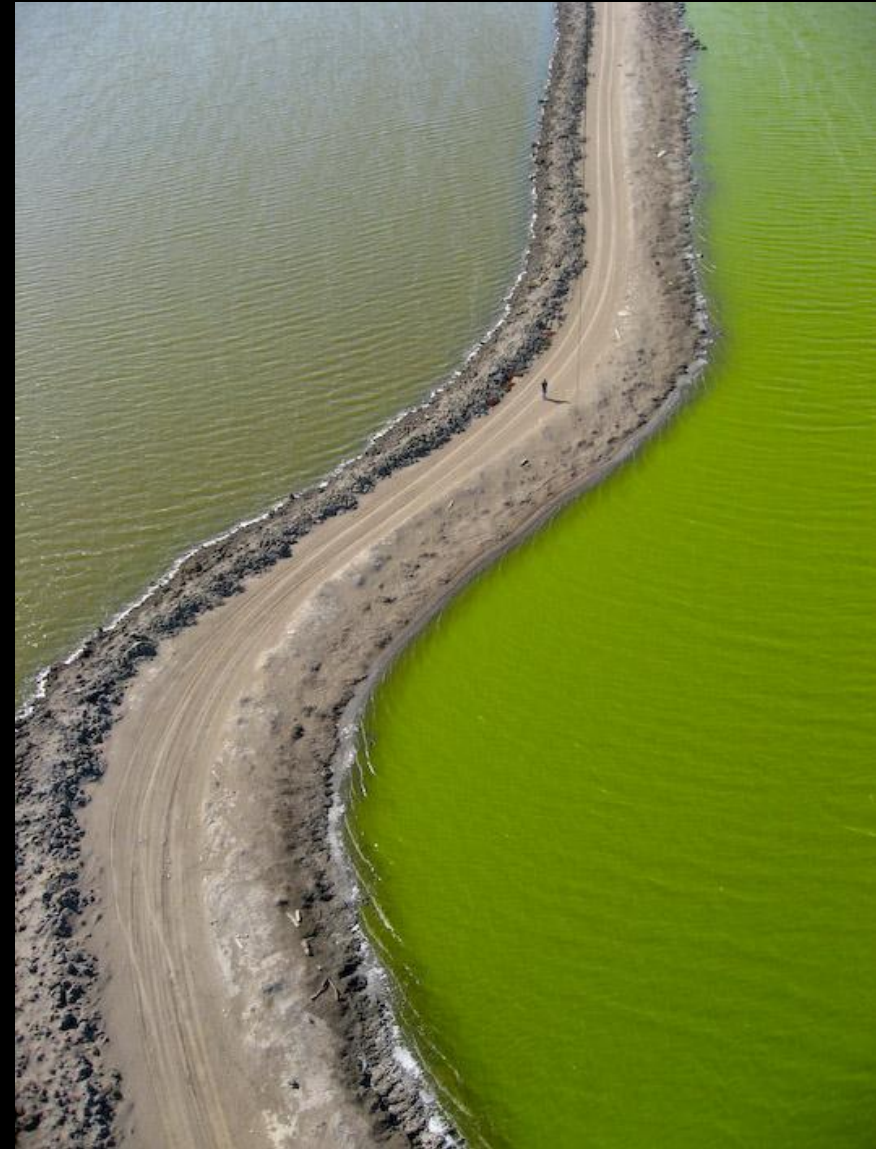


SOUTH BAY SALT PONDS
RAVENSWOOD
SANTA CLARA COUNTY, CA

DATE OF PREPARATION: JANUARY 2013
DRAFT, FOR INTERNAL USE ONLY
URS PROJECT NO. 26818348

Alternative R4
RAVENSWOOD POND COMPLEX

partnerships





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John Krause

California Department of Fish and Wildlife

jkrause@wildlife.ca.gov or 415/250-0243

www.southbayrestoration.org or, follow us on Facebook

facebook



Name:
South Bay Salt
Pond Restoration
Project