Sediment and Beneficial Reuse

Policy Workshop

June 4, 2026

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Agenda

Time	Item
1:30 – 1:40 PM	Welcome and housekeeping
1:40 – 1:50 PM	Workshop goals and context setting
1:50 – 2:10 PM	Overview of the Sediment for Wetland Adaptation Project, Bay Plan amendment, and policy development
2:10 – 2:20 PM	Activity instructions
2:20 – 2:30 PM	Clarifying questions and answers
2:30 – 4:00 PM	**Activity: beneficial reuse policy stations** Poster-based exploration of beneficial reuse policy topics
4:00 – 4:15 PM	Close out, next steps, and meeting adjournment

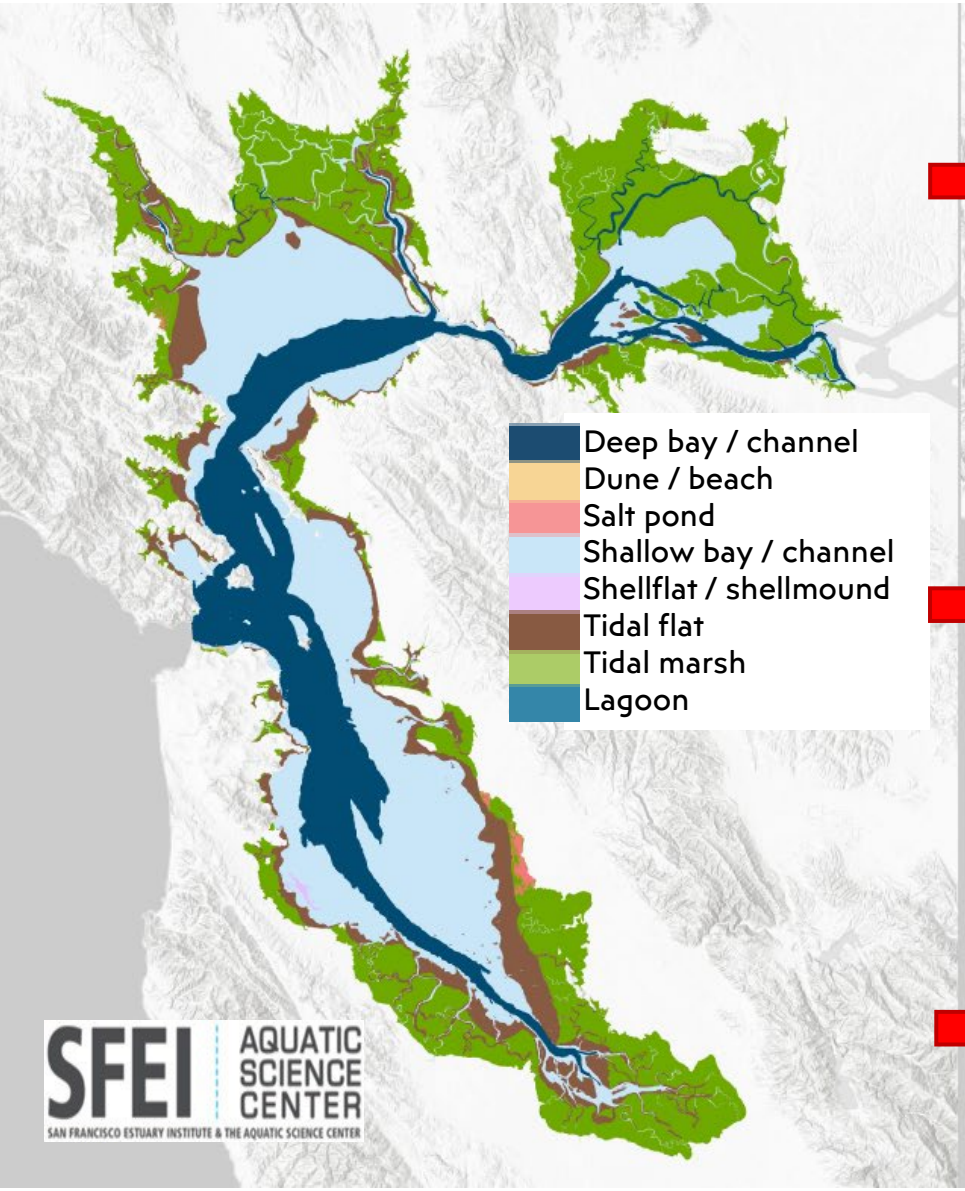
Opening Remarks by Commissioner Andy Gunther

Chair of the Sediment and Beneficial Reuse Commissioner Working Group

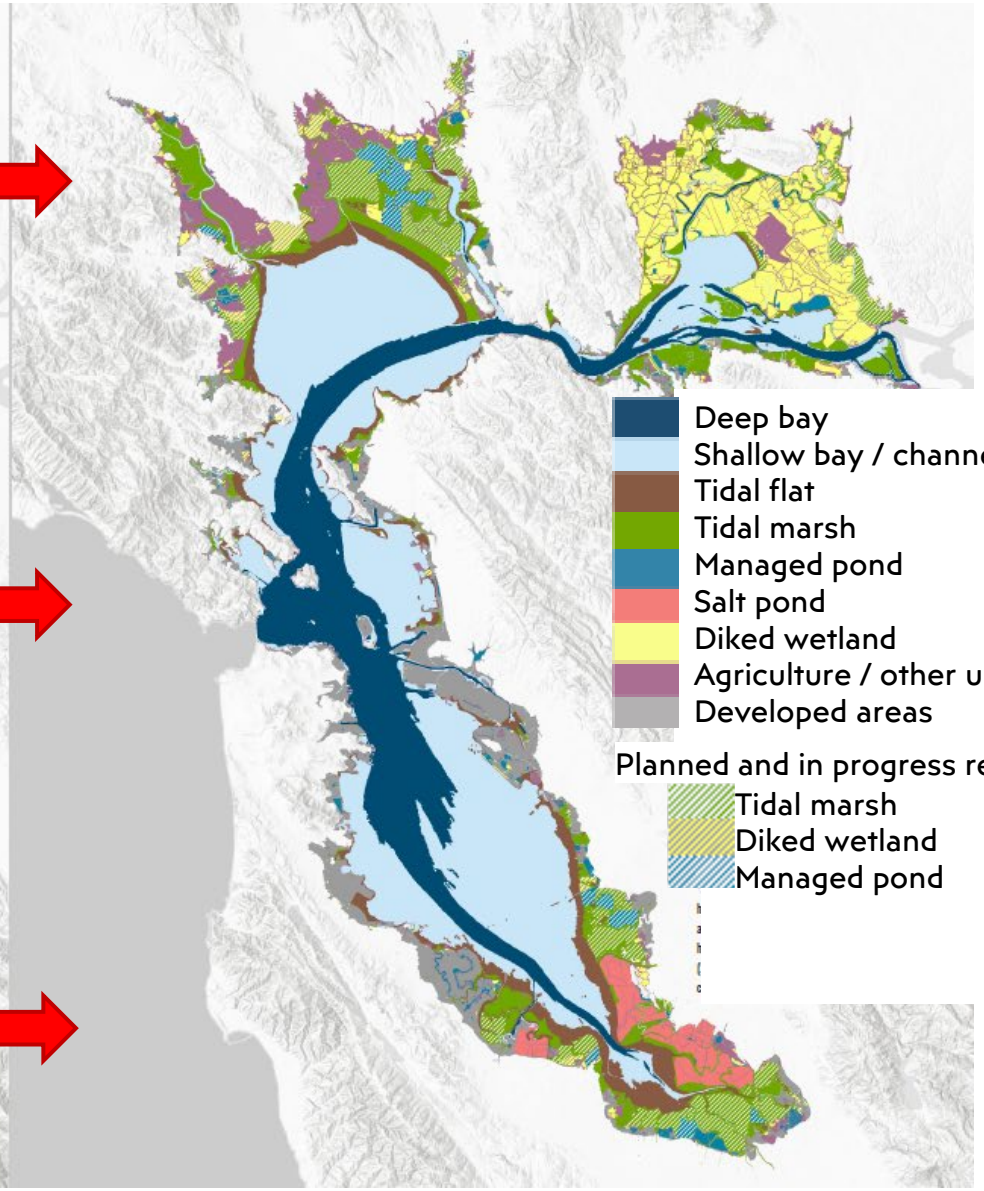
Workshop goals

1. Learn about the sediment problem, BCDC's role, and the Sediment for Wetland Adaptation Project.
2. Help shape Bay Plan policies that would increase beneficial reuse of sediment and soil for wetland restoration as part of Bay Plan Amendment 1-26.
3. Build on previous work that resulted in the Sediment and Soil Beneficial Reuse Action Plan which BCDC published last year.

Historical Baylands Circa 1800



Modern Baylands Circa 2009



Between 1880 – 1998, ~90% of wetlands were lost due to human activities

Sediment in service

Wetland environmental services

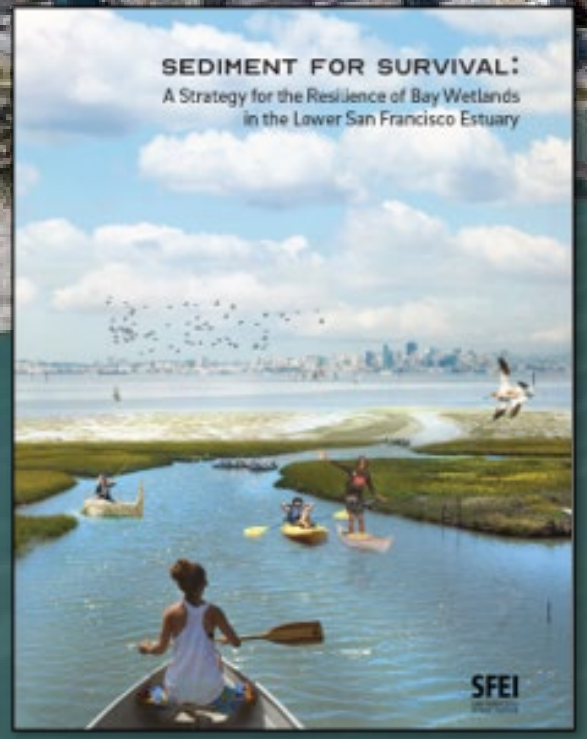
- Nutrient and mineral source
- Air and water quality
- Storm buffer
- Biodiversity

Sediment supports Bay ecosystems

- Is the basis of habitat
- Supports plants and microbes, the building blocks of the food web
- Stabilization and growth
- Promotes ecosystem diversity

VOLUME OF SEDIMENT NEEDED FOR TIDAL WETLANDS AND MUDFLATS BY 2100

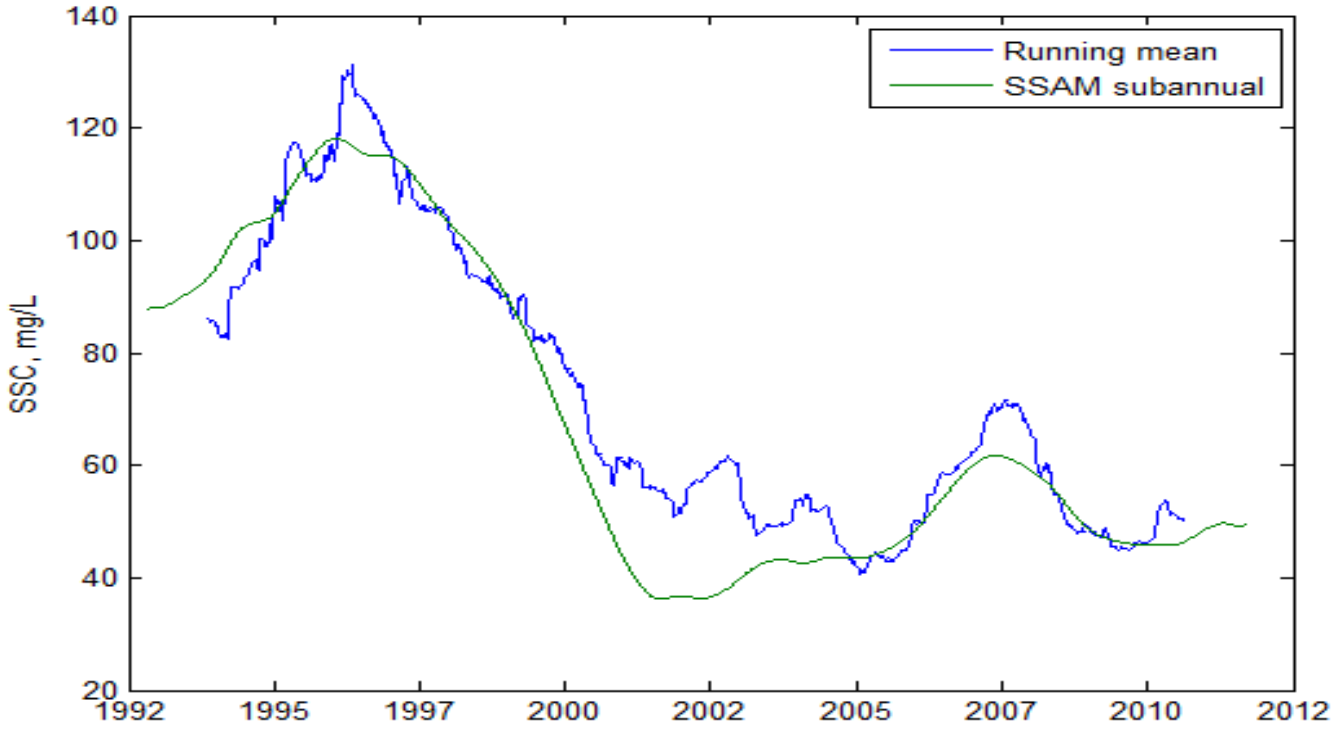
450–650 million metric tons



Human Impacts on Suspended Sediment Supply

- Hydraulic mining during the Gold Rush
- Deforestation
- Draining wetlands
- Dams, aqueducts, levees
- Salt production
- Waterfowl hunting
- Modifying streams
- Bank armoring
- Flood control channels

Decline in suspended sediment input



Dumbarton Bridge, mid-depth, Dave Schoellhamer, USGS

Dredged sediment is available for reuse

Sediment dredged from Bay, streams, channels

Sediment Reuse in Deer Creek, Novato

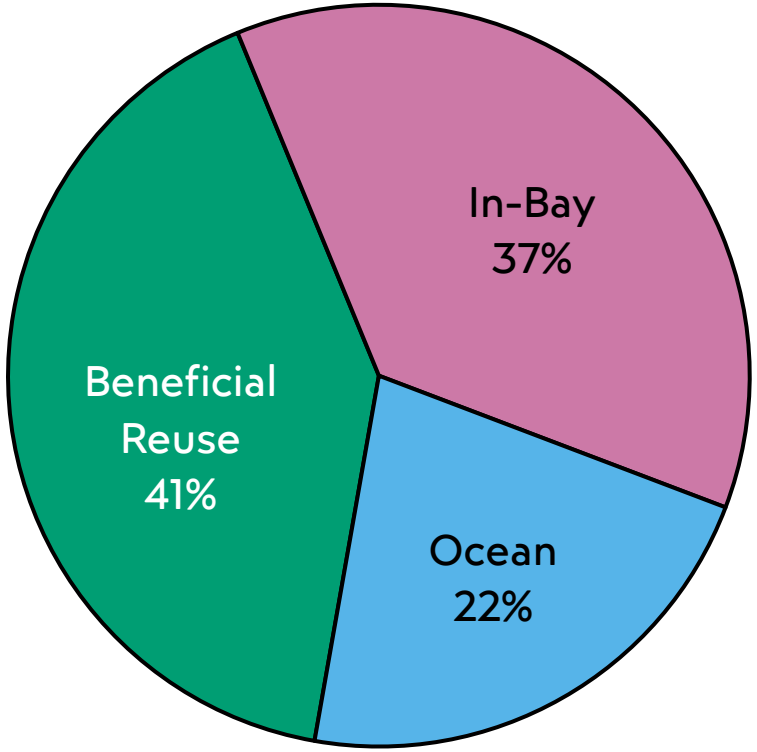
Soil is available for reuse

Excess upland construction soil

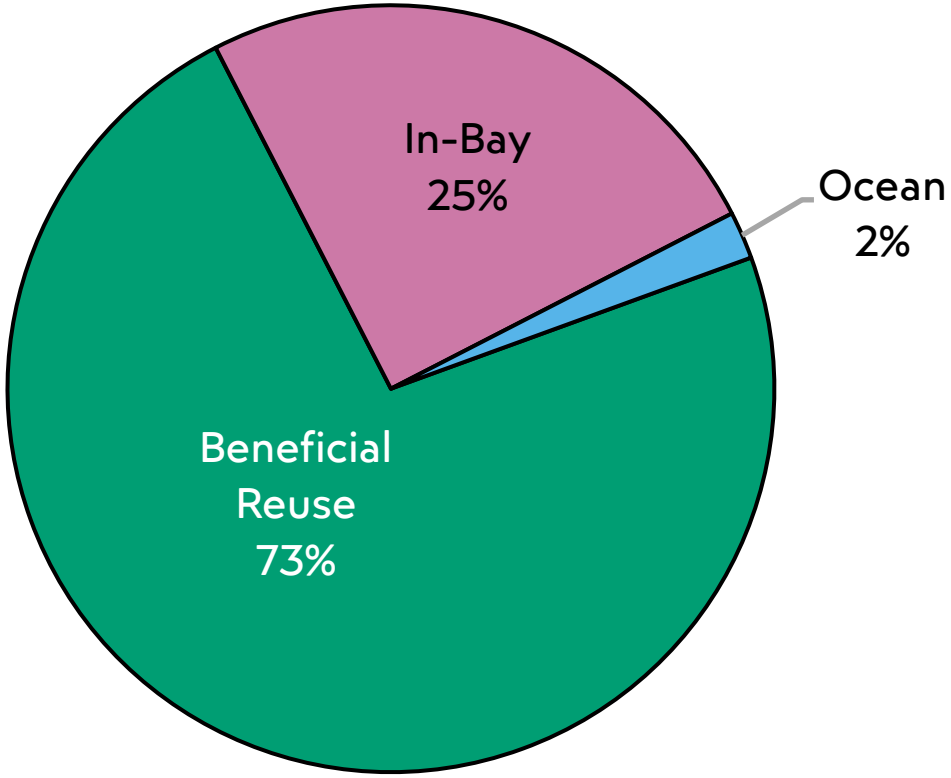
Soil reuse at South Bay Salt Ponds Restoration Project

Placement and Disposal Status

Average Annual Dredged Material
Placement & Disposal 2013-2024



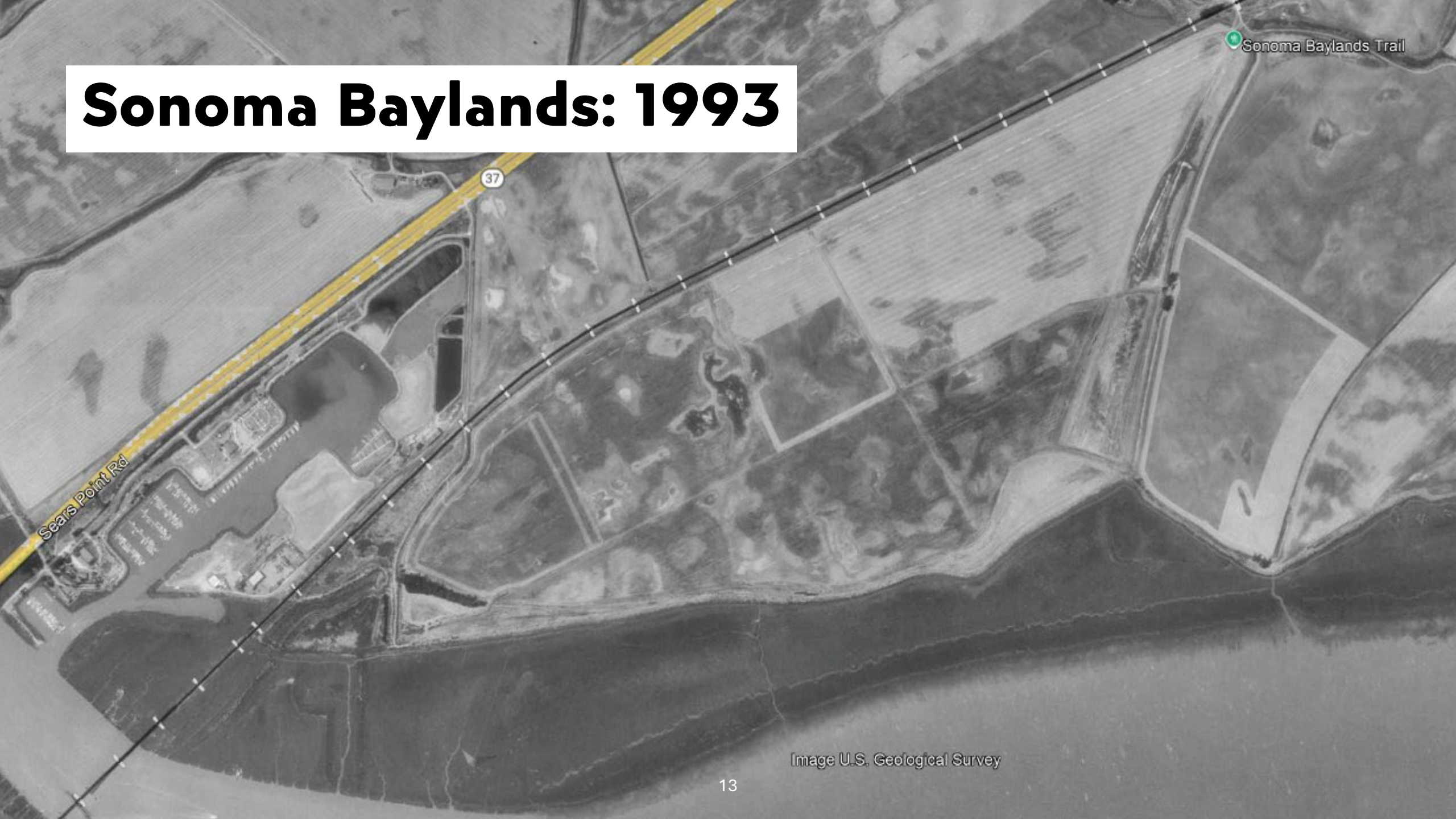
Dredged Material
Placement & Disposal 2023



Beneficial reuse example:

Sonoma Baylands

Sonoma Baylands: 1993



Sonoma Baylands: 2024

What is the SWAP?

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

Objectives:

- Increased collaboration ✓
- Beneficial Reuse Action Plan ✓
- Possible policy changes
- Financing Strategy

Funders: EPA + CALIFORNIA OCEAN PROTECTION COUNCIL

Photo: Hamilton Wetlands, Marin County

SWAP Timeline

2025 → 2026

Phase 1 (Complete)
Increased Collaboration
- Coalition building
- Action Plan ✓

Phase 2 – Potential Bay Plan Amendment

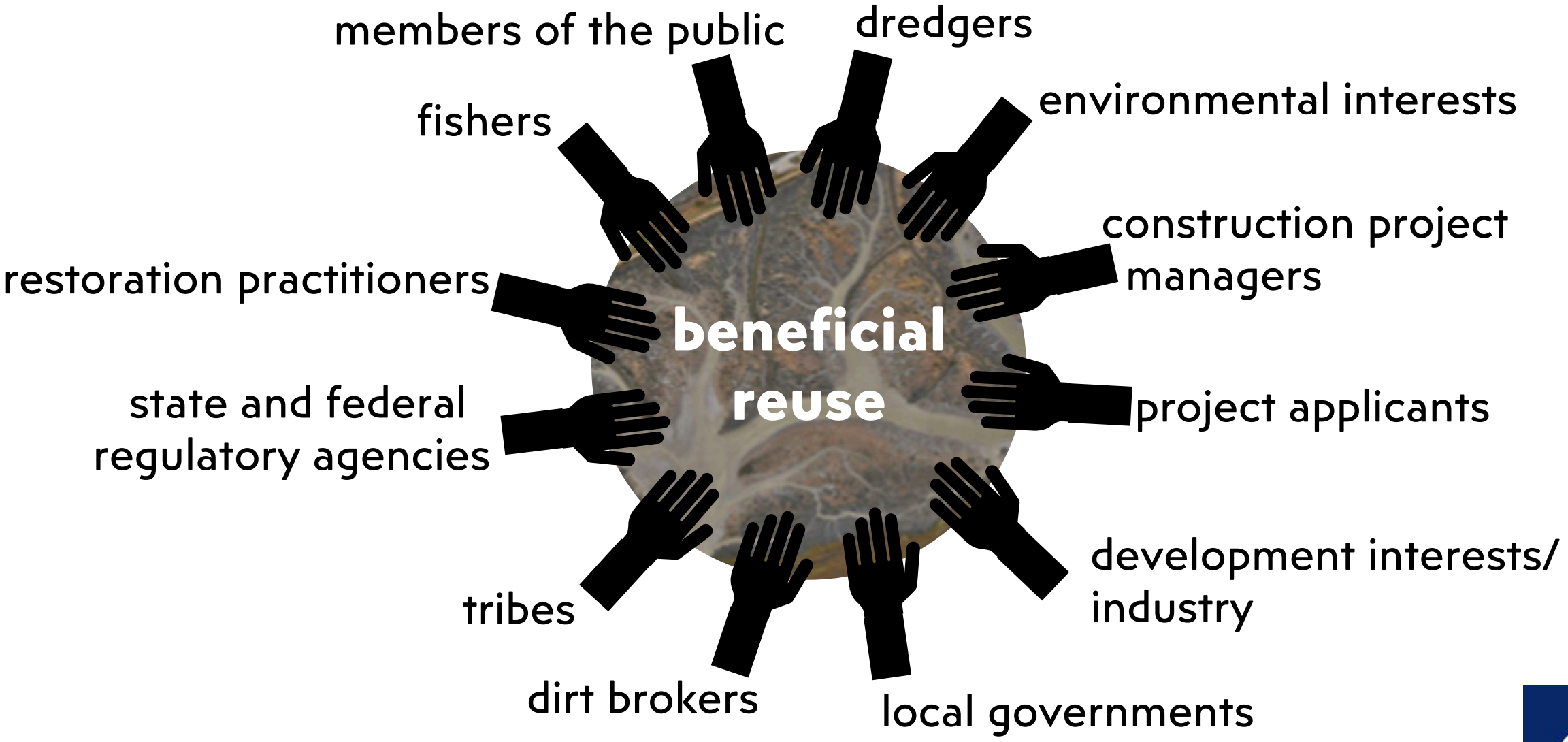
Phase 3 – Financing Strategy

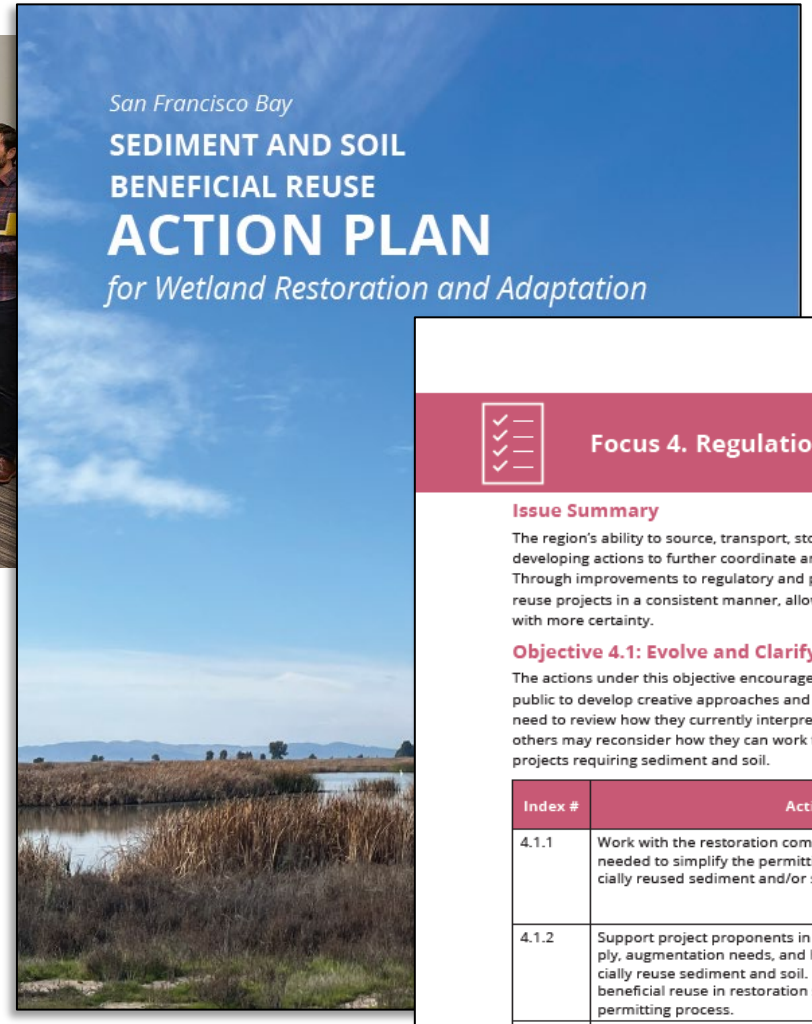
Commissioner Working Group meetings

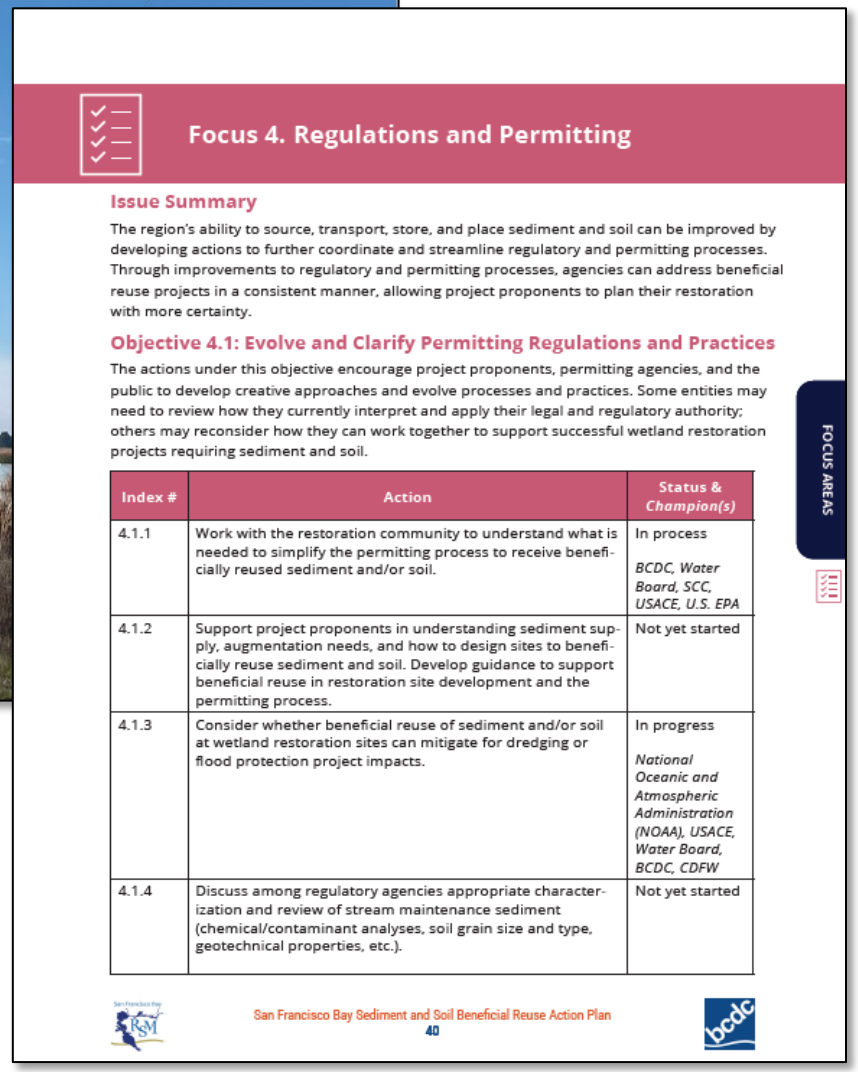
Core Team meetings

Core Team:

Interested parties







Focus 4. Regulations and Permitting

Issue Summary

The region's ability to source, transport, store, and place sediment and soil can be improved by developing actions to further coordinate and streamline regulatory and permitting processes. Through improvements to regulatory and permitting processes, agencies can address beneficial reuse projects in a consistent manner, allowing project proponents to plan their restoration with more certainty.

Objective 4.1: Evolve and Clarify Permitting Regulations and Practices

The actions under this objective encourage project proponents, permitting agencies, and the public to develop creative approaches and evolve processes and practices. Some entities may need to review how they currently interpret and apply their legal and regulatory authority; others may reconsider how they can work together to support successful wetland restoration projects requiring sediment and soil.

Index #	Action	Status & Champion(s)
4.1.1	Work with the restoration community to understand what is needed to simplify the permitting process to receive beneficially reused sediment and/or soil.	In process *BCDC, Water Board, SCC, USACE, U.S. EPA*
4.1.2	Support project proponents in understanding sediment supply, augmentation needs, and how to design sites to beneficially reuse sediment and soil. Develop guidance to support beneficial reuse in restoration site development and the permitting process.	Not yet started
4.1.3	Consider whether beneficial reuse of sediment and/or soil at wetland restoration sites can mitigate for dredging or flood protection project impacts.	In progress *National Oceanic and Atmospheric Administration (NOAA), USACE, Water Board, BCDC, CDFW*
4.1.4	Discuss among regulatory agencies appropriate characterization and review of stream maintenance sediment (chemical/contaminant analyses, soil grain size and type, geotechnical properties, etc.).	Not yet started

FOCUS AREAS

San Francisco Bay Sediment and Soil Beneficial Reuse Action Plan
40

Stakeholder Workshops

- Early 2024

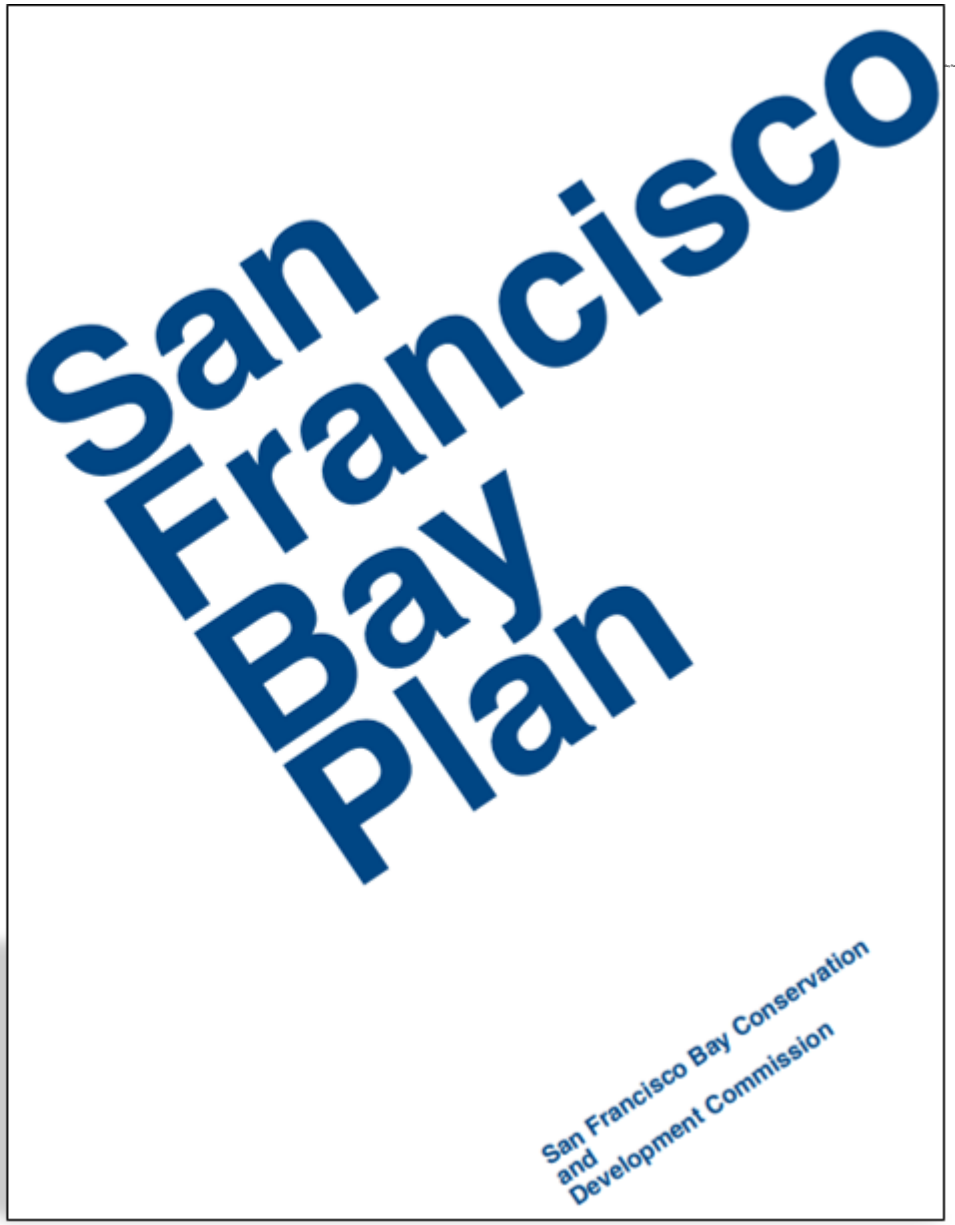
Regional Action Plan

- Released March 2025
- Beneficial reuse challenges
- 70 actions organized into 8 focus areas
- Action prioritization

McAteer-Petris Act

McAteer-Petris Act

- **66605(b)** That fill in the bay and certain waterways should be authorized only when no alternative upland location is available for such purpose;
  - **(c)** Water area to be filled should be the minimum necessary to achieve purpose of fill.
- **66632(a)** "Any person or governmental agency wishing to place fill, to extract materials,… within the area of the commission's jurisdiction shall secure a permit from the commission…"
- **66632(f)** "…the commission may grant a permit subject to reasonable terms and conditions including… methods for dredging or placing of fill."
- **66663-66666.** Dredging Findings call for beneficial reuse and partnership with LTMS.



Bay Plan Cover (Source: BCDC)

San Francisco Bay Plan

- Guides the review of projects under the McAteer-Petris Act
- Policies related to:
  - Protection of the Bay as a Resource
  - Development of the Bay and Shoreline
- Policies are updated periodically for regional needs
- Permits issued if consistent with McAteer-Petris Act and San Francisco Bay Plan policies.

Bay Plan policies supportive of wetland restoration

Tidal Marshes and Tidal Flats	Policy 5: "where feasible, former tidal marshes and tidal flats that have been diked from the Bay should be restored to tidal action…"
Fish, Other Aquatic Organisms, and Wildlife	Policy 7: "Sediment placement for habitat adaptation should be prioritized in (1) subsided diked baylands, tidal marshes and tidal flats… (2) intertidal and shallow subtidal areas…"
Water Quality	Policy 1: "the Bay's tidal marshes, tidal flats, …should be conserved and, whenever possible, restored and increased to protect and improve water quality"
Subtidal Areas	Policy 8: "fill may be authorized for habitat enhancement, restoration or sea level rise adaptation of habitat"
Climate Change	Policy 4: "undeveloped areas that are… especially suitable for ecosystem enhancement should be given special consideration for preservation…"

Bay Plan policies supporting beneficial reuse

Policy 1

"Dredging and dredged material disposal should be conducted in an environmentally and economically sound manner. Dredgers should reduce disposal in the Bay and certain waterways over time to achieve the LTMS goal of limiting in-Bay disposal volumes to a maximum of one million cubic yards per year…."

Policy 5

"dredging projects should maximize use of dredged material as a resource consistent with protecting and enhancing the Bay natural resources such as creating, enhancing or restoring tidal and managed wetlands"

Policy 10

"Interested agencies and parties are encouraged to explore and find funding solutions for… transporting dredged material to nontidal and ocean disposal sites"

Policy 12

The Commission should continue to participate in the LTMS, the DMMO, and other initiatives conducting research on Bay sediment movement, the effects of dredging… <u>alternatives to Bay aquatic disposal and funding</u>…"

Bay Plan Amendment Goals

1. Acknowledge sediment as a critical Bay resource and a public trust resource.
2. Make beneficial reuse BCDC's priority for sediment and soil.
3. Address sources of sediment and soil other than navigation dredging.
4. Encourage local connections and innovation.

Bay Plan Amendment - work so far (1 of 2)

2024 Workshop

Interested parties discussed regional needs and challenges to increasing beneficial reuse.

Action Plan

BCDC released Beneficial Reuse Action Plan with regional actions.

Brainstorm concepts

Using previous engagement and research, staff brainstormed policy amendment concepts.

Integrate feedback

Integrated feedback into drafting process.

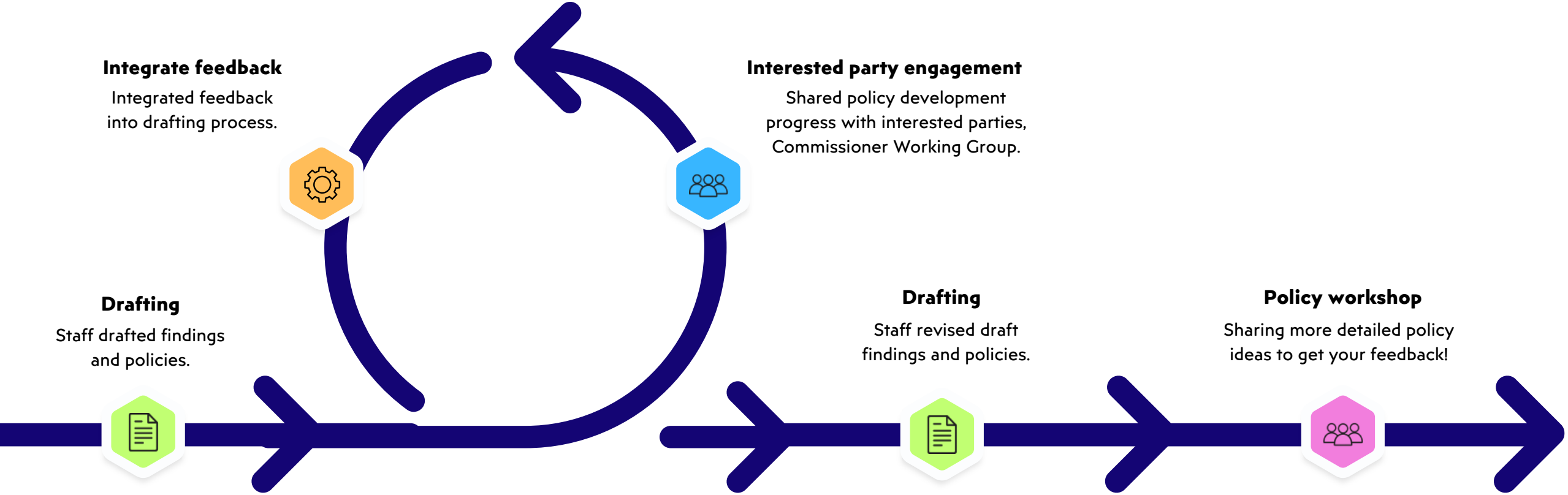
Interested party engagement

Shared early concepts with interested parties, Commissioner Working Group.

Drafting

Staff drafted findings and policies.

Bay Plan Amendment - work so far (2 of 2)



New “Sediment Management” Section

Overarching findings

- Sediment as a valuable & public trust resource
- Human activities, sediment management, use

Subsections

1. Navigation dredging
2. Flood protection channels & streambed maintenance
3. Upland soil, stockpiling

Poster topics

Bay Plan Policy Discussion

- Navigation dredging
- Channel & streambed maintenance
- Upland soil

Brainstorming Regional Actions

- Restoration incentives
- Funding beneficial reuse
- Action Plan implementation

Bay Plan Poster: **Navigation Dredging**

- Beneficial reuse is the preferred alternative to aquatic disposal.
- A dredging project is required to evaluate:
  - Suitability of dredged sediment for beneficial reuse;
  - Availability of beneficial reuse sites;
  - Alternatives to aquatic disposal, including a comparison of costs of beneficial reuse and aquatic disposal;
  - Benefits of the project.
- Based on this analysis, beneficial reuse would be required if a site is available, the sediment is suitable, and the reuse is practicable.

Bay Plan Poster:
Channel & Streambed Maintenance

- Evaluate reconnection and realignment of creeks and waterways to tidal and seasonal wetlands to supply fresh water and sediment to these areas, as well as increase flood absorption.
- Require beneficial reuse of sediment dredged from channels and creeks to support habitat restoration.

Bay Plan Poster: **Upland Soil**

- Clarify in policy that use of suitable soil is encouraged in local restoration projects.
- Create standardized testing program to determine suitability of upland soils in restoration projects, particularly those in need of specific geotechnical qualities.

Posters: **Brainstorming**

Restoration Incentives

- How can BCDC encourage or incentivize restoration projects to include beneficial reuse of sediment or soil in their project?

Action Plan Implementation

- Discuss questions around governance models, permit streamlining, and other priority actions for the region.

Funding and Financing Beneficial Reuse

- Beneficial reuse is typically more expensive than aquatic disposal. What strategies can the region use to overcome the barrier of increased cost?

Activity: **Beneficial Reuse Policy Stations**

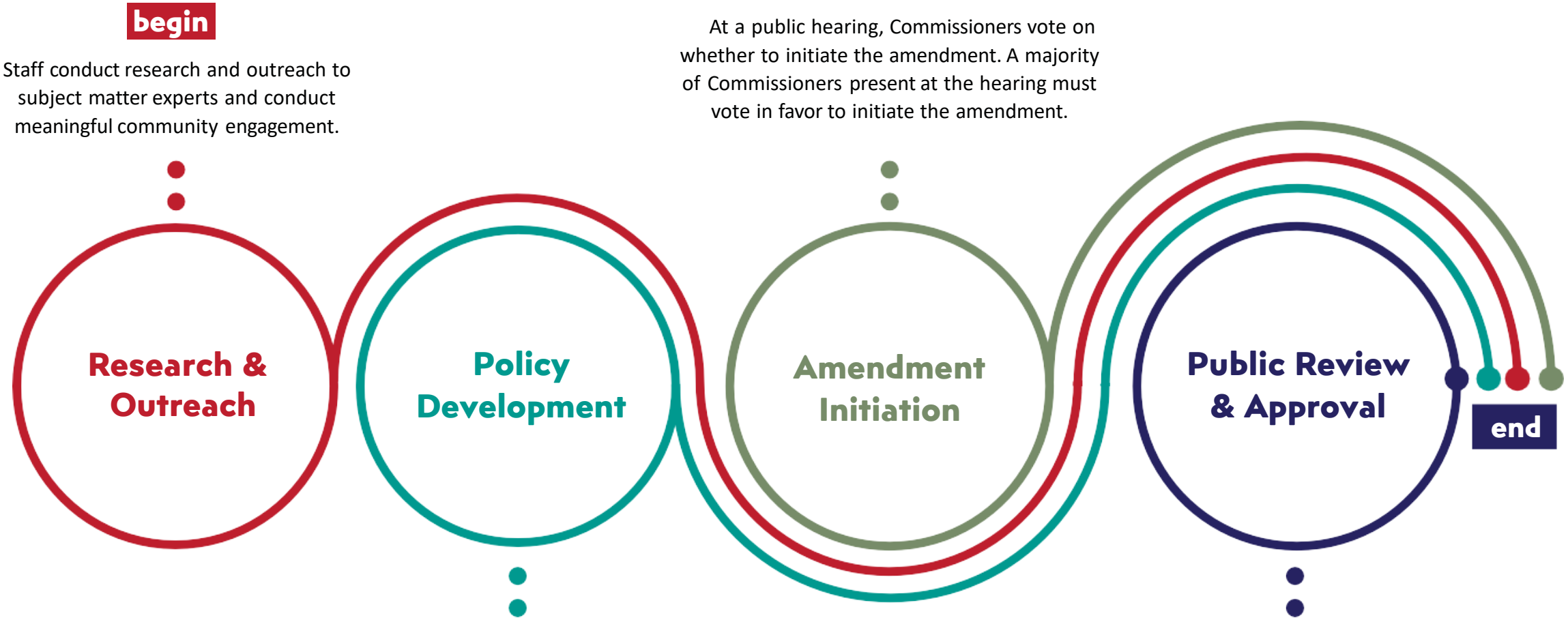
- 6 stations around the room
  - Each has a facilitator and a notetaker
- 90 minutes to visit whichever posters you'd like
- Handout available to write your thoughts

Clarifying Q & A

Photo: San Mateo looking at Dumbarton Bridge

The Commission is now holding an in-person beneficial reuse policy workshop

Bay Plan Amendment Process



Tentative **BPA Timeline**

Initiate amendment	-	May 7
In-person policy workshop	-	June 4
Commissioner working group	-	July 7
Mail preliminary staff recommendation	-	July 21
Public comment period	-	July 21 – August 20
Public hearing	-	August 20
Vote	-	September 17 or October 1
OAL and NOAA review	-	After vote