



San Francisco Bay Plan Amendment to Address Bay Fill for Habitat Restoration Projects



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November 15, 2018



San Francisco Bay Conservation
and Development Commission

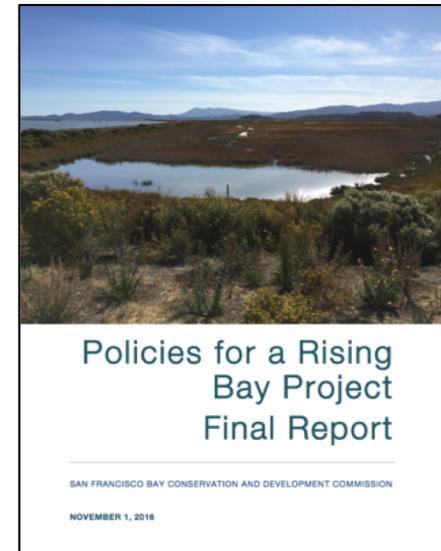
Processes leading to amendments



1. Rising Sea Level Working Group (2013)

2. Bay Fill Policies Working Group (2014 – present)

- Barry Nelson, Chair
- Katerina Galacatos
- Jim McGrath
- Sean Randolph
- Pat Showalter
- Sam Ziegler



3. Policies for a Rising Bay (2015 – 2016)

4. Public Workshops on Rising Sea Level (2016-2017)

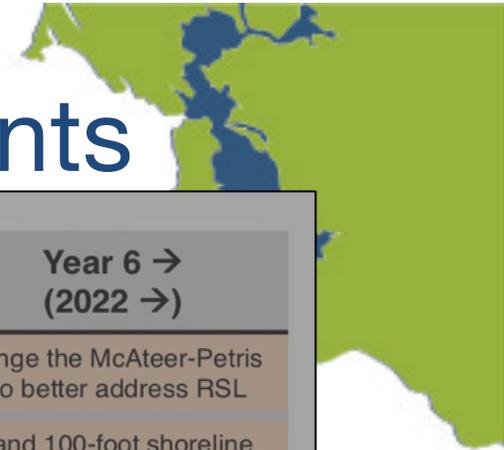
- October 6, 2016: Vote to Adopt 8 Adaptation Actions
- July 20, 2017: Adoption of Brief Descriptive Notices (Fill for Habitat and Environmental Justice)

Reminder: Upcoming Amendments



	Year 1 (2017)	Year 2 (2018)	Year 3 (2019)	Year 4 (2020)	Year 5 (2021)	Year 6 → (2022 →)
Legislation	Include environmental justice in McAteer-Petris Act or other Commission directive legislation					Change the McAteer-Petris Act to better address RSL
						Expand 100-foot shoreline band jurisdiction inland and authority beyond maximum feasible public access
Bay Plan Amendments / Regulations Update	Social equity and environmental justice Bay Plan amendment		Mitigation Bay Plan amendment		Adaptive management (Climate Change & Habitat Projects)	
	Fill for Habitat Projects Bay Plan Amendments & Regs Update (resource policies, dredging policy 11, shoreline protection)		Beneficial reuse Bay Plan Amendment		Fill for flood protection (nature-based & human-made solutions)	
Guidance	Environmental justice and social equity staff training for current laws and policies	Environmental justice and social equity guidance and staff training for new laws and policies	Implementation guidance on new policies and equity assessment checklist for permit analysts			
		Guidance for long-term sustainability of habitat projects (adaptive management and resilience)				
Planning	Adaptation planning guidance for local communities.		Minimum design, monitoring, informational guidance for experimental projects			
		Complete or incorporate existing economic analysis of beneficial reuse compared to ocean disposal and identify "complete costs"	Guidance on beneficial reuse of sediment where natural supplies are limited			
			Update Tidal Marsh Restoration Design Guidelines(PWA 2004)			
		Collaborate with other agencies to develop a compatible approach to mitigation (RAMP, regional mitigation, etc.)			Investigate incentives for identifying and preserving transition space for habitat and communities	

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Planning	Adaptation planning guidance for local communities.	Complete or incorporate existing economic analysis of beneficial reuse compared to ocean disposal and identify "complete costs"	Minimum design, monitoring, informational guidance for experimental projects Guidance on beneficial reuse of sediment where natural supplies are limited			
		Collaborate with other agencies to develop a compatible approach to mitigation (RAMP, regional mitigation, etc.)	Update Tidal Marsh Restoration Design Guidelines(PWA 2004)			Investigate incentives for identifying and preserving transition space for habitat and communities

Fill for Habitat Bay Plan Amendment Process



BAY PLAN AMENDMENT PROCESS

Initial Public Hearing:
June 20, 2019

February & March,
2019

Final Action: Aug/Sept 2019
(assuming one hearing)
Additional hearings?

SCOPE AND ORGANIZE

PUBLIC WORKSHOPS

COMMISSION HEARING AND VOTE

BACKGROUND RESEARCH

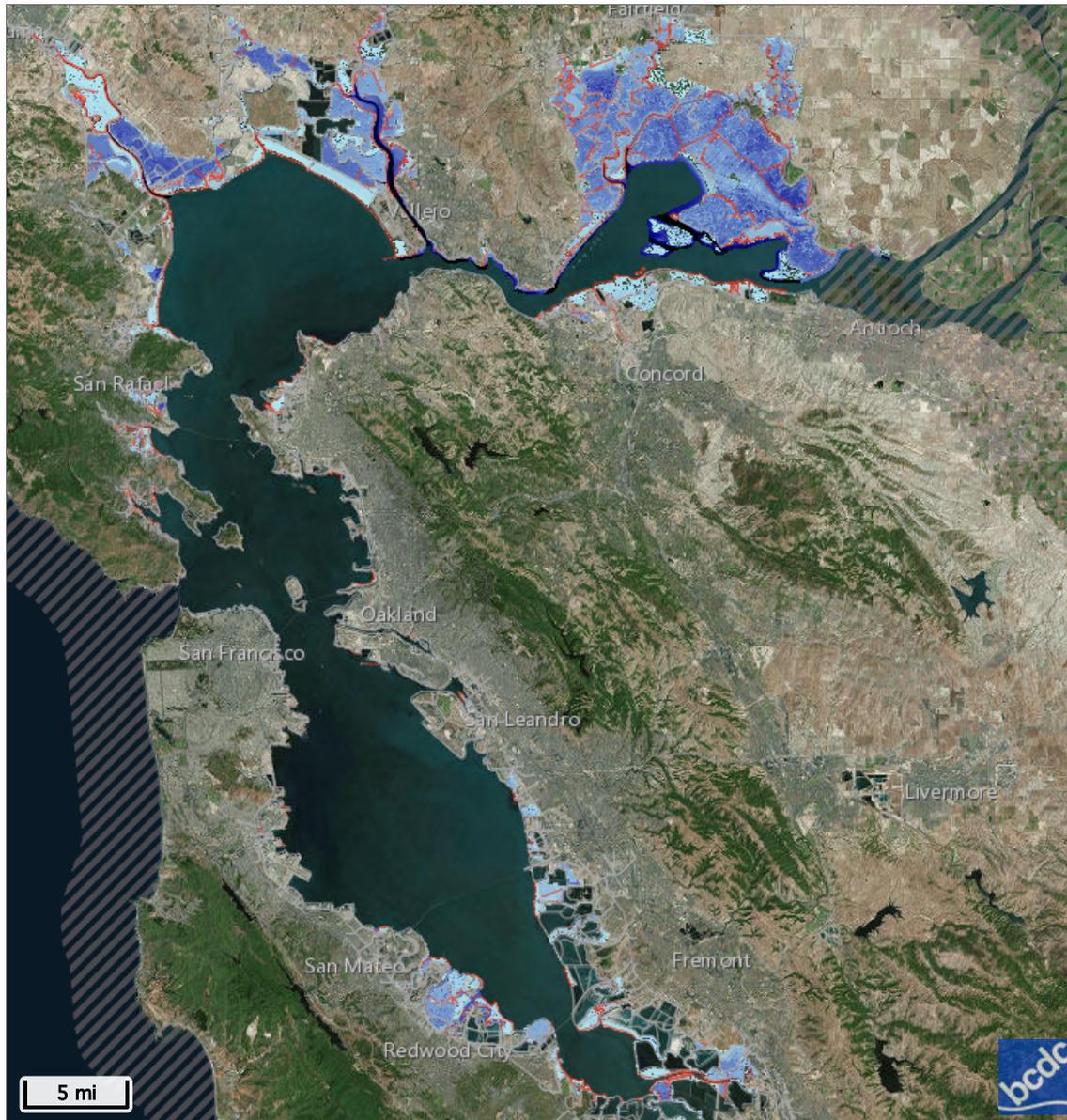
DRAFT POLICY CHANGES

STATE AND FEDERAL ADMINISTRATIVE LAW REVIEW

- Past approvals
- Best available science (e.g., BEHGU)
- Findings from PRB and other workshops

- Project team
- Regulatory staff
- Bay Fill Policies Working Group
- Stakeholder groups

Adaptation may require more fill for some habitat projects



TOTAL WATER LEVEL: 12-inches

Printed from:
explorer.adaptingtorisingtides.org

Sea Level Rise	+	Storm Surge
0"		King Tide
12"		No Storm Surge

Depth of Flooding

- 12+ feet
- 10 - 12 feet
- 8 - 10 feet
- 6 - 8 feet
- 4 - 6 feet
- 2 - 4 feet
- 0 - 2 feet

Shoreline Overtopping

- Overtopping
- No Overtopping

At the regional scale, these scenarios present average water levels that are representative of what could occur along the entire Bay shoreline. The mapped scenarios are based on binning the water levels with a tolerance of ± 3 inches.

Icons by Icons8. Map tiles by ESRI.

Source: BCDP Bay
Shoreline Flood
Explorer

Project Goal



*Amend the San Francisco Bay Plan to address the planning, design, and permitting of necessary Bay fill for **habitat projects** in the San Francisco Bay, and to increase the region's resilience to rising seas using the best available science.*

Potential relevant Bay Plan Policies



- Fish, Other Aquatic Organisms and Wildlife
- Tidal Marshes and Tidal Flats
- Subtidal Areas
- Dredging
- Protection of Shorelines
- potentially, Public Access

Policy challenges to be addressed

- How to handle “minor” amount of fill?

Tidal Marshes and Tidal Flats, Policy 8:

“Based on scientific ecological analysis and consultation with the relevant federal and state resource agencies, a **minor amount of fill** may be authorized to enhance or restore fish, other aquatic organisms or wildlife habitat if the Commission finds that no other method of enhancement or restoration except filling is feasible.”



Sonoma Creek Restoration Project

Source: <http://scc.ca.gov/climate-change/climate-ready-program/sonoma-creek-enhancement-project/>

Policy challenges to be addressed

- How to address the policy limitations on beneficial reuse of dredged sediment in the Bay tied to the completion of the Middle Harbor Enhancement project?

Dredging Policy 11b:

“To ensure protection of Bay habitats, the Commission should not authorize dredged material disposal projects in the Bay and certain waterways for habitat creation, enhancement or restoration, except for projects using a minor amount of dredged material, until ... The Oakland Middle Harbor enhancement project, if undertaken, is completed successfully.”



Middle Harbor Enhancement Project

Source: <https://goldengateaudubon.org/blog-posts/middle-harbor-shoreline-birding-hotspot/>

Policy challenges to be addressed

- Should additional guidance on specific habitat types, such as transition zones, oyster reefs, and channelized creeks, be added?

Tidal Marshes and Tidal Flats Policy 3:

“Projects should be sited and designed to avoid, or if avoidance is infeasible, minimize adverse impacts on any transition zone present between tidal and upland habitats. Where a transition zone does not exist and it is feasible and ecologically appropriate, shoreline projects should be designed to provide a transition zone between tidal and upland habitats.”



Examples of living shorelines.

Source: <http://scc.ca.gov/climate-change/climate-ready-program/san-francisco-bay-living-shorelines-project/>

Policy challenges to be addressed

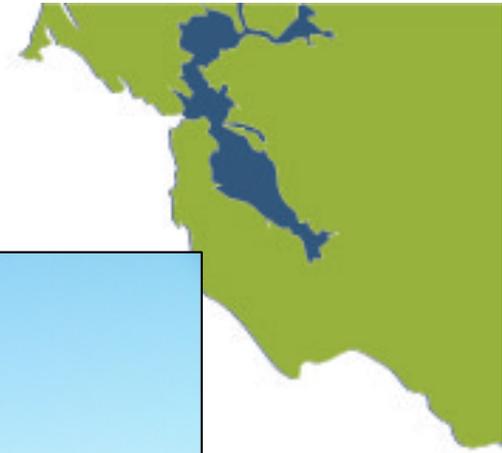
- How to facilitate pilot projects and/or projects with less certainty of success?



Oyster reef pilot project in Richmond, CA

Source: <http://scc.ca.gov/2018/09/07/4-acres-of-living-shoreline-reefs-installed-in-richmond/>

Public Access



Bay Trail through Bothin Marsh, Marin County.

Source: <https://www.flickr.com/photos/jef/16095375052/in/pool-cakingtides/>



Comments from Bay Fill Policies Working Group

TO AM TO ALL HABITA

You learn some neat stuff when you study
history

Jim McGrath

BCDC Commissioner

RESILIENCE ATLAS

accessible science for creating resilient landscapes



SHORELINE CHARACTERISTICS

INFRASTRUCTURE

VULNERABILITY

ADAPTATION

ALL DATA

ABOUT // DOWNLOADS

RESILIENCE ATLAS

SFEI

+ About These Layers

- Legend

Historical Baylands (ca. 1800)

- Deep Bay/Channel
- Dune or Beach
- Salt Pond

-Habitat Type



Historical Baylands (ca. 1800)



1998 Baylands



Historical Ecology



-Landscape Ecology Metrics







arterial disposal



