



MEMORANDUM

DATE: January 25, 2012

TO: Governing Board
San Francisco Bay Restoration Authority

FROM: Amy Hutzel, San Francisco Bay Area Conservancy Program Manager
State Coastal Conservancy

SUBJECT: Update on San Francisco Bay Restoration Needs and Opportunities 2015 – 2039

- Attachments:
1. Preliminary List of Projects Needing Funding Starting in 2015
 2. San Francisco Bay Restoration Needs and Opportunities 2015-2039 (Maps 1-3)
 3. Sample Project Cost Estimates

This memo and the accompanying project list, maps, and sample cost estimates are being provided to the Governing Board of the San Francisco Bay Restoration Authority to update previously available information about projects and funding that are needed to restore San Francisco Bay.

As previously estimated by Save the Bay in 2007, the cost of restoring the 13 largest tidal wetland restoration projects ringing the Bay will be in excess of \$1.4 billion. While these projects are at various stages of planning and implementation, the majority of the costs are yet to be funded.

In consultation with the San Francisco Bay Joint Venture, Save the Bay, the San Francisco Estuary Partnership and other individuals, staff of the Coastal Conservancy has compiled a preliminary list of Bay restoration projects anticipated to need funding after 2015, which is the earliest that the Restoration Authority may begin receiving revenue from its envisioned November 2014 parcel tax measure. The project list is attached, as are maps showing the geographic distribution of the projects and a table with cost estimates for a sampling of projects. The project list and maps include bayland properties that have been acquired by public agencies,

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but not yet restored, restoration projects that have been completed but could be enhanced or expanded, and areas that have the potential for restoration work, but are currently conceptual ideas.

The list and map should not be interpreted as implying or limiting eligibility or priority for any funds that may become available to the Restoration Authority. Project eligibility and priorities will be determined in a future public process and in accordance with the Restoration Authority's enabling legislation (Government Code Sections 66700 *et seq.*). The list and maps will continue to be updated as additional information is acquired.

**SAN FRANCISCO BAY RESTORATION NEEDS AND OPPORTUNITIES:
PRELIMINARY LIST OF PROJECTS NEEDING FUNDING STARTING IN 2015**

NOTE: The purpose of this list and the accompanying memorandum and maps is to update the San Francisco Bay Restoration Authority about the scope of Bay restoration needs and opportunities that will require a regional funding source to match State and Federal funds. While the list, map and memo are intended to provide a comprehensive view of existing restoration projects, currently envisioned future Bay restoration projects, and conceptual ideas for future restoration sites, they should not be interpreted as implying or limiting eligibility or priority for any funds that may become available to the Restoration Authority. Project eligibility and priorities will be determined in a future public process and in accordance with the Restoration Authority's enabling legislation (Government Code Sections 66700 *et seq.*).

Sample cost estimates for projects marked with an * are provided on an accompanying table.

San Francisco City and County

Crissy Field
Tennessee Hollow
Pier 94
Heron's Head Marsh
Yosemite Slough*
Islais Creek
Treasure Island and Yerba Buena Island
Golden Gate National Recreation Area (bayside)
Subtidal habitats
Bay Trail associated with habitat restoration projects
Watershed projects that clean and protect water and sediment that flow to the Bay

San Mateo County

Brisbane Baylands
Oyster Cove/Shearwater
Coyote Point
Seal Slough
Bair Island
South Bay Salt Ponds (Ravenswood Ponds)*
East Palo Alto Shoreline
San Francisquito Creek
Don Edwards San Francisco Bay National Wildlife Refuge
Subtidal habitats
Bay Trail associated with habitat restoration projects
Watershed projects that clean and protect water and sediment that flow to the Bay

Santa Clara County

San Francisquito Creek
Palo Alto Baylands
Charleston Slough
Stevens Creek
Moffett Field wetlands
South Bay Salt Ponds (Alviso Ponds)*
Sunnyvale Baylands
Pond A4
New Chicago Marsh
Pond A18
Coyote Creek
Alviso Slough/Guadalupe River

Santa Clara County (continued)

Don Edwards San Francisco Bay National Wildlife Refuge
Subtidal habitats
Bay Trail associated with habitat restoration projects
Watershed projects that clean and protect water and sediment that flow to the Bay

Alameda County

Warm Springs seasonal wetland
Mowry Slough
La Riviere Marsh
Mayhews Landing
Alameda Flood Control Channel and Alameda Creek
South Bay Salt Ponds (Alviso and Eden Landing Ponds)*
Hayward Shoreline
San Leandro Shoreline
Elsie Roemer Sanctuary
Lake Merritt
Eastshore State Park, including Strawberry and School House Creeks and Albany Beach
Berkeley Aquatic Park
Alameda Naval Air Station
Oakland Estuary
East Bay Regional Park District's Shoreline Parks, including Coyote Hills, Hayward, Oyster Bay and Martin Luther King Jr. Regional Shoreline
Don Edwards San Francisco Bay National Wildlife Refuge
Subtidal habitats
Bay Trail associated with habitat restoration projects
Watershed projects that clean and protect water and sediment that flow to the Bay

Contra Costa County

Eastshore State Park, including Hoffman Marsh
North and South Richmond Shoreline (including Breuner Marsh *, San Pablo Marsh, Wildcat Marsh, Stege Marsh and Baxter Creek, and Rheem Creek)
Chelsea Wetlands/Pinole Creek
Rodeo Shoreline
Dutch Slough* and Marsh Creek

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Contra Costa County (continued)

Peyton Slough wetland complex, including
McNabney Marsh
Pacheco Creek/Marsh and Pt. Edith
Alhambra Creek
Concord Naval Weapons Station
Walnut Creek
East Bay Regional Park District's Shoreline Parks,
including Point Isabel, Brooks Island, Point
Molate, Martinez, Bay Point and Big Break
Regional Shorelines
Subtidal Habitats
Bay Trail associated with habitat projects
Watershed projects that clean and protect water and
sediment that flow to the Bay

Solano County

Mare Island
Cullinan Ranch*
Napa-Sonoma Marshes State Wildlife Area: White
Slough
Benicia State Recreation Area
Suisun Creek
Suisun Marsh: Rush Ranch—other project sites
subject to pending Habitat Management,
Preservation, and Restoration Plan for Suisun Marsh
Western Delta Islands
Subtidal habitats
Bay Trail associated with habitat restoration projects
Watershed projects that clean and protect water and
sediment that flow to the Bay

Napa County

Napa River
Napa-Sonoma Marshes State Wildlife Area
(including Stanley Ranch, Napa River Salt Ponds*,
Green Island/Napa Plant Site and Huichica Creek)
American Canyon riverfront
Fagan Marsh
Bull Island
Subtidal habitats
Bay Trail associated with habitat restoration projects
Watershed projects that clean and protect water and
sediment that flow to the Bay

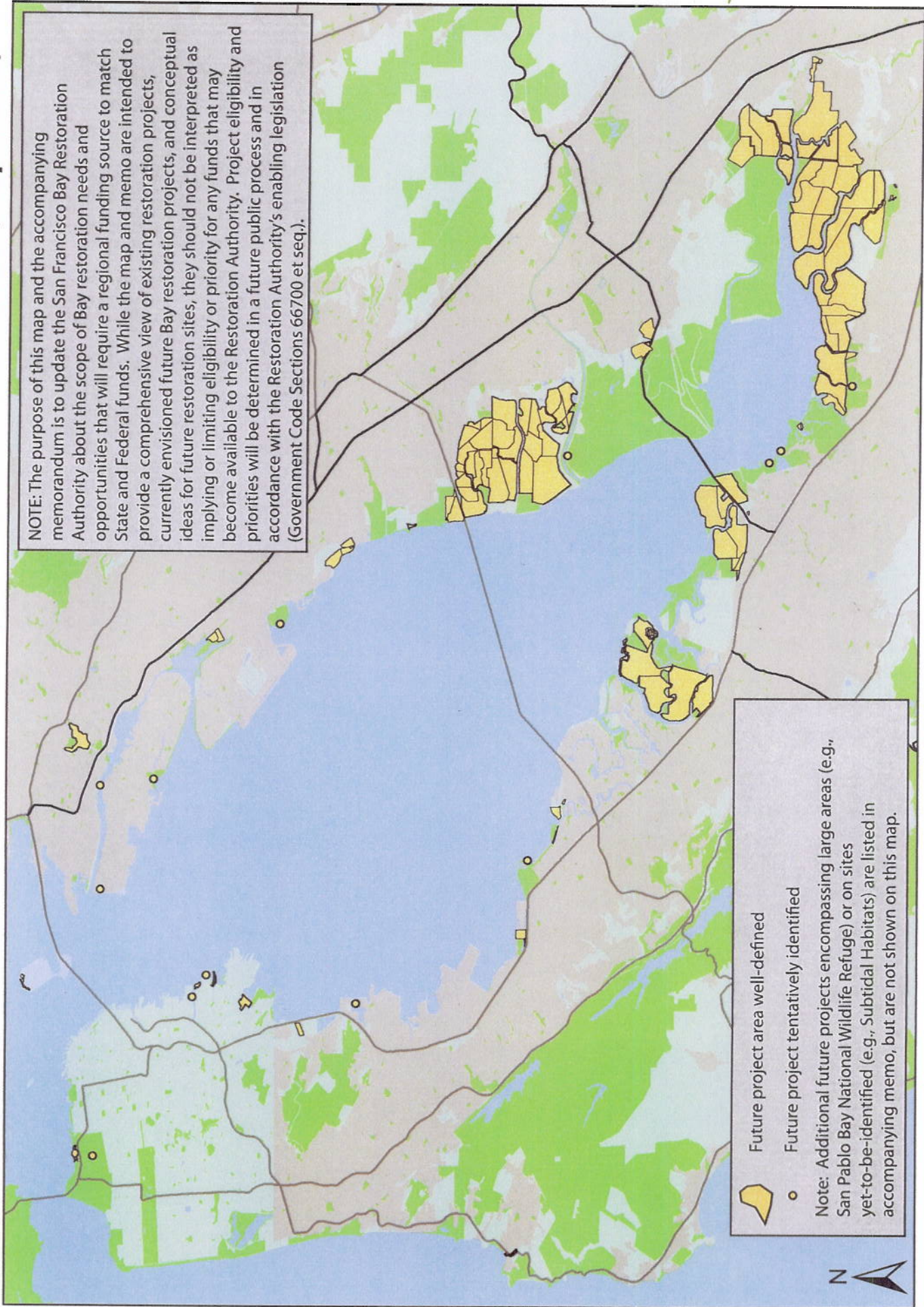
Sonoma County

Skaggs Island
Sonoma Creek
Tolay Creek
Sears Point*
Sonoma Baylands
Lower Petaluma River
Petaluma Marsh
Napa-Sonoma Marshes State Wildlife Area
San Pablo Bay National Wildlife Refuge
Subtidal Habitats
Bay Trail associated with habitat projects
Watershed projects that clean and protect water and
sediment that flow to the Bay

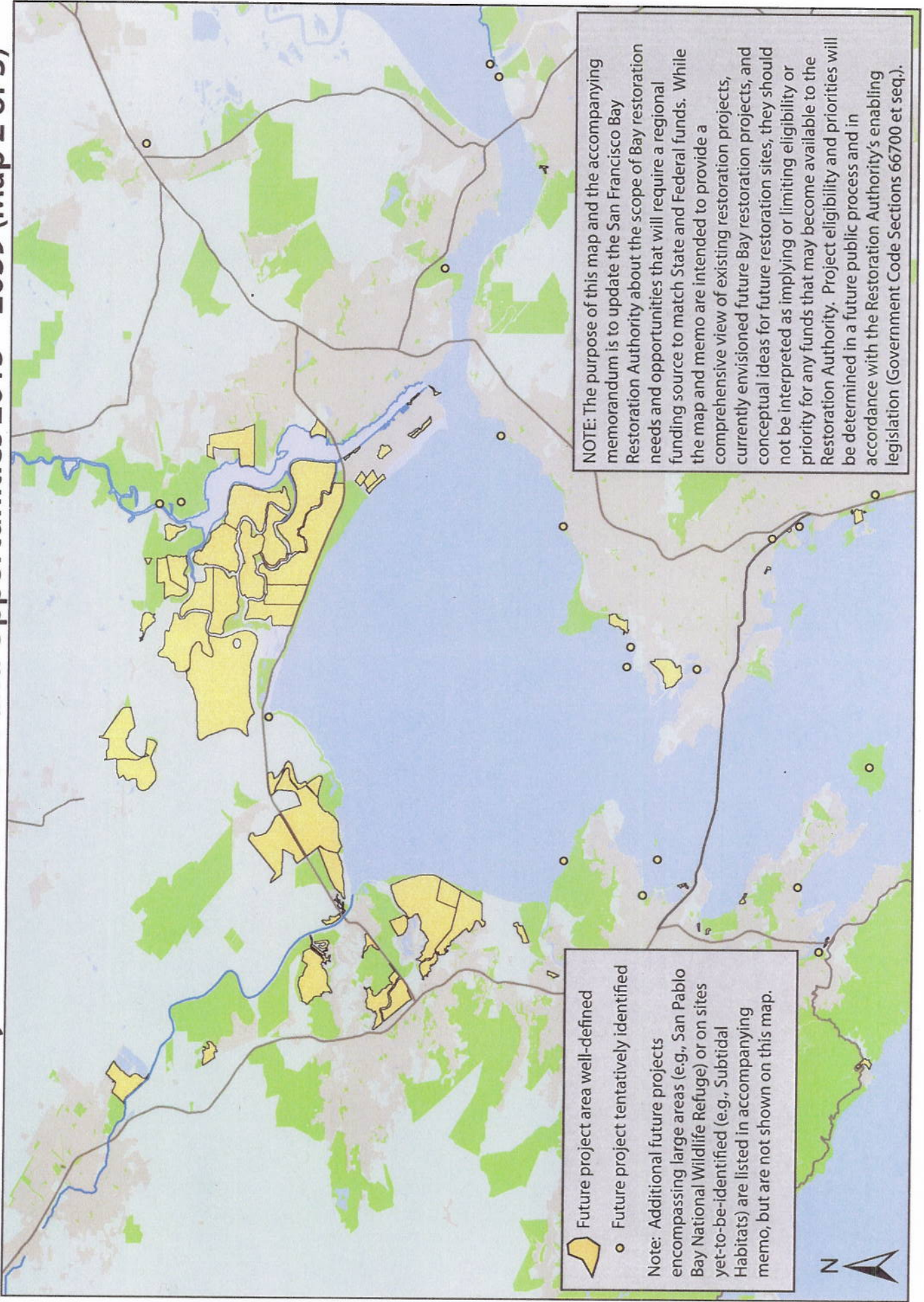
Marin County

Golden Gate National Recreation Area Bayside
Lands
Marin County Parks and Open Space District Bayside
Lands
Lower Petaluma River
Bahia
Novato Creek
Hamilton Wetlands
Bel Marin Keys*
Gallinas Creek
China Camp
Marin Islands
Angel Island
Corte Madera Creek and Marsh
San Rafael Canal
Richardson Bay
Tam Junction Wetlands
Blackie's Pasture
San Pablo Bay National Wildlife Refuge
Subtidal habitats
Bay Trail associated with habitat restoration projects
Watershed projects that clean and protect water and
sediment that flow to the Bay

San Francisco Bay Restoration Needs and Opportunities 2015 – 2039 (Map 1 of 3)



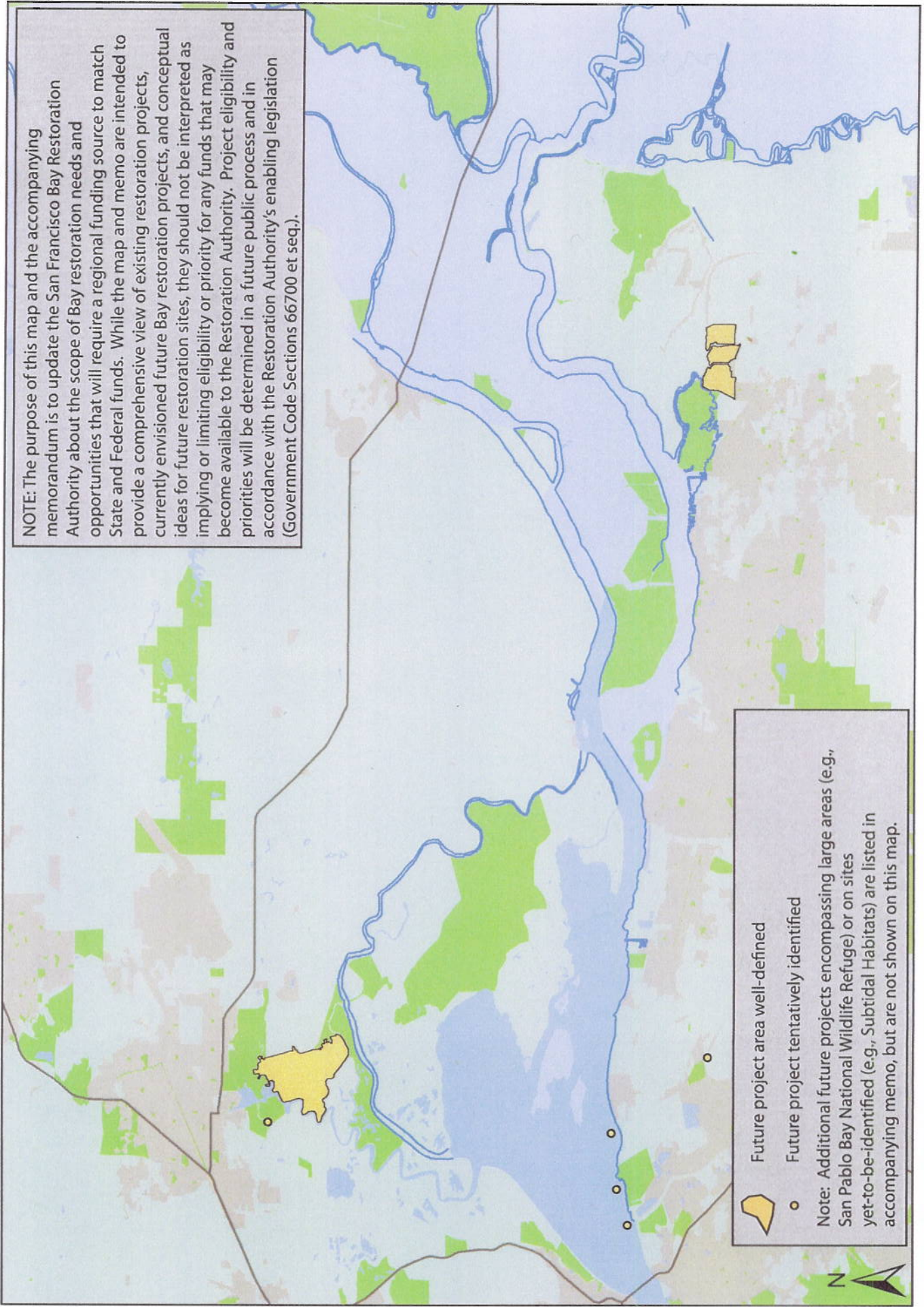
San Francisco Bay Restoration Needs and Opportunities 2015 – 2039 (Map 2 of 3)





NOTE: The purpose of this map and the accompanying memorandum is to update the San Francisco Bay Restoration Authority about the scope of Bay restoration needs and opportunities that will require a regional funding source to match State and Federal funds. While the map and memo are intended to provide a comprehensive view of existing restoration projects, currently envisioned future Bay restoration projects, and conceptual ideas for future restoration sites, they should not be interpreted as implying or limiting eligibility or priority for any funds that may become available to the Restoration Authority. Project eligibility and priorities will be determined in a future public process and in accordance with the Restoration Authority's enabling legislation (Government Code Sections 66700 et seq.).

San Francisco Bay Restoration Needs and Opportunities 2015 – 2039 (Map 3 of 3)

NOTE: The purpose of this map and the accompanying memorandum is to update the San Francisco Bay Restoration Authority about the scope of Bay restoration needs and opportunities that will require a regional funding source to match State and Federal funds. While the map and memo are intended to provide a comprehensive view of existing restoration projects, currently envisioned future Bay restoration projects, and conceptual ideas for future restoration sites, they should not be interpreted as implying or limiting eligibility or priority for any funds that may become available to the Restoration Authority. Project eligibility and priorities will be determined in a future public process and in accordance with the Restoration Authority's enabling legislation (Government Code Sections 66700 et seq.).



-  Future project area well-defined
-  Future project tentatively identified

Note: Additional future projects encompassing large areas (e.g., San Pablo Bay National Wildlife Refuge) or on sites yet-to-be-identified (e.g., Subtidal Habitats) are listed in accompanying memo, but are not shown on this map.



SAN FRANCISCO BAY RESTORATION AUTHORITY
 Cost summary for sample restoration projects (1-2 per county)
 September 6, 2011

PRELIMINARY COST ESTIMATES SUBJECT TO CHANGE

Project	County	Project Description	Acres	COSTS 2014-2025					Notes
				Planning and Design	Construction	Monitoring and Adaptive Management	Operations and Maintenance	Total	
South Bay Salt Ponds: Eden Landing	Alameda	Restoration of Ponds E6, 5, 6C, 1C, 2C, 3C, and 4C, plus flood management and public access	895 acres	\$1,000,000	\$18-29 million	\$500,000	\$1,000,000	\$20-30 million	Leads: Department of Fish and Game, State Coastal Conservancy
Dutch Slough	Contra Costa	Tidal restoration of three subsided peninsulas in the southwestern Delta, using fill material to raise elevations and levees to provide flood protection, and construction of associated public access.	1200 acres	\$0	\$23.3 million	\$1,000,000	\$5,600,000	\$90 million	Leads: Department of Water Resources, State Coastal Conservancy, Department of Fish and Game
Breuner Marsh	Contra Costa	Restoration of tidal saltmarsh, seasonal wetland and coastal prairie by removing and recontouring fill, and construction of a 1.5 mile segment of San Francisco Bay Trail and other access improvements	150 acres	\$1,000,000	\$7,000,000	\$250,000	\$750,000	\$9,000,000	Lead: East Bay Regional Park District
Bel Marin Keys	Marin	Design and implementation of tidal restoration, using dredged sediment to raise elevations prior to breaching, along with Bay Trail and levees	1,600 acres	\$3,000,000	\$1.40 million	\$5,000,000	\$2,000,000	\$1.50 million	Lead: State Coastal Conservancy, 75% of implementation costs anticipated to be federal (U.S. Army Corps of Engineers)
Napa River Salt Marsh	Napa	Enhancement of Ponds 7, 7A, and 8 for shorebirds and waterfowl, construction of a pipeline to deliver recycled water to dilute bittern in Pond 7, and public access improvements.	750 acres	\$0	\$15-30 million	\$3,000,000	\$1,000,000	\$19-34 million	Lead: California Department of Fish and Game; 65% of implementation costs for levee anticipated to be federal (U.S. Army Corps of Engineers)
Yosemite Slough	San Francisco	Phase 3: completion of park improvements (entry, parking, signs, trails, visitor center, etc.), monitoring of restored wetlands, and operations and maintenance of wetlands and visitor amenities	590 acres	\$1,000,000	\$4,425,000	\$325,000	\$1,320,000	\$7 million	Lead: California State Parks Foundation, State Parks
South Bay Salt Ponds: Ravenswood	San Mateo	Restoration of Ponds R1 and R2	590 acres	\$500,000	\$5-6 million	\$500,000	\$500,000	\$7-8 million	Leads: U.S. Fish and Wildlife Service, State Coastal Conservancy
South Bay Salt Ponds: Alviso	Santa Clara	Construction of flood management levees and restoration or enhancement of Ponds A9 and A10, A3N, and A3W, and associated public access improvements	1345 acres	\$1,000,000	\$16-25 million	\$500,000	\$1,000,000	\$19-28 million	Leads: U.S. Fish and Wildlife Service, State Coastal Conservancy, Santa Clara Valley Water District; 65% of implementation costs for levee and A9 and A10 anticipated to be federal (U.S. Army Corps of Engineers)
Ponds A18	Santa Clara	Tidal restoration of Pond A18 after placement of fill material	600 acres	\$500,000	\$5-8 million	\$200,000	\$500,000	\$6-10 million	Leads: City of San Jose; Santa Clara Valley Water District; 65% of implementation costs for levee anticipated to be federal (U.S. Army Corps of Engineers)
Cullinan Ranch	Solano	Monitoring and management of restored wetlands	1500 acres	\$0	\$0	\$1,300,000	\$0.5-1 million	\$2-2.5 million	Leads: U.S. Fish and Wildlife Service, Ducks Unlimited
Sears Point	Sonoma	Completion of restoration, construction of public access improvements, and monitoring and management of restored wetlands.	2300 acres	\$0	\$4-5 million	\$1,600,000	\$0.5-1 million	\$6-8 million	Leads: Sonoma Land Trust, Ducks Unlimited