



SAN FRANCISCO BAY

RESTORATION AUTHORITY

Beneficial Use of Excavated Sediment and Dredged Material across SF Bay Wetland Restoration Projects

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Governing Board Meeting
May 5, 2023

History of Beneficial Use of Dredged Material

- San Francisco Bay Long Term Management Strategy for Dredging (LTMS)
- Dredged Material Management Office (DMMO)
- Wetland Restoration Projects completed
 - Sonoma Baylands
 - Hamilton
 - Montezuma Wetlands Phase 1



Montezuma Phase 1



Sonoma Baylands

Dredging, Disposal, & Beneficial Use



Many Beneficial Use Initiatives

- \$6M of state funding in 2018 - Redwood City harbor dredging
 - ~Half spent at Montezuma & Cullinan in 2021
 - Remaining funds to be spent in 2023
- **Aquatic Strategic Placement Project**
 - 2023 Redwood City harbor dredging
- \$19M of federal funding for beneficial use
 - \$10M in 2023 for Inner Richmond & Oakland dredging
 - \$9M in 2024 dredging season
- \$2.1M SFBRA to Montezuma LLC for incremental costs
 - Start spending this dredging season



Continued...

- USACE developing a Regional Dredge Material Management Plan
 - Regional analysis of habitat & flood benefits
 - Sediment modeling
 - Goal to maximize beneficial use
- USACE nation-wide goal of beneficial use of 70% of all dredged material

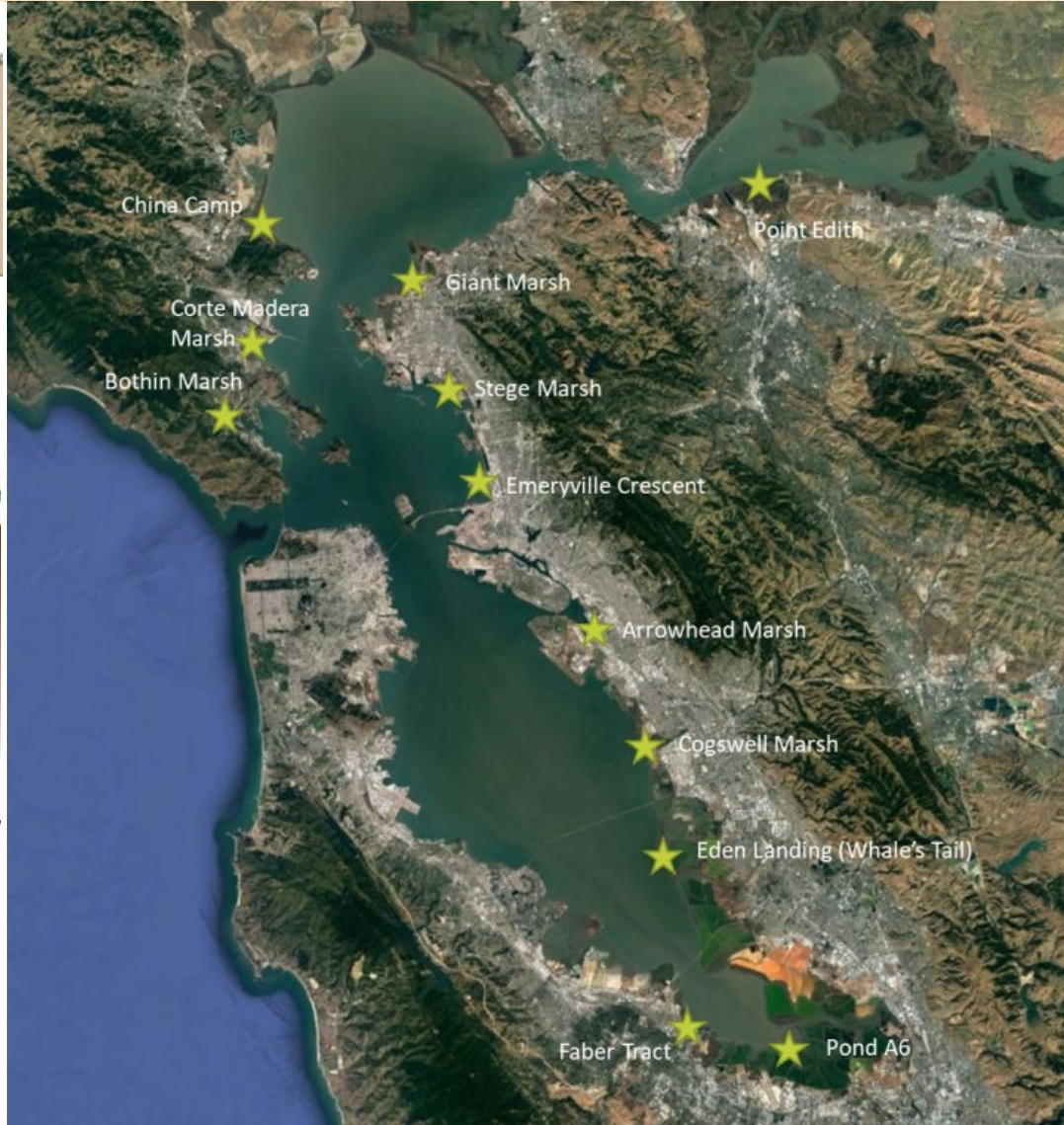
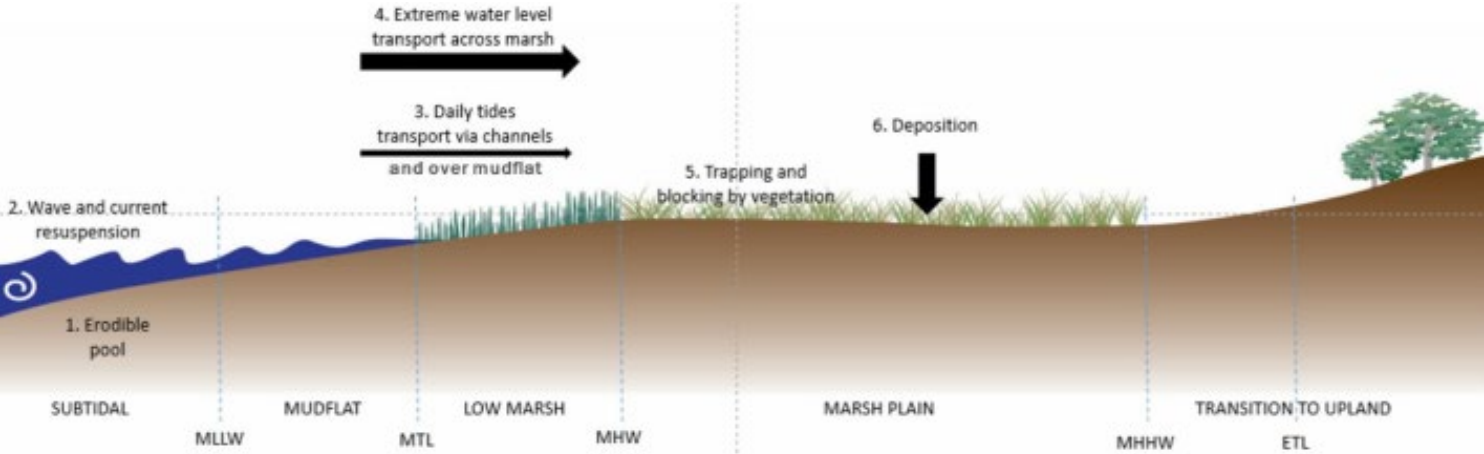
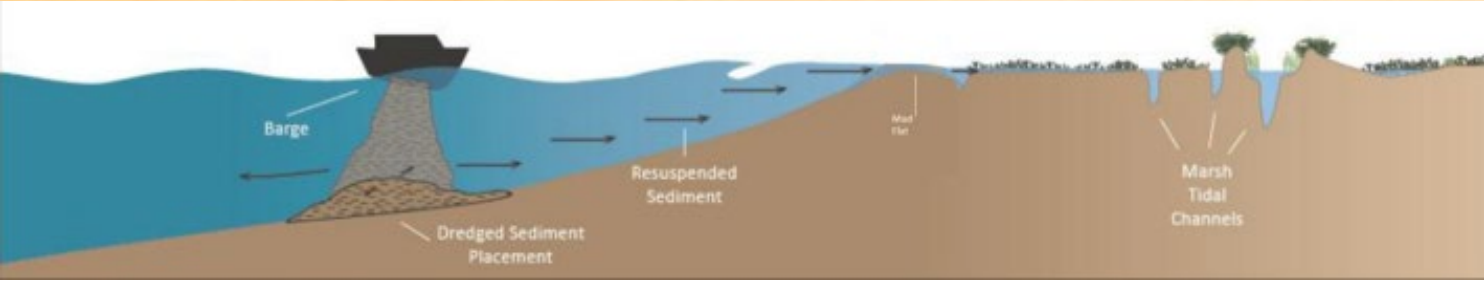


2023 Dredging Season – 85% Beneficial Use!!

- ~1 million cubic yards to be beneficially use
- Exceeding the nationwide USACE 70% beneficial use goal



Aquatic Strategic Placement Project



Aquatic Strategic Placement Project



Photo of Emeryville
Crescent marsh removed
7/6/23



Whale's Tail Marsh: Photo by Cris Benton, Professor of Architecture,
UC Berkeley (retired)

Aquatic Strategic Placement Project

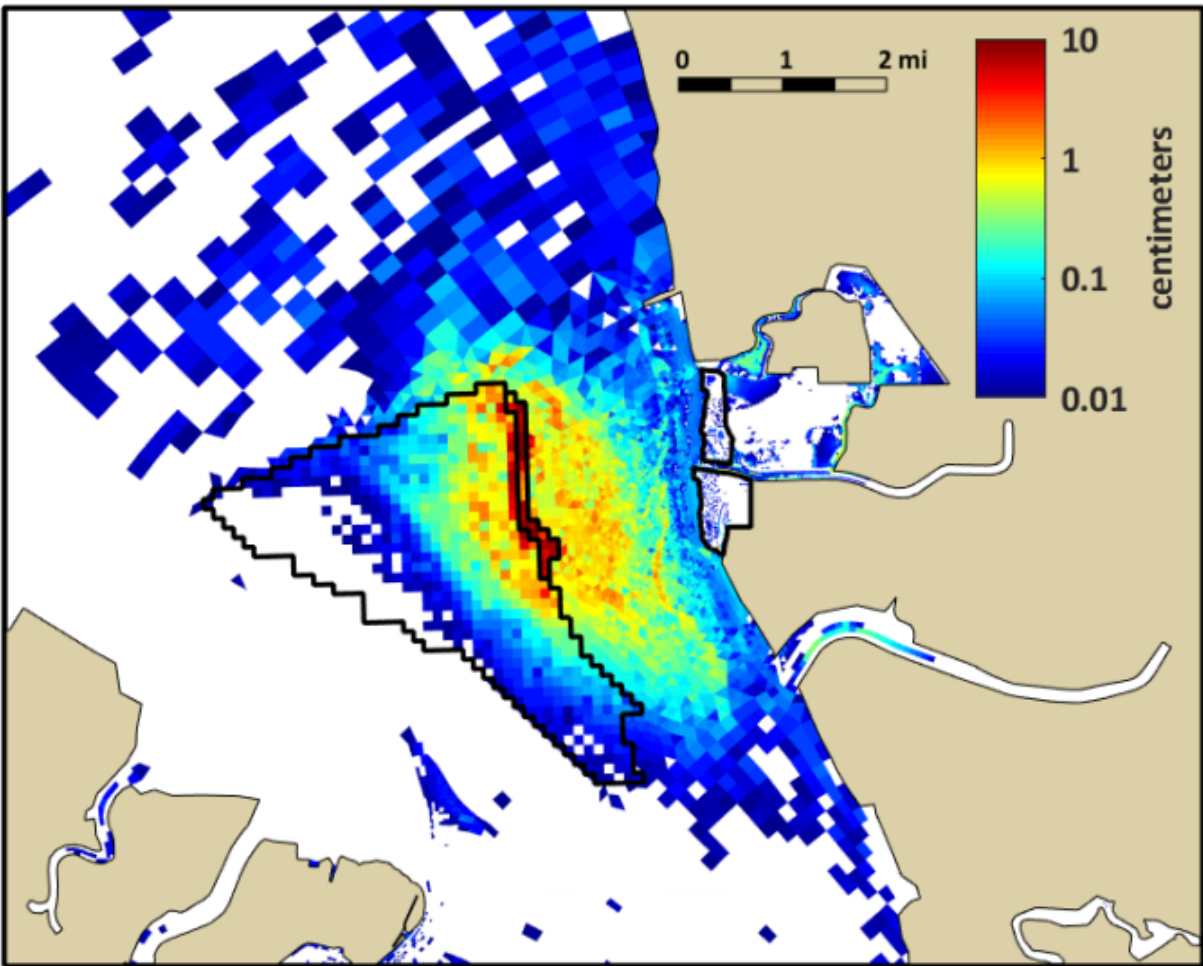
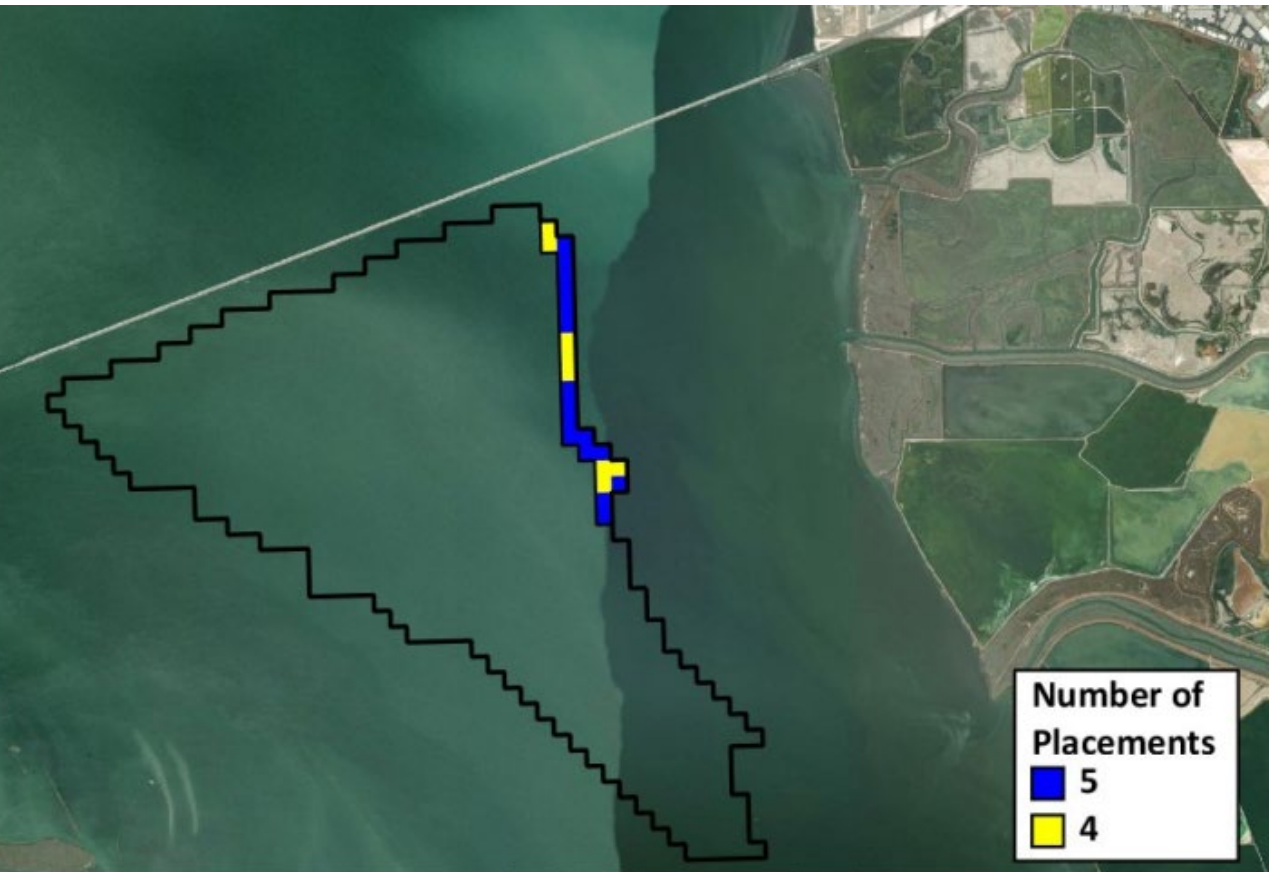


Figure 3-10. Eden Landing shallow/east placement planview indicating sediment deposition thickness after a two-month summer model run for 100,000 CY. Note that deposition thickness is on the order of one to two millimeters in the target mudflat and marsh complex.

Pilot Aquatic Strategic Placement Project

- 100,000 cubic yards of sediment
- 138-acre subtidal area
- 9-12 feet deep
- Implementation Fall 2023
- Pre- & post-implementation monitoring of sediment movement (tracer), accretion, invertebrates, and eelgrass



Not just dredged material!

- Excavated soil from construction projects can be used in wetland restoration
- BCDC updating Bay Plan to increase beneficial use beyond dredged sediment
- South Bay Salt Ponds Restoration Project (SBSPRP) continues to use excavated soils to build ecotones at Eden Landing, Ravenswood, and Alviso ponds
- SCC approved a \$1.5M grant to Santa Clara Valley Transportation Authority to analyze/permit beneficial use of BART tunnel muck at SBSPRP subsided ponds
 - Benefitting 2 SFBRA projects: South Bay Shoreline & Calabazas Creeks Reconnection





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Thank you!

BACK UP SLIDES



RDMMP Objectives and Implementation

Objectives

- Confirm dredged material placement sites for the District's eleven federal channels for the next 20-years.
- Analyze alternatives and establish the Federal Standard "Base Plan"
- Obtain multi-year dredging program approvals for the RDMMP Base Plan
 - 2025-2034 National Environmental Policy Act (NEPA) coverage
 - Associated CWA 401 and CZMA coverage

Implementation

- PHASE I – Scope of work (2020-2022)
 - Broad stakeholder engagement
 - Literature review, data "gap analysis" by SFEI
 - Scope out study efforts to address data gaps (ERDC/SFEI)
 - Scope PDT efforts (USACE)
- PHASE II – Execute scope of work (2022-2024)
 - Initiate study efforts
 - Planning, Engineering, Economic, Environmental analyses and plan synthesis
 - Complete RDMMP and coordinate for Environmental approvals

Changes at the Federal Level

- ◆ Water Resources and Development Act (WRDA)
 - ◆ Federal to federal projects - allowed
- ◆ Water Infrastructure Improvement Act (WIIN) 2016 –
Section 1122 – Resilient San Francisco Bay \$19m
 - ◆ Strategic Placement Pilot Project
- ◆ WRDA 2020 – Consider beneficial reuse & more
 - ◆ Section 125 a – c guidance
- ◆ Regional Dredge Material Management Program
- ◆ 70% Beneficial reuse goal – General Spellman



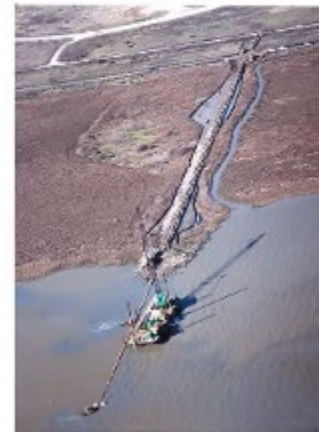
Changes at the Regional & State Level


- ◆ Measure AA – beneficial reuse project inclusion 2016
- ◆ Mullin provides \$6 million incremental cost share for Redwood City 2018
- ◆ Ocean Protection Council includes beneficial reuse goals in strategic plan 2021



Making San Francisco Bay Better

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A large white excavator is mounted on a barge in a body of water. The excavator's arm is raised. In the background, a line of wind turbines is visible on a sandy dune. The foreground shows a wetland area with tall, dry grasses and a wooden fence. The text "Montezuma Wetland Restoration Phase 2" is overlaid in white on the image.

Montezuma Wetland Restoration Phase 2

Montezuma Wetland Restoration Phase 2



Note: Vernal pool preserve is mitigation for all phases.

