

SWAP Meet:

The place where sediment and soil get together with wetlands



Brenda Goeden

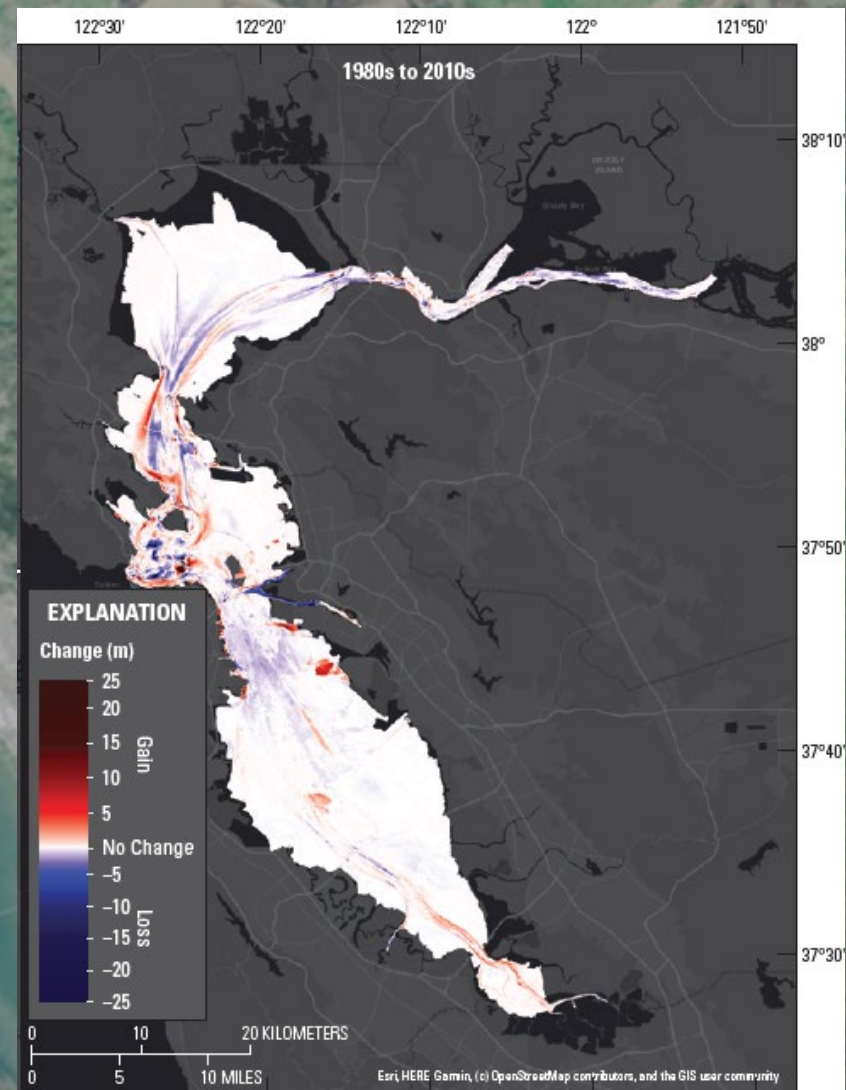
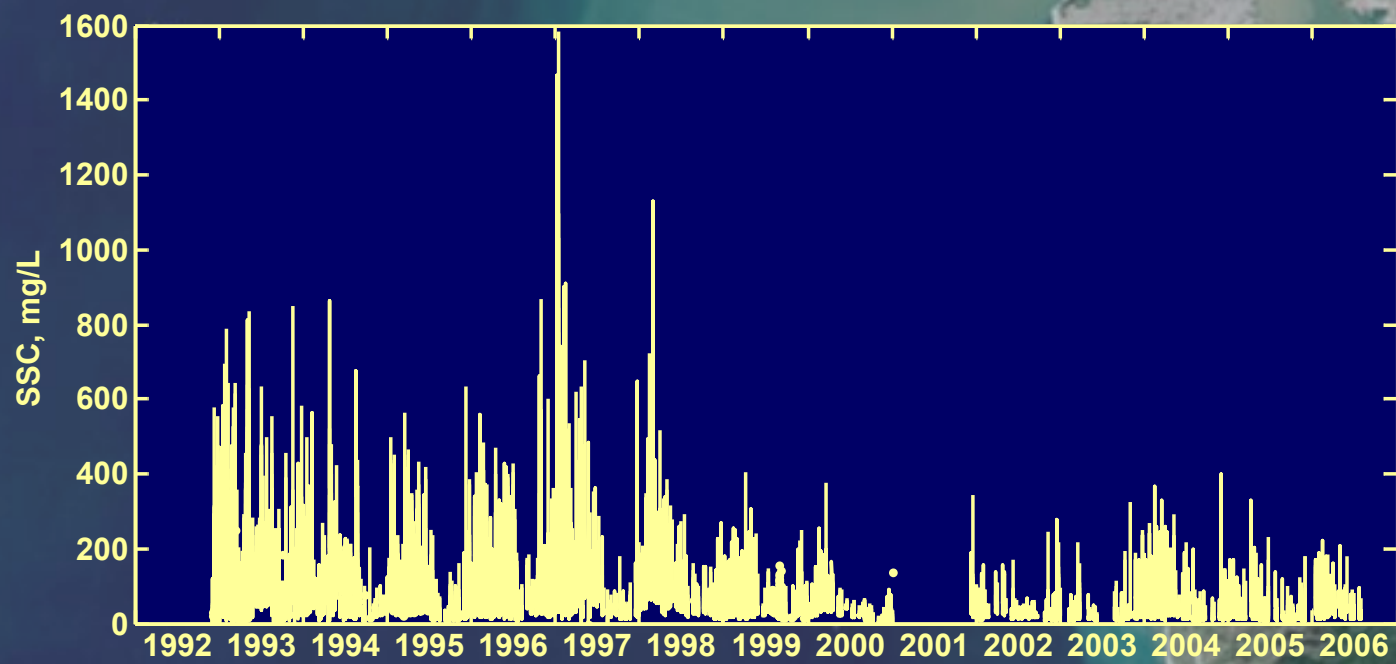
Sediment Program Manager

San Francisco Bay Conservation and Development Commission

State of the Estuary Conference

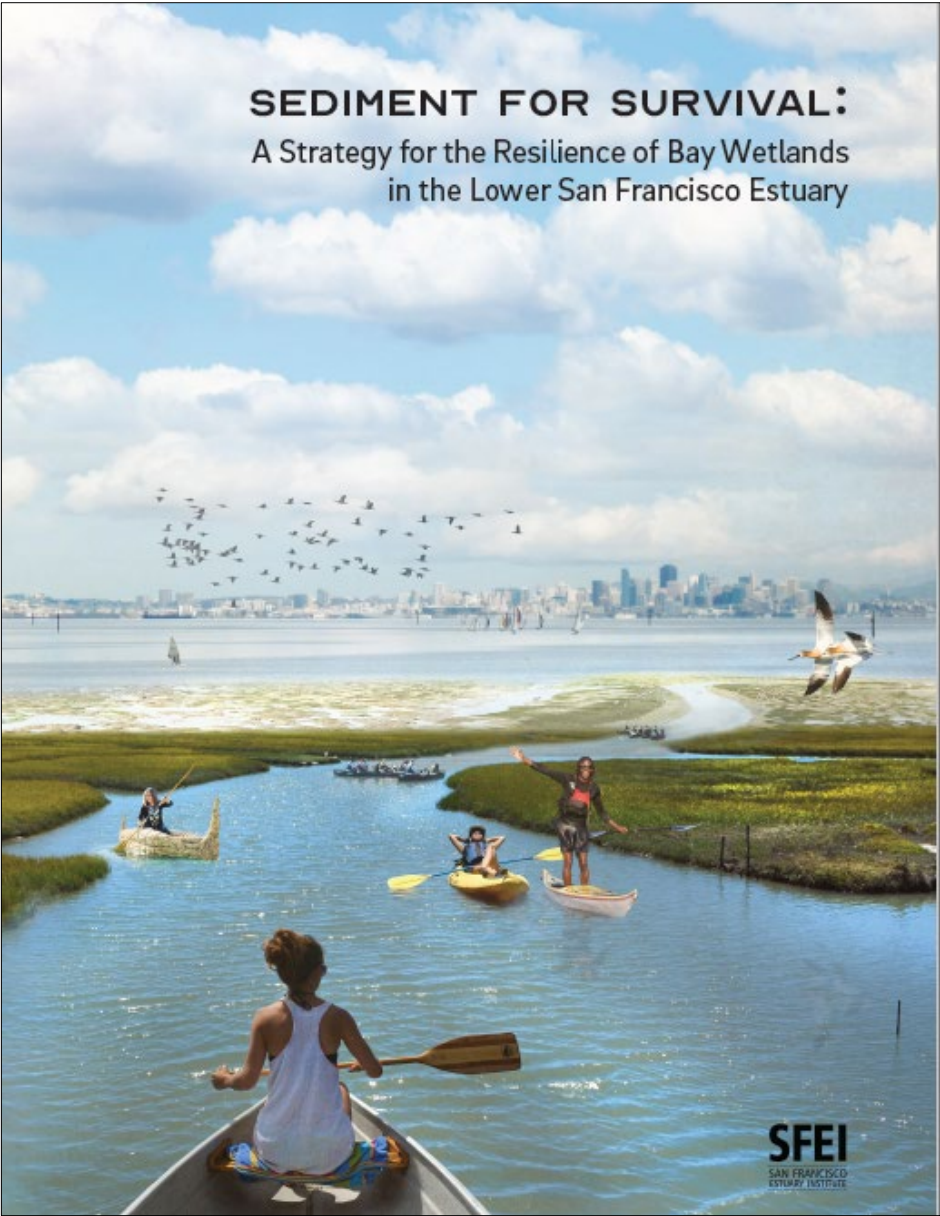
October 29 6, 2025





SEDIMENT FOR SURVIVAL:

A Strategy for the Resilience of Bay Wetlands
in the Lower San Francisco Estuary



SFEI
SAN FRANCISCO
ESTUARY INSTITUTE

CHANGING CHANNELS

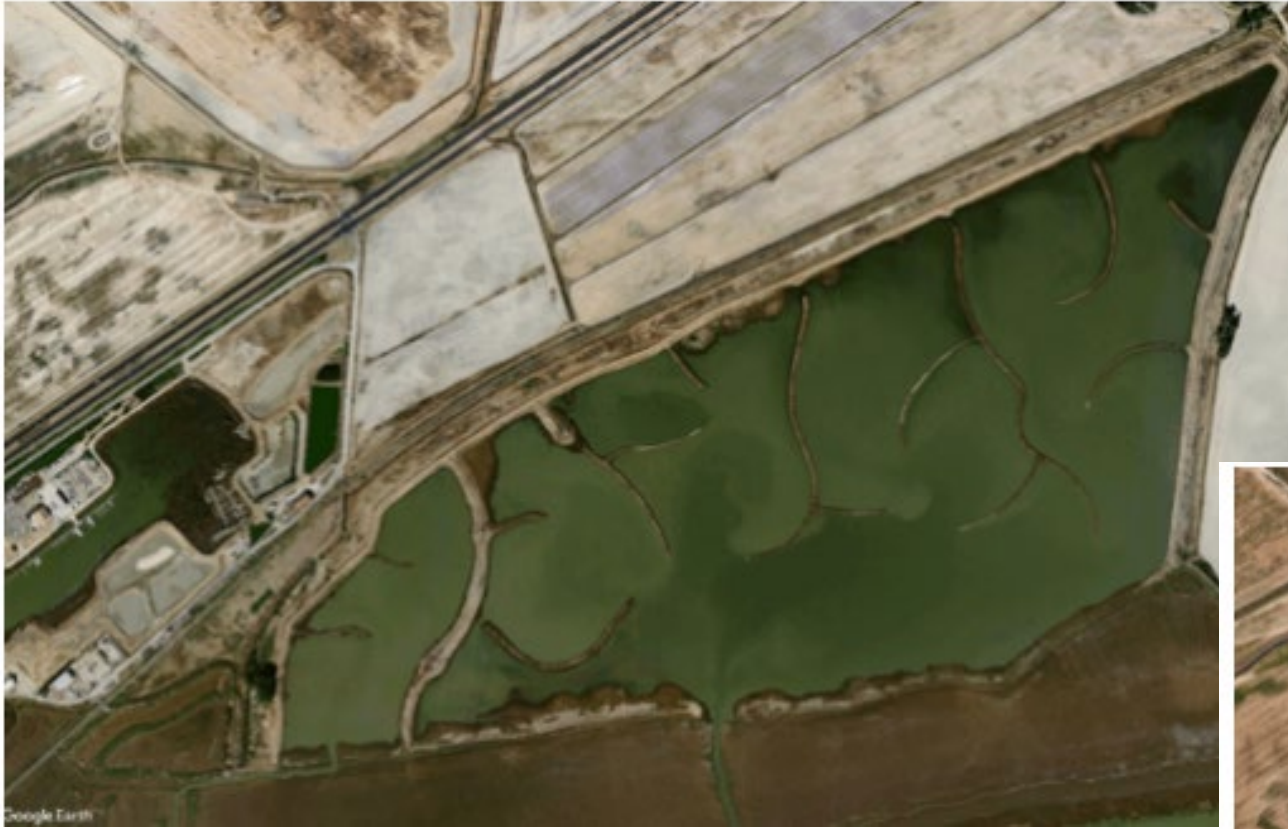
Regional Information
for Developing Multi-benefit
Flood Control Channels
at the Bay Interface



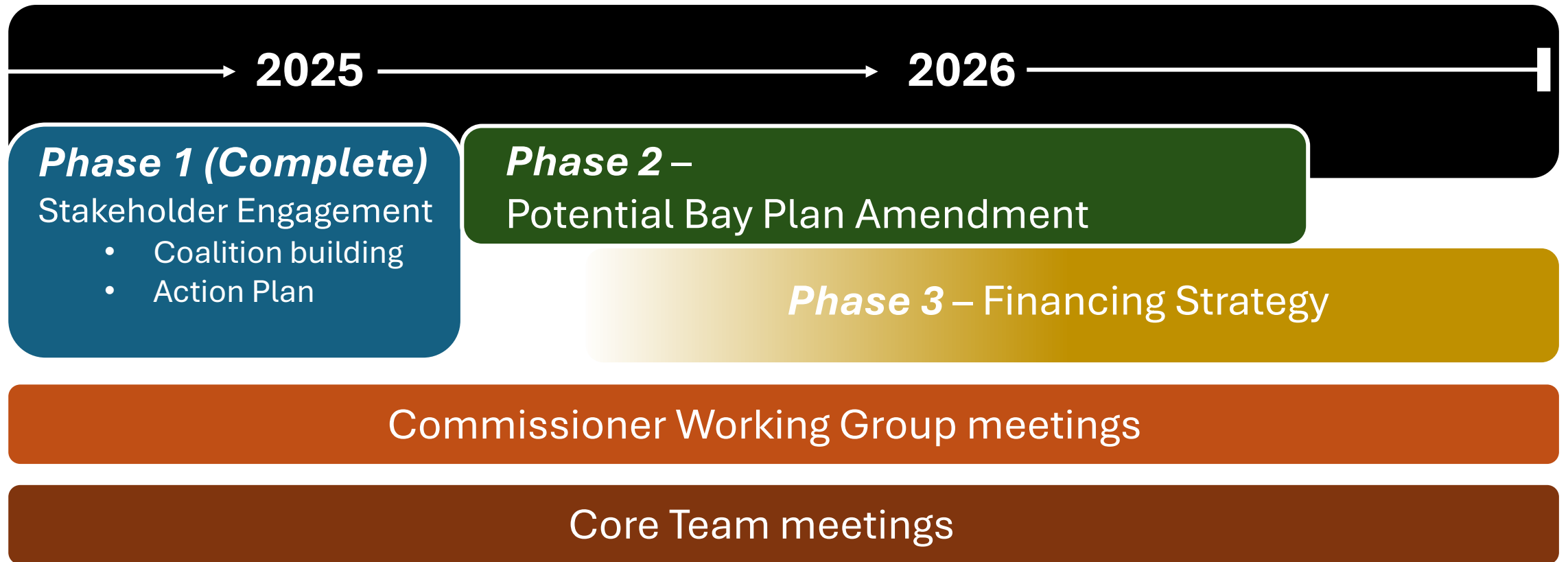
A PRODUCT OF FLOOD CONTROL 2.0
FLOOD CONTROL 2.0

SFEI AQUATIC
SCIENCE
CENTER
SAN FRANCISCO ESTUARY INSTITUTE & THE AQUATIC SCIENCE CENTER





Sediment for Wetland Adaptation Project (SWAP)



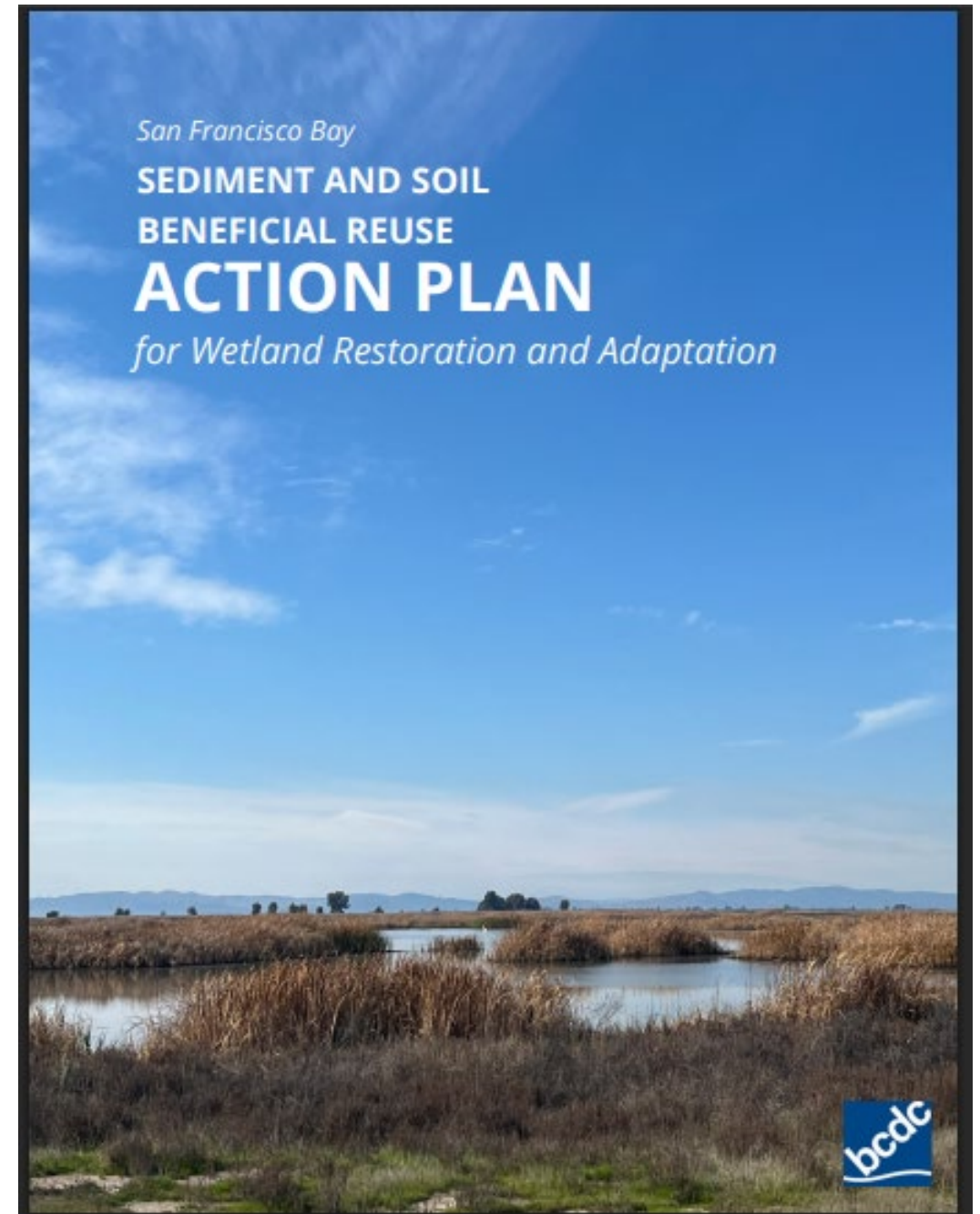
Sediment & Soil Sources

- Barriers
- Challenges
- Solutions



Goal:

“Increase beneficial reuse of sediment and soil for wetland habitat restoration, resilience, and sea level rise adaptation in the San Francisco Bay Area.”



SWAP Action Focus Areas

1. Implementation and Regional Coordination
2. Federal, State, and Regional Policy and Collaboration
3. Regional Planning and Evaluation
4. Regulations and Permitting
5. Pilot Projects
6. Sediment and Soil Quality
7. Sediment and Soil Availability and Placement
8. Costs and Funding



Federal, State, and Regional Policy Coordination

Objective 2.3: Improve State and Regional Coordination Through the Ocean Protection Council's 2020-2025 Strategic Plan, the State of California recognizes the need for a state-wide beneficial reuse program with a focus on the coast and the San Francisco Bay estuary...

Action 2.3.1 In coordination with the **Ocean Protection Council (OPC)**, the **California Natural Resources Agency (CNRA)**, and the **California Environmental Protection Agency (CalEPA)**, develop regional recommendations on a state-wide beneficial use policy and implementation structure. Work with other regions and state agencies to establish these beneficial reuse recommendations.

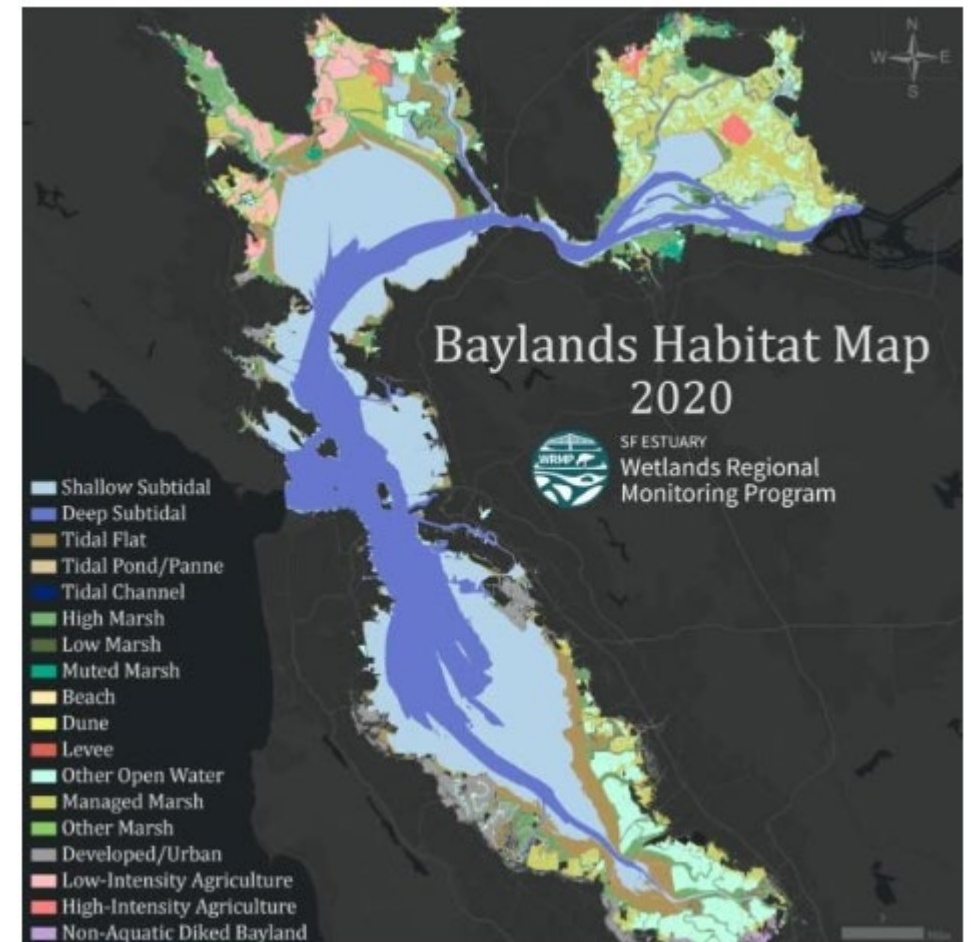


Regional Planning and Priorities

Objective 3.1: Solidify Regional Priorities and Strategy.

Understand conditions of existing marshes and baylands

Action 3.1.1. Identify and evaluate active and candidate restoration sites and existing marshes to determine whether they need sediment from navigation channels, stream beds, and/or construction soil. Use EcoAtlas (<https://www.ecoatlas.org/re-gions/ecoregion/bay-delta>) and the SFEI Baylands Resilience Metrics to identify existing and new restoration sites and needs.



Pilot Projects

Objective 5.1 & 5.2: Support Indirect & Direct Placement Pilot Projects.

Action 5.1.2. Investigate novel technologies to increase sedimentation on wetlands using dredged and/or flood protection project materials. Create opportunities for partnerships between implementing entities, researchers, and regulatory agencies to increase regional knowledge and understanding.

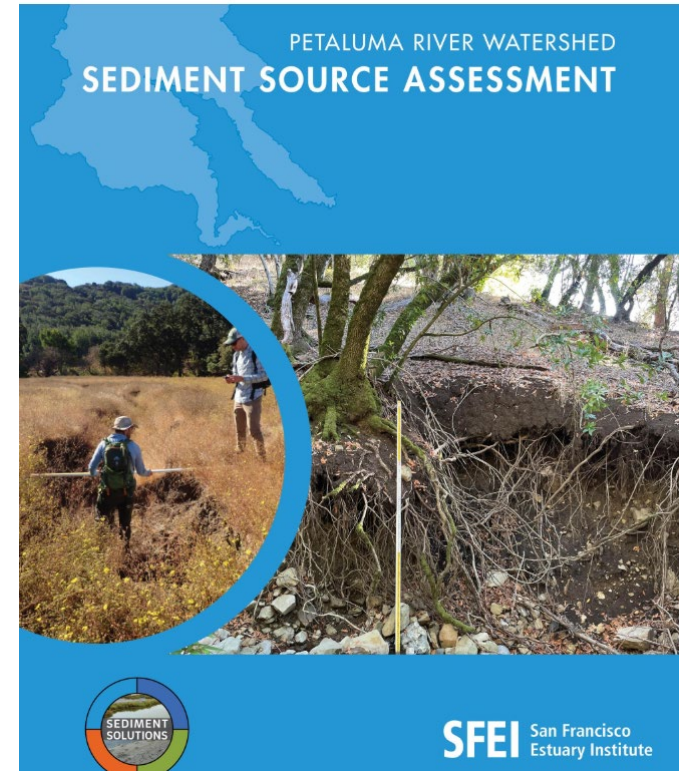
Action 5.2.3. Conduct thin-lift and other direct placement pilot projects at sites needing sediment augmentation based on site prioritization, regional data gap analysis and periodic modeling.



Soil Availability and Placement

Objective 7.2: Improve Flood Protection Programming

Action 7.2.1. Coordinate with Bay Area Flood Protection Agencies Association (BAFPAA) to facilitate changes in practices and create opportunities to link beneficial reuse, flood protection, and channel realignment.



Federal, State & Regional Policy Coordination

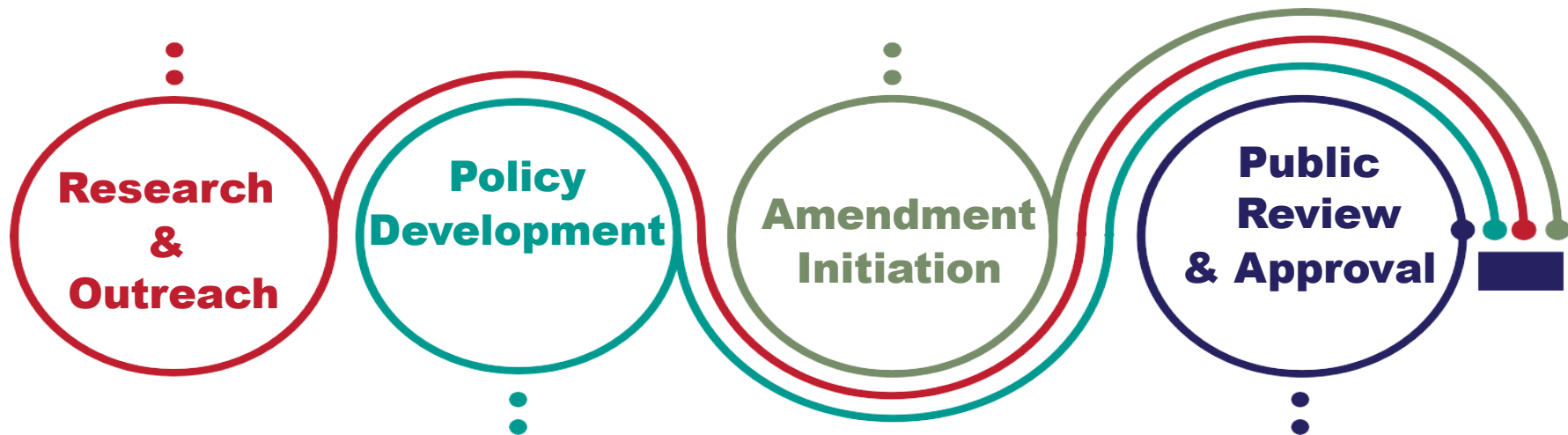
Objective 2.4: Update State and Regional Policies. Federal and state agencies, regional organizations, and non-governmental partners should collaborate to improve federal, state, and regional policies. In addition, local agencies and organizations should review their own policies and plans to identify and reduce barriers to beneficial reuse in wetlands.

Action 2.4.2. Assess San Francisco Bay Plan findings and policies regarding sediment supply and beneficial reuse to identify necessary improvements and propose amendments.



Current Effort: San Francisco Bay Plan Amendment

1. Sediment as a Resource
2. Upland Soils
3. Flood Protection
4. Dredging and Beneficial Reuse
5. In-Bay Disposal Limit
6. Restoration and Beneficial Reuse



San Francisco Bay

**SEDIMENT AND SOIL
BENEFICIAL REUSE**

ACTION PLAN

for Wetland Restoration and Adaptation

<https://www.bcdc.ca.gov/programs/sediment-management/sediment-for-wetland-adaptation/>



Questions?

Thank you

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