

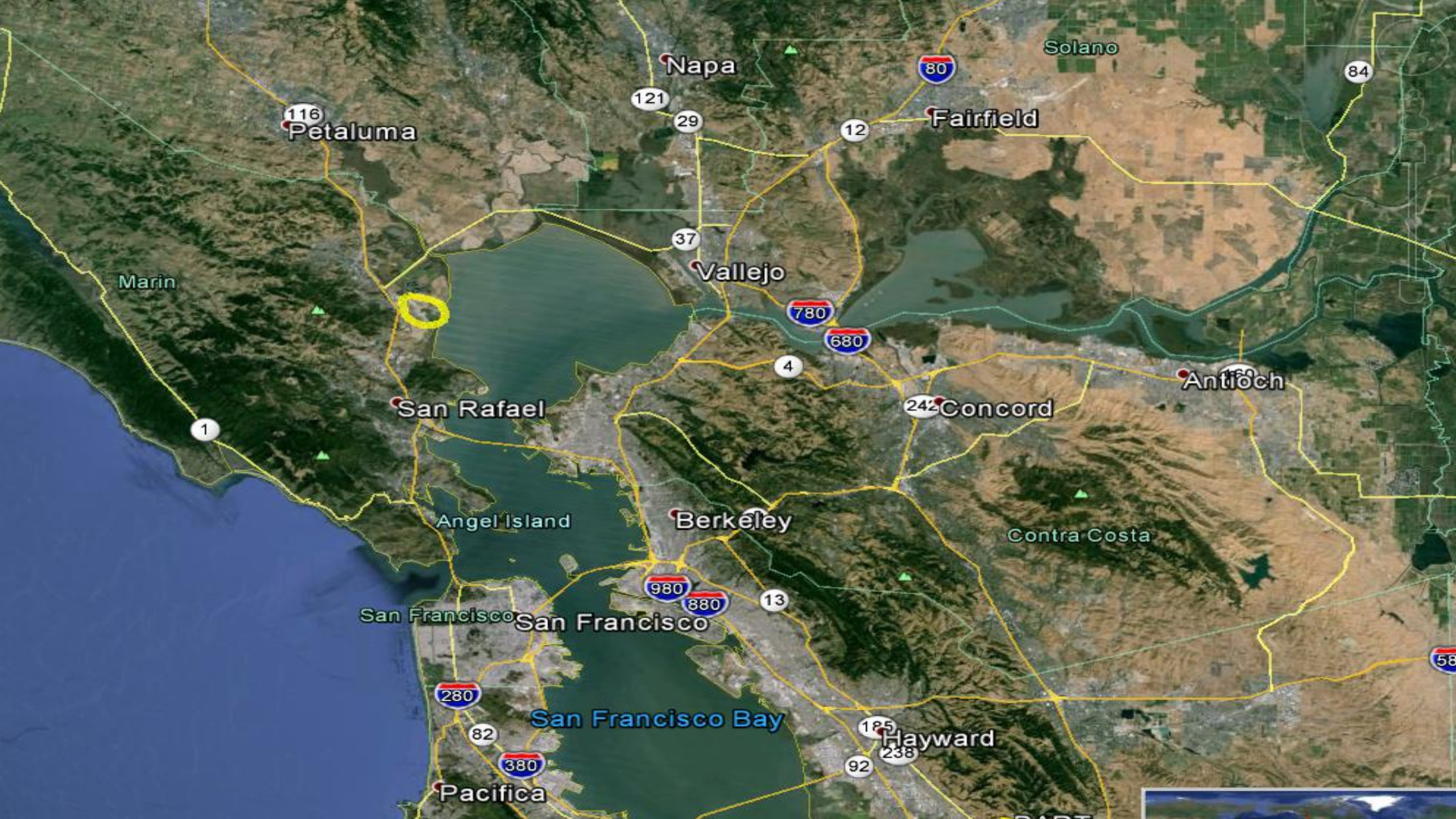
HAMILTON WETLAND RESTORATION PROJECT

For AAPA Harbors & Navigation Committee
April 1, 2020

Presented by
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With thank you to Tom Gandsbery former Project Manager with the
California Coastal Conservancy for his contribution to these slides



116
Petaluma

Napa

80

Solano

84

Fairfield

121

29

12

Marin

37

Vallejo

780

680

4

160
Antioch

San Rafael

242
Concord

1

Angel Island

Berkeley

Contra Costa

San Francisco

San Francisco

980

880

13

280

San Francisco Bay

82

380

Pacifica

92

125
Hayward

238

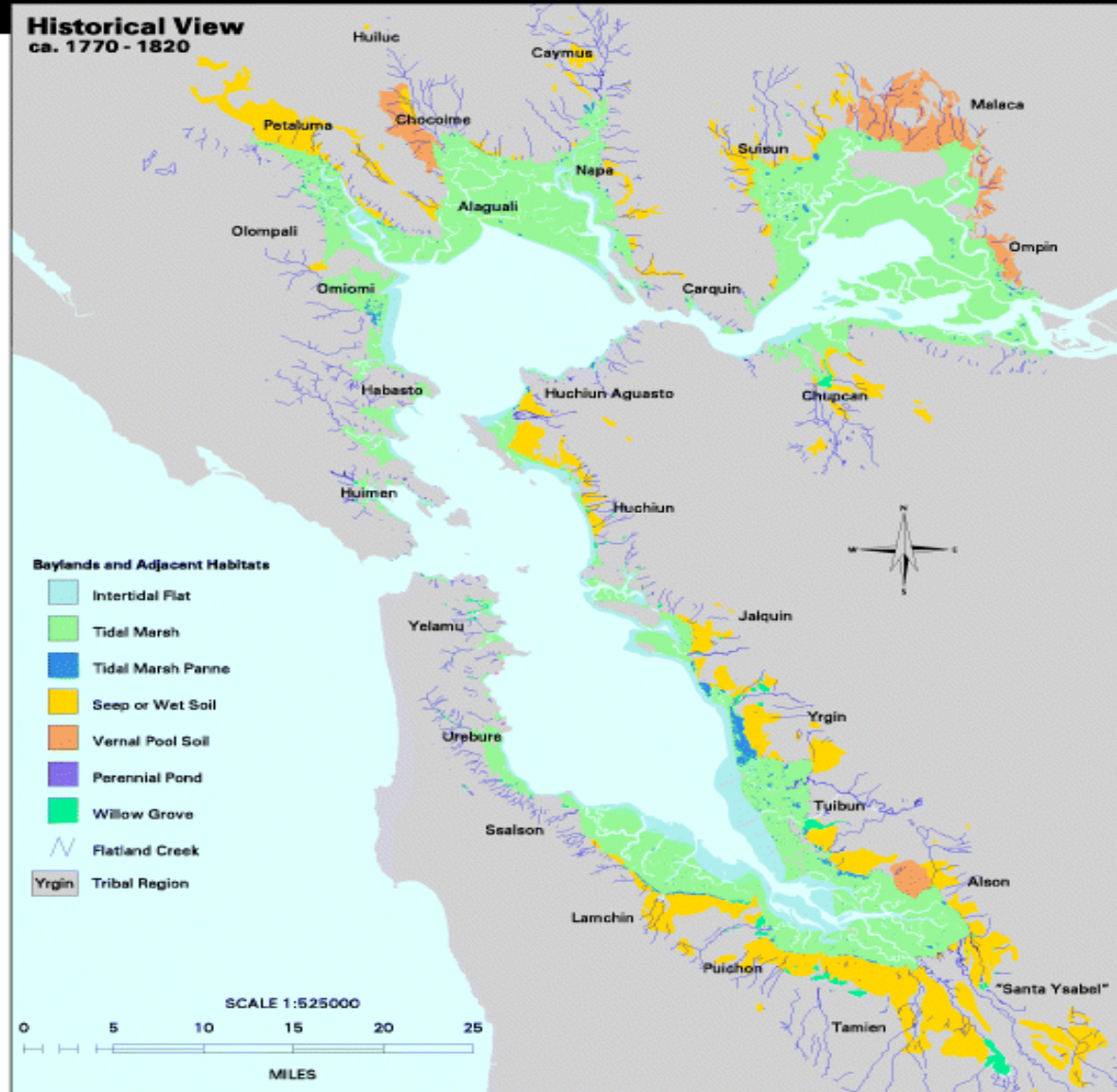
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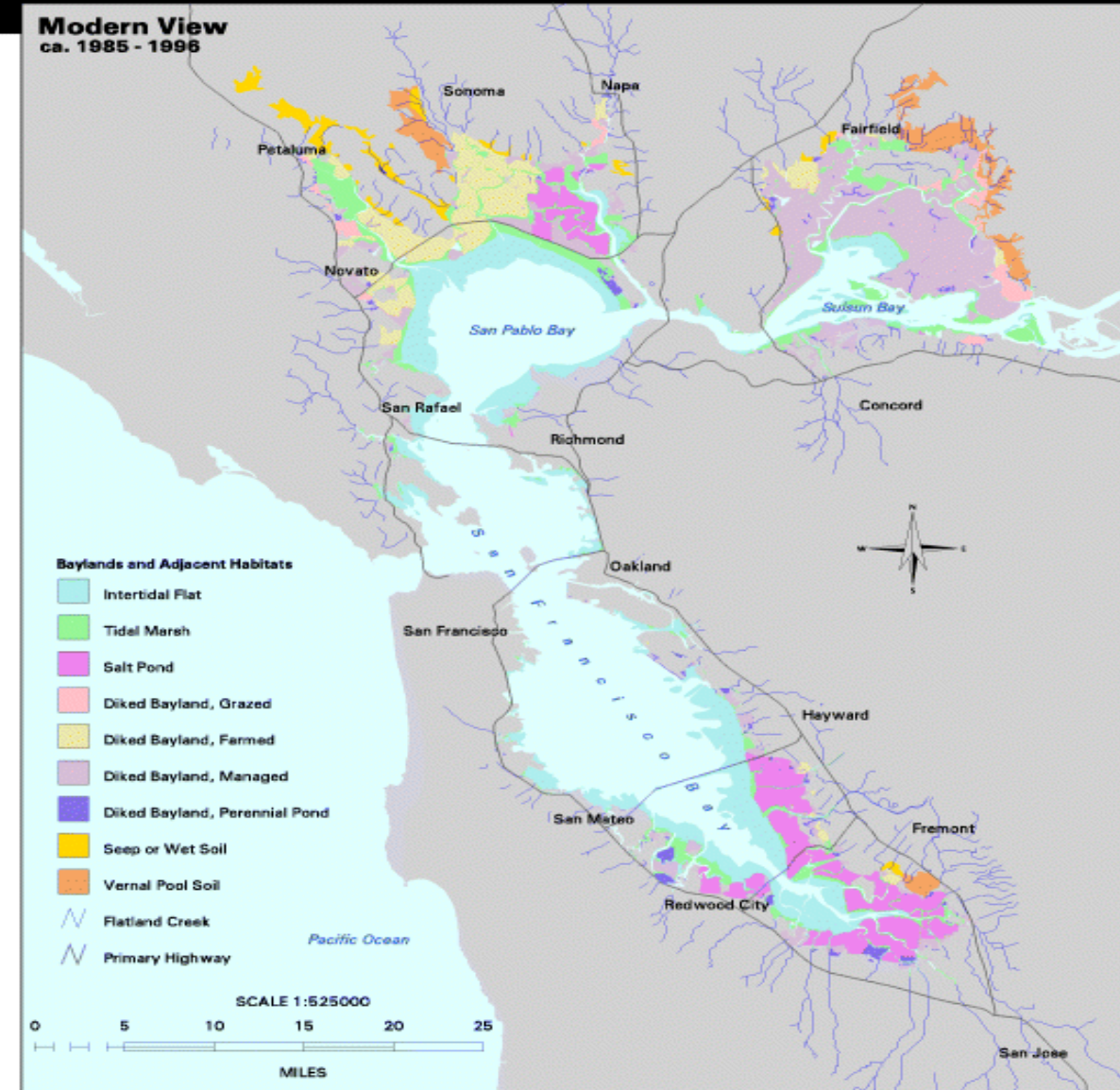
Bay Area EcoAtlas

Past and Present



Historical View Primary Sources:
US Coast Survey, US Geological Survey, US Department of Agriculture, Spanish dienas, explorers' journals, and local archives. Tribal Regions courtesy of Randall Milliken.

Projection:
1927 North American Datum
Universal Transverse Mercator Projection
UTM Zone 10

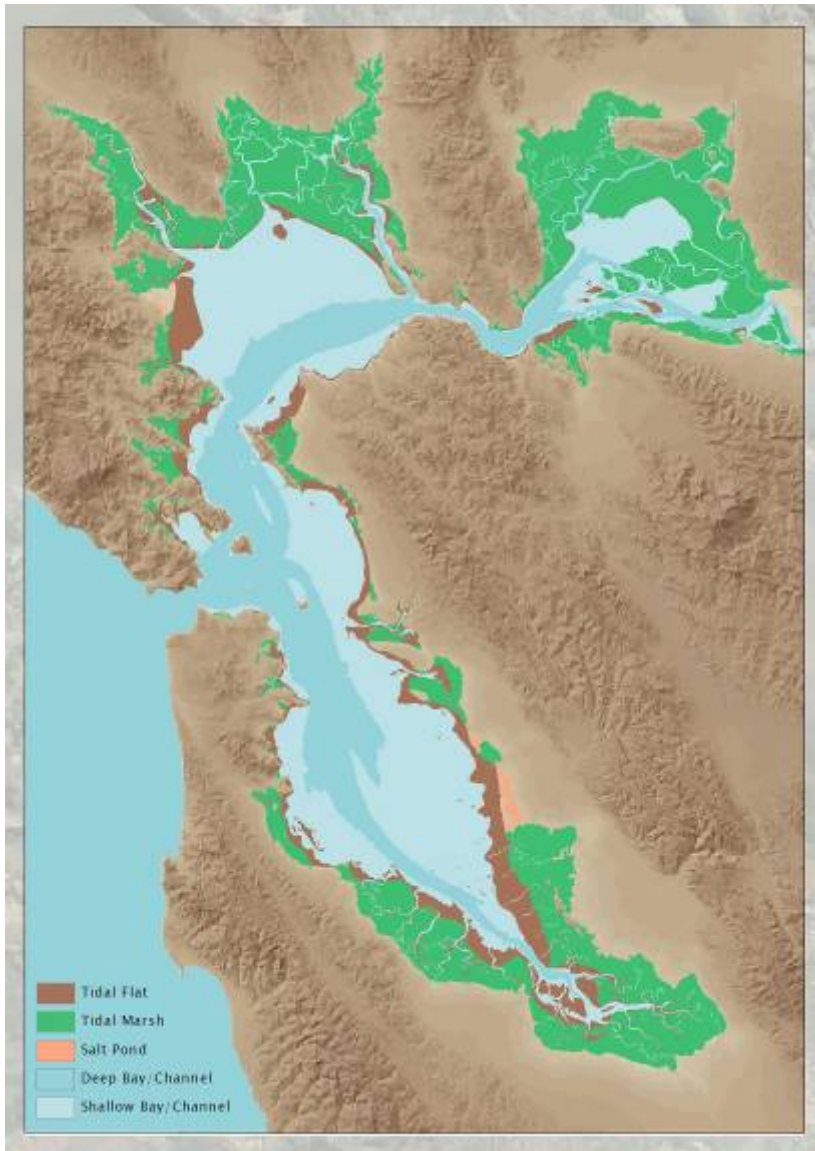


Modern View Primary Sources:
CA State Lands Commission, US Geological Survey, US Fish and Wildlife Service, US National Aeronautical and Space Administration, and local experts.

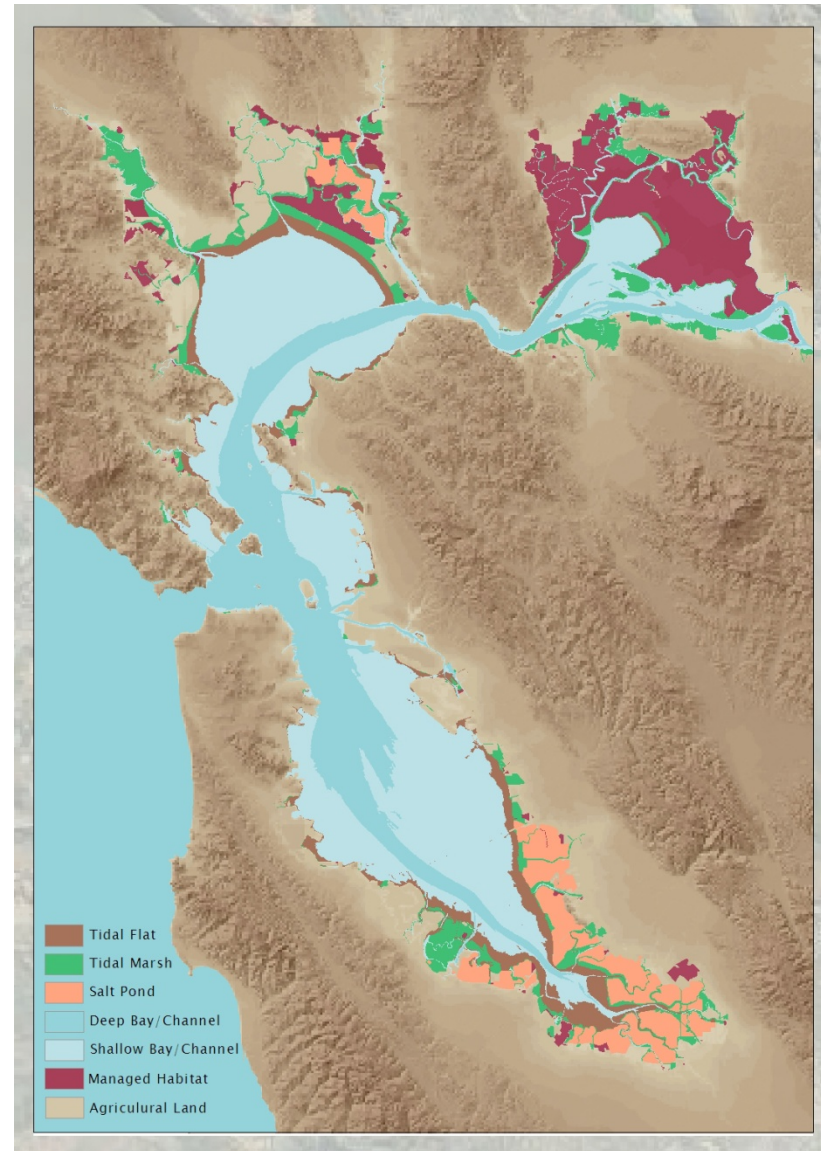
Production:
Science coordination, GIS and Map Design by the San Francisco Estuary Institute
Richmond, California <http://www.sfei.org>
EcoAtlas 1.0 ©1997 SFEI



Past (~1850)



Present (~2000)



SF Bay Navigation & Env Restoration Projects with Dredged Material Disposal Sites



Petaluma River Channel

Sonoma Baylands Project

Napa River

Hamilton Wetlands Restoration Project

SF-9

SF-16

Montezuma Wetlands Project

San Rafael Creek

SF-10

Pinole Shoal Channel

Suisun Bay Channel

Richmond Harbor

SF-11

Oakland Harbor

San Francisco Main Ship Channel

SF-08

Near Shore Nourishment Site

Jack D. Maltester Channel

San Francisco DODS Site

Inner Bair Island (USFWS Project)

Redwood City

- SF Bay Navigation Projects
- Bay Area Disposal Site
- SPN Env Restoration Project
- Other Env Restoration Project

No Scale



HAMILTON WETLAND RESTORATION PROJECT (HWRP) MULTIPLE USE

OBJECTIVES

- ➔ Could use as much as 24M cubic yards of clean sediment to bring site back to marsh elevation
- ➔ Tidal Marsh Habitat benefiting Endangered Species
- ➔ Dredge material placement speeds up natural marsh building process
The project is a major milestone in fulfilling a key goal of the Long Term Management Strategy to utilize 40% of the 3-4.5 mcy of material dredged annually in the Bay for beneficial reuse.
- ➔ Reuse of Military Lands; Economic Benefit to the region because the restoration is being accomplished through the beneficial use of dredged material from the -50' Oakland Harbor Deepening Project
- ➔ BRAC Land Transfer was a No-Cost Conveyance
- ➔ Linkages to other North Bay lands. (Within the San Pablo Bay USFWS Refuge Planning boundary)
- ➔ Bay Trail Segment

**Project is 3
Properties =
2600 acres**

Bel Marin
Keys Homes

BMK V 1600 ac
-Owned by SCC

NAF
~200ac
Owned by
SLC

Airfield 622ac -
Owned by SCC

Hamilton Planning Milestones

Goal: Restoration of 2,600 acres of tidal and seasonal wetland as well as transitional habitat for several fish, wildlife and bird species

- 1994 Hamilton Army Airfield is closed under Base Realignment and Closure (BRAC) Act
- 1998 Feasibility Study and NEPA/CEQA compliance complete
- 1999 Congress authorizes the Hamilton Wetland Restoration Project (HWRP) in WRDA 1999 (988 acres)
- 2001 Project Cooperation Agreement (PCA) signed between USACE and the Port of Oakland -50' Harbor Deepening
- 2003 Bel Marin Keys V (BMKV) Expansion Project (NEPA/CEQA compliance complete) (1,612 acres)
- 2006 BRAC Cleanup is complete
- 2007 Congress authorizes the BMKV Expansion Project in WRDA 2007 (increased project size to 2,500 acres; \$228 M for combined project to be supported by dredging sponsor costs)
- 2008 Dredged material from the Port of Oakland's -50' project is placed at HWRP

Hamilton Planning Milestones cont.:

- 2009 Cleanup of some portions of the site begins under the Formerly Used Defense Sites (FUDS) program
- 2011 Proposed construction of BMKV expansion site
- 2013 Proposed HWRP's outboard marsh levee breach
- 2014 13 year HWRP Monitoring Program begins
- 2018 Proposed BMKV wetland restoration construction complete. 15 year monitoring program.



What does it take to convert an abandoned military base airfield into a tidal wetland?



*Hamilton Wetlands Restoration
Oblique Rendering*

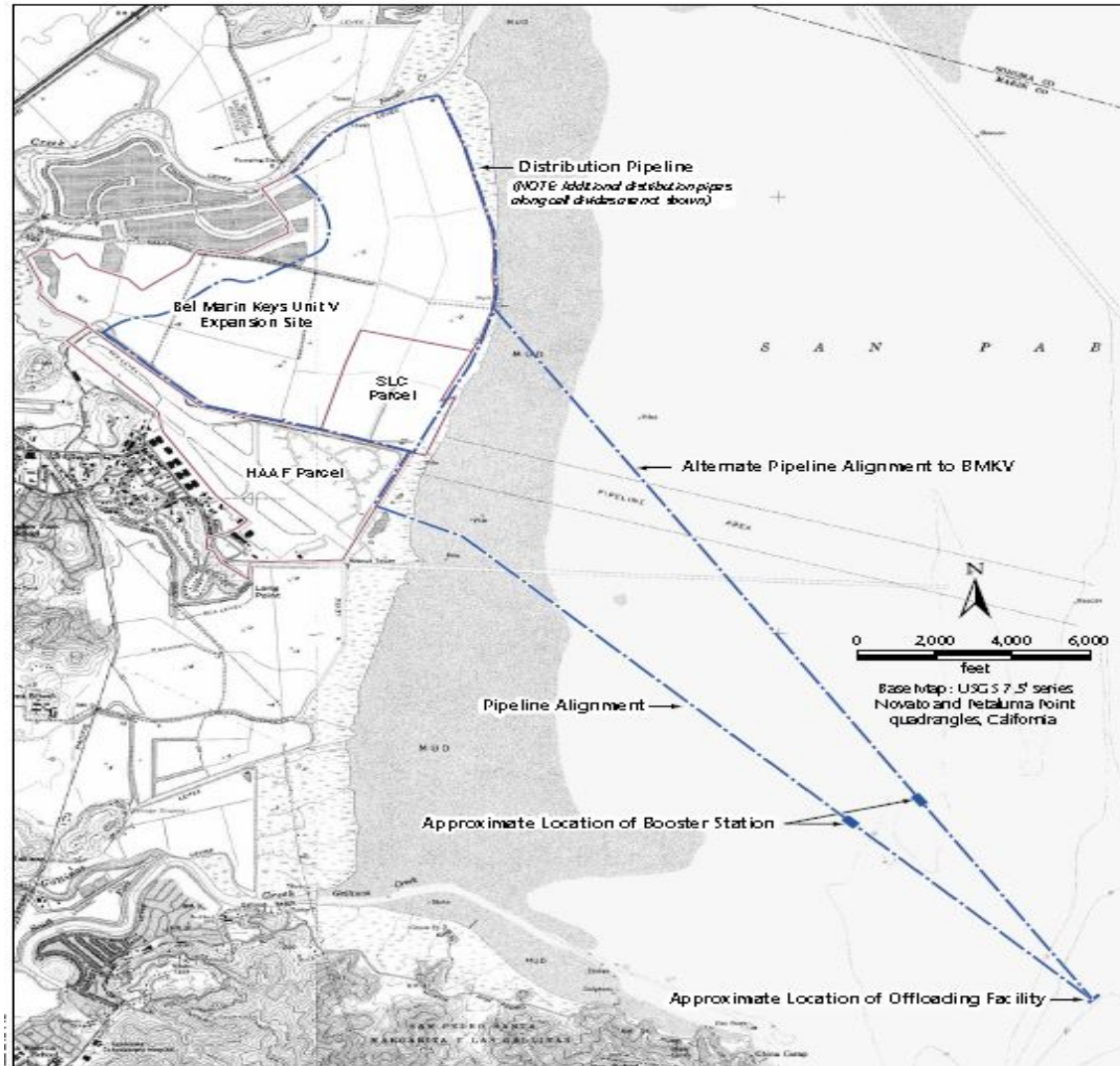


Cozy, No?





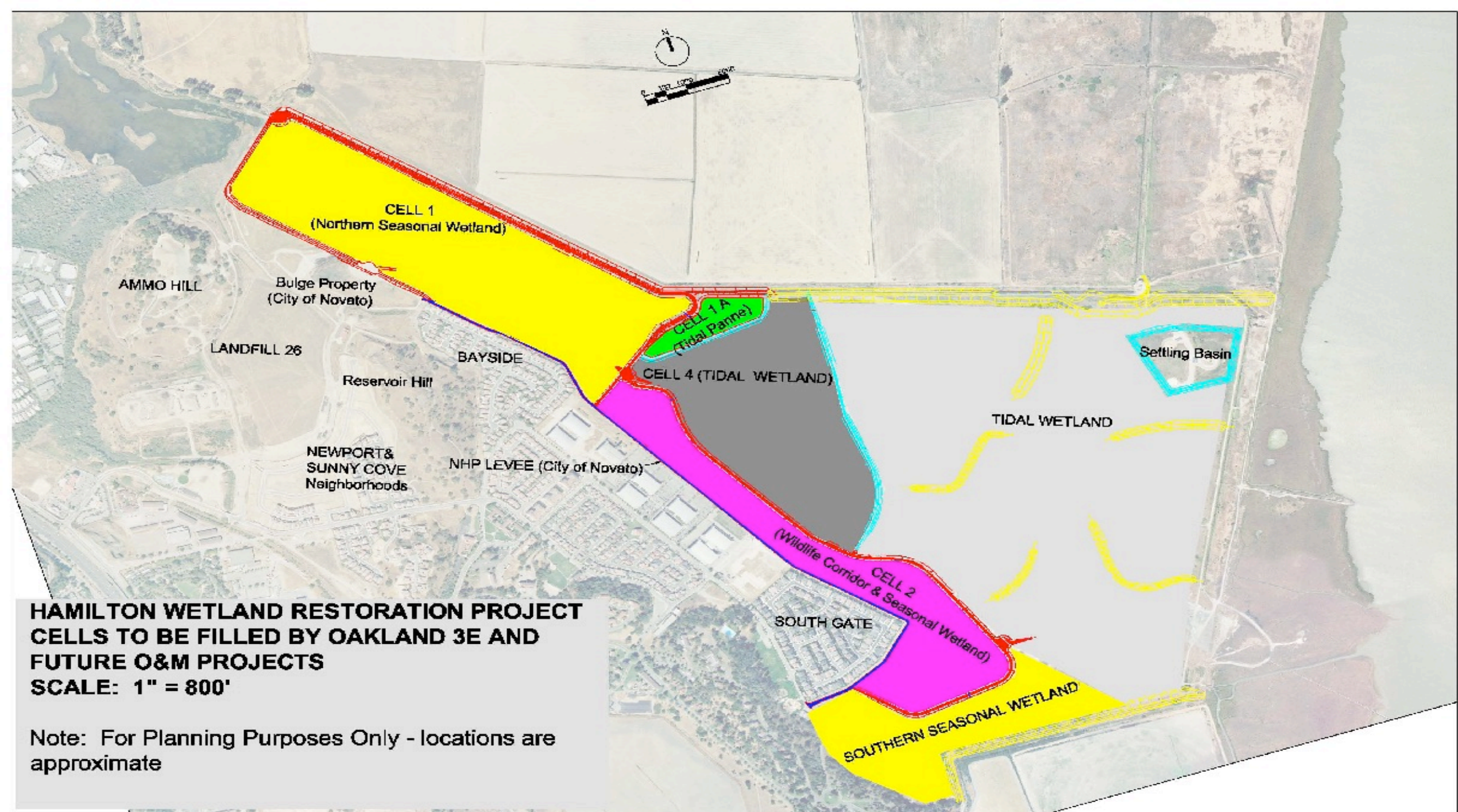
Offloader location





5.6 Million Cubic Yards / 4.28 Million Cubic Meters: Source: Port of Oakland -50 ft Channel Deepening -mostly.

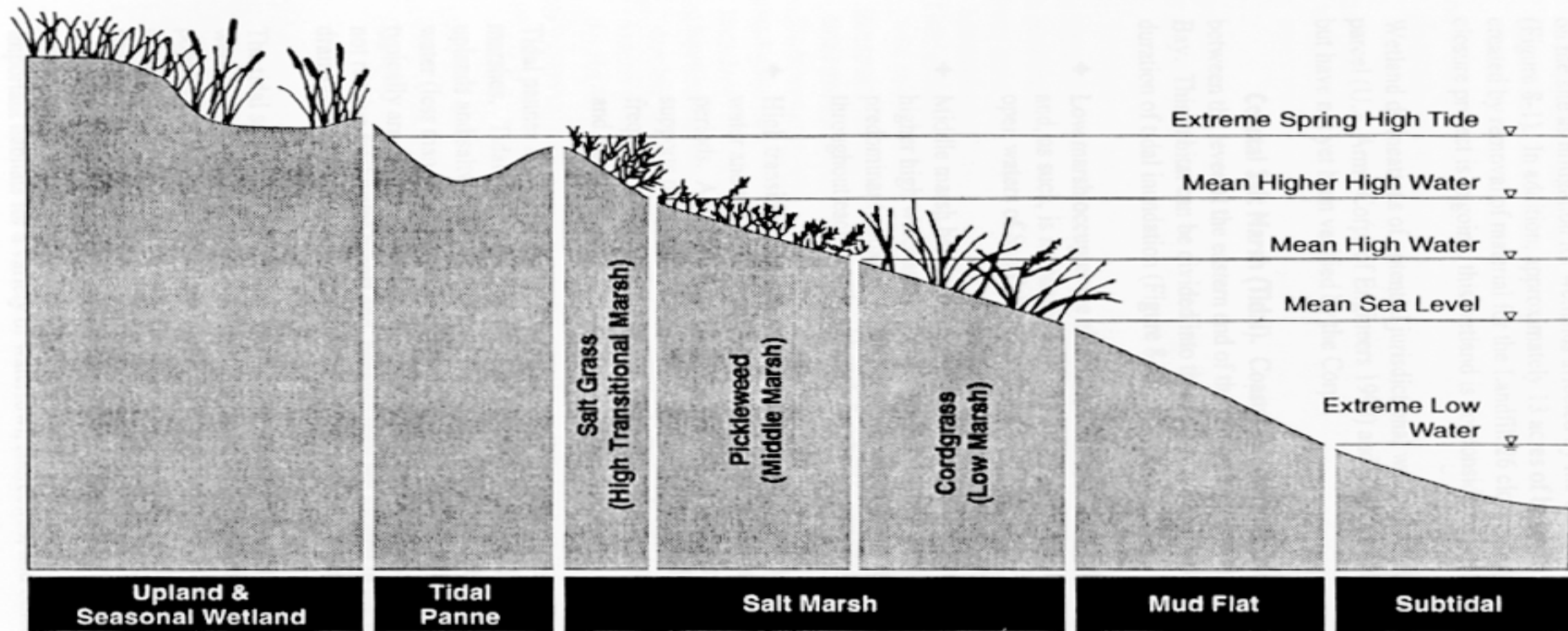




**HAMILTON WETLAND RESTORATION PROJECT
CELLS TO BE FILLED BY OAKLAND 3E AND
FUTURE O&M PROJECTS
SCALE: 1" = 800'**

Note: For Planning Purposes Only - locations are approximate

Altering the fill elevation will result in different habitat types



Source: Woodward-Clyde 1998.



Jones & Stokes Associates, Inc.

Schematic of Habitats by Tide Levels

HWRP 13 year Monitoring and Adaptive Management Plan (MAMP)

- **FY 19 in fourth year;** 4 years after breach project performance in general is progressing well towards performance criteria set in the MAMP with few exceptions:
- **FY 18 Workplan** funds delayed issuance of nursery contract resulting in deterioration of native vegetation populations.
- **North Seasonal Wetland (NSW)** not performing as a seasonal wetland based above; also 2017 flooding
- **Public support and Volunteers** big factor in recovery of lost native vegetation

TOTAL FUNDING

TOTAL COST	\$ 286,219,000
FEDERAL COST	214,182,000
NON-FEDERAL COST	70,037,000
TOTAL FEDERAL COST	90,751,27
FY 2021 BUDGET	0
FEDERAL COST TO COMPLETE	123,430,873

figure E

Hamilton Wetlands Restoration Project
Grading and Vegetation Plan
Southern Site Seasonal Wetland

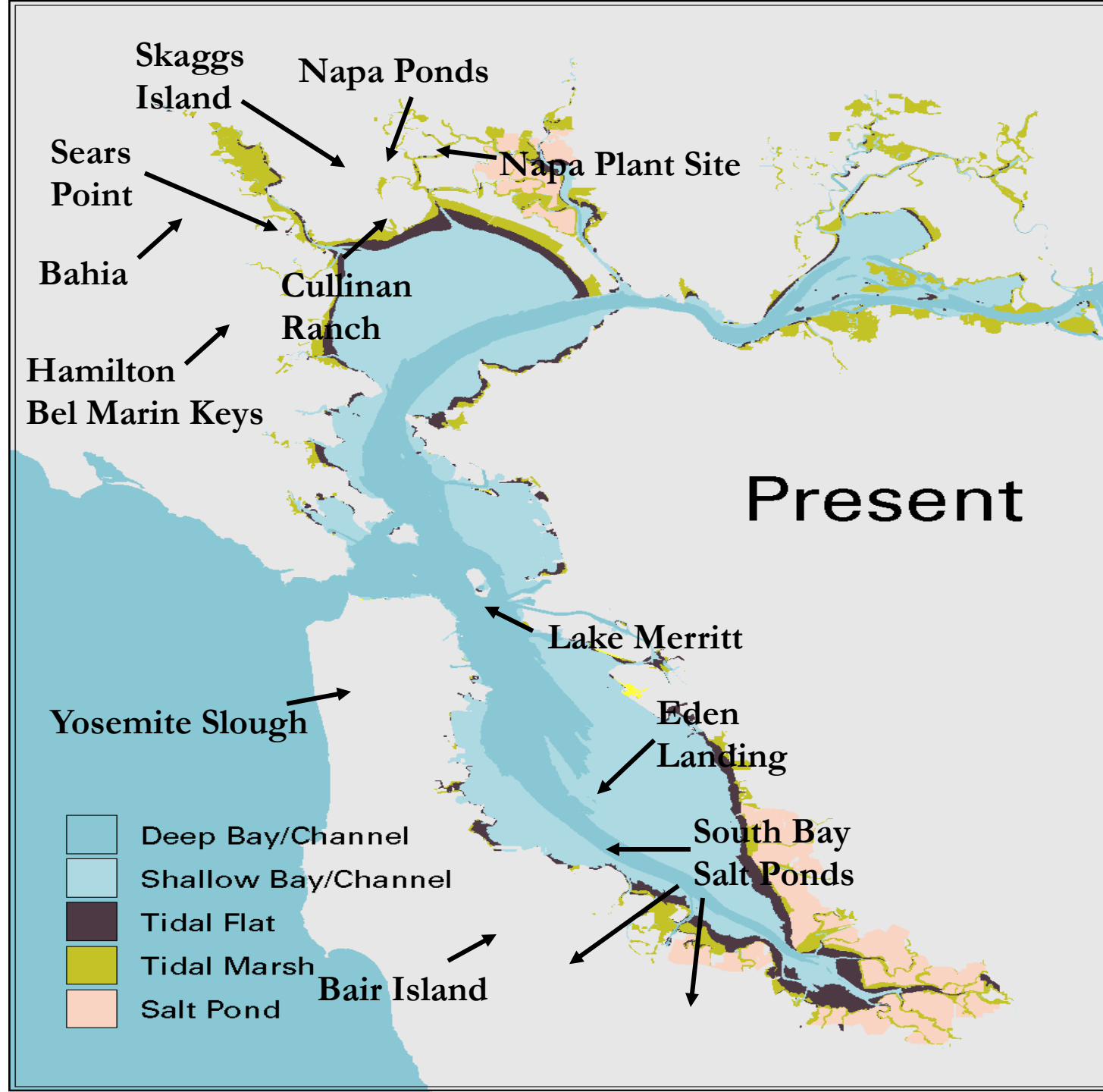
-  Pickleweed
Sarcocornia pacifica
-  Bulrush
Bolboschoenus maritimus
-  Gum plant
Gnaphalium strica
-  Toyon
Heteromeles arbutifolia
-  Coyote Brush
Baccharis pilularis
-  Arroyo Willow
Salix lasiolepis




Part of a Regional Effort With California Coastal Conservancy leading

40,000 acres underway or planned (as of 2014)

<u>South Bay</u>	15,100
<u>Napa Ponds</u>	9,800
Skaggs Island	4,400
<u>Hamilton/BMK</u>	2,600
Bair Island	1,600
Cullinan Ranch	1,600
Napa Plant Site	1,400
Sears Point	1,400
Eden Landing	830
Bahia	350
& some others...	




Thank you! For future reference on Bay restoration and the beneficial use of dredged material, check out PIANC's Guide for Working with Nature and Ellen Johnck Case Study on the Port of Oakland's Middle Harbor Enhancement Project



PIANC

**EnviCom WG Report
n° 176 - 2018**



**GUIDE FOR APPLYING WORKING WITH NATURE
TO NAVIGATION INFRASTRUCTURE PROJECTS**

The World Association for Waterborne Transport Infrastructure

The complex block is a blue-themed graphic for a report cover. It features the PIANC logo at the top left, the title 'PIANC' in large blue letters, and a dark blue box containing the text 'EnviCom WG Report n° 176 - 2018'. Below this is a framed aerial photograph of a large body of water with a bridge structure. At the bottom, the title 'GUIDE FOR APPLYING WORKING WITH NATURE TO NAVIGATION INFRASTRUCTURE PROJECTS' is written in white, bold, uppercase letters, followed by the subtitle 'The World Association for Waterborne Transport Infrastructure' in a smaller white font.