

San Francisco Bay

SEDIMENT for WETLAND ADAPTATION PROJECT

Wetland restoration is needed to protect the San Francisco Bay ecological habitat and its vibrant shoreline communities from flooding due to sea level rise and storms. Funded by the U.S. Environmental Protection Agency and the Ocean Protection Council, the San Francisco Bay Area **SEDIMENT FOR WETLAND ADAPTION PROJECT** will investigate the management, funding, and policy challenges of restoring Bay wetlands through reuse of soil and sediment and propose new policies to ensure Bay wetlands and shorelines keep pace with sea level rise.

Project Background

Two hundred years ago, vast wetlands lined the shoreline of San Francisco Bay. Wetlands provide natural habitat for a diverse array of fish and wildlife between the Bay and uplands. They also absorb flood waters, improve water quality, and buffer waves along the shoreline. By the 1950s, however, 80% of these wetlands were destroyed due to diking and draining of the San Francisco Bay primarily for agricultural, industrial, and commercial purposes. Today, large areas of subsided lands ring the Bay where marshes used to exist.

To ensure that existing Bay wetlands and shorelines persist in light of sea level rise and decreased sediment supply, there must be enough sediment delivered and retained on tidal marshes and mudflats. Over time, if the natural sediment supply is not enhanced or supplemented, it is predicted that wetlands will not keep up. According to San Francisco Estuary Institute's 2021 Sediment for Survival Report, between 450 and 650 million cubic yards of sediment and soil would be needed to restore and sustain the Bay's wetlands in the face of sea level rise through 2100. Some prospective wetland restoration sites will require a large volume of sediment just to raise the site elevations to an appropriate level relative to the tides to promote marsh plant establishment and channel development. All restored and existing wetland habitats will likely need infusions of sediment to keep up with rapidly rising seas. Additional material will be needed to adapt the Bay shoreline to protect communities, infrastructure, parks, and natural areas from a rising bay.

“Between 450 and 650 million cubic yards of sediment and soil would be needed to restore and sustain the Bay’s wetlands in the face of sea level rise through 2100.” -- San Francisco Estuary Institute
Sediment for Survival Report (2021)

Exploring Solutions

The Bay is regularly dredged to remove sediment and maintain the region's waterways for commercial, military, flood control, and recreational purposes. A portion of this dredged sediment is used to help restore wetlands, while the rest is treated as a waste product and disposed of in the Bay or deep ocean, but more of this dredged sediment could be used beneficially. Sediment dredged from Bay tributaries and flood protection channels can contribute to restoration of wetlands and be used for other sea level rise adaptation purposes, as can sediment trapped in upper watersheds, behind reservoirs and dams, and soil excavated during construction projects.

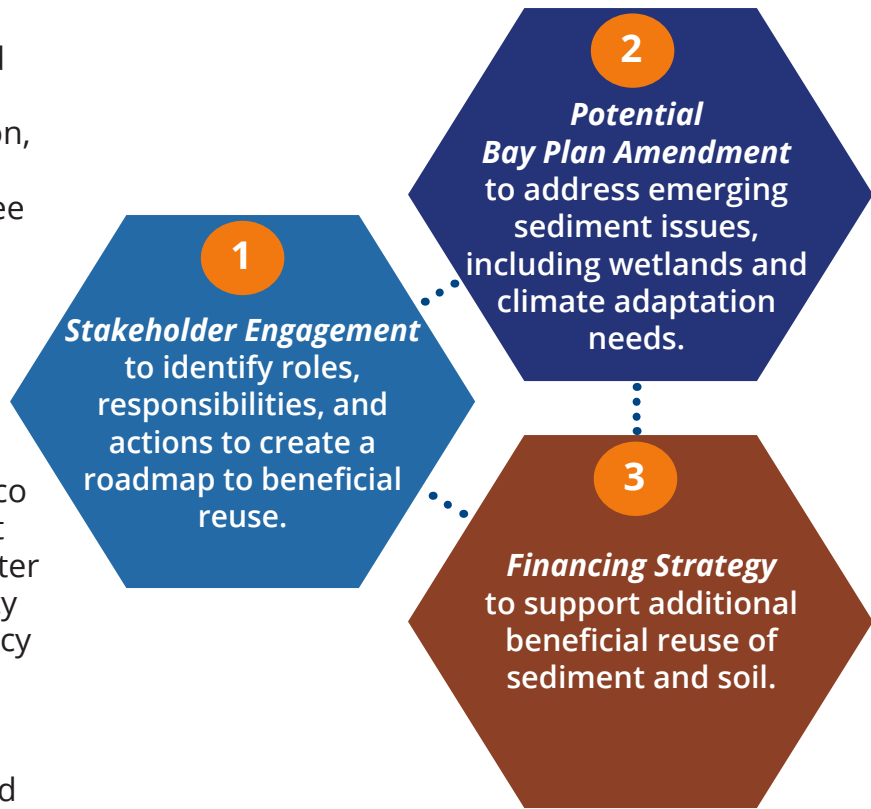
Facilitating the movement of the supplemental sediment supplies will require coordination, collaboration, and mobilization from a coalition of like-minded people working together to move the issue forward.

Our Process

The San Francisco Bay Conservation and Development Commission (BCDC) has received funding to improve coordination, funding, and policies around sediment and soil issues. The project includes three phases focused on increasing beneficial reuse of sediment and soil for wetland habitat restoration, resilience, and sea level rise adaptation in the Bay Area.

Collaboration is Key

BCDC is partnering with the San Francisco Estuary Institute, San Francisco Bay Joint Venture, San Francisco Bay Regional Water Quality Board, State Coastal Conservancy and U.S. Environmental Protection Agency on this project. Together, along with scientists, environmentalists, dredgers, community and business leaders, and more, these agencies will create a shared vision on how to harness the power of sediment reuse in the Bay Area.



How to Get Involved

The benefits of this **SEDIMENT FOR WETLAND ADAPTATION PROJECT** will be seen by communities and the environment for generations to come. Your input and engagement will help ensure the project's success. BCDC hosts Commissioner Working Group meetings every other month, where you can listen, learn, and voice your opinions. There will also be public workshops.

To be added to the contact list, stay informed about progress, and learn about upcoming opportunities to get involved, please contact:

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Materials developed by the Regional Sediment Management program



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