



# Bay Planning Coalition

## *From “Mudlock” to Effective Collaboration*

Presented at WEDA 2022

San Francisco, CA

October 27, 2022

Josh Gravenmier (Arcadis), Scott Bodensteiner (Haley & Aldrich), and Jan Novak (Port of Oakland)  
Co-chairs, BPC Dredging and Beneficial Reuse Committee



# OVERALL BPC MISSION

Working through a broad coalition, to advocate for sustainable commerce, industry, infrastructure, recreation and the natural environment connected to the San Francisco Bay and its watershed



## **BPC DREDGING AND BENEFICIAL REUSE COMMITTEE STRATEGY**

To be a unified and trusted voice of support and advocacy for the BPC strategic goal of effecting significant change in dredging regulation and financing policy to promote resilient shorelines, restored habitats and navigable waterways.



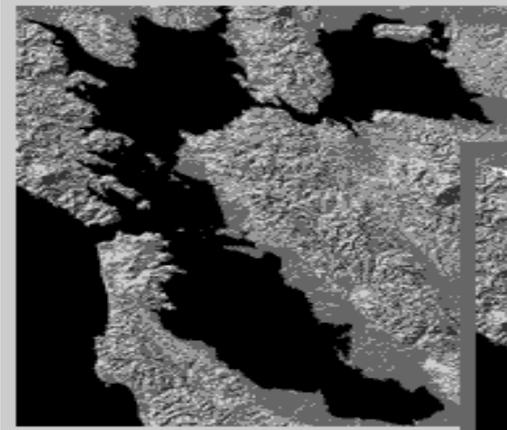
## **BPC DREDGING AND BENEFICIAL REUSE COMMITTEE STRATEGY**

To accomplish our strategic goal, we consider the following key points:

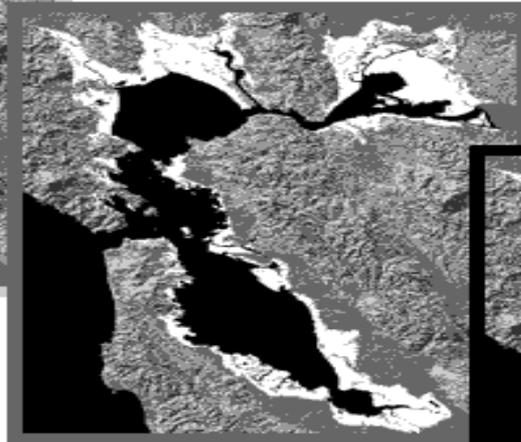
- Collaborate with agencies,
- Work with national organizations, and
- Make the public, economic and scientific case related to the benefits of dredging and beneficial reuse in California.



# History of San Francisco Bay Fill & Development



1849



1965



2020 (projected)

Source: BCDC



# Formation of BCDC (Bay Conservation & Development Commission)

- State legislation - the McAteer-Petris Act - was passed in 1965 to establish the San Francisco Bay Conservation and Development Commission (BCDC) as a temporary state agency. The Commission was charged with preparing a plan for the long-term use of the Bay and regulating development in and around the Bay while the plan was being prepared.
- Once the plan was developed and approved, it would become the tool which BCDC would use for regulatory purposes
- BCDC became permanent in 1969, and the Bay Plan has been periodically updated to respond to new challenges (such as climate change and sea level rise).





## In the Days Before LTMS

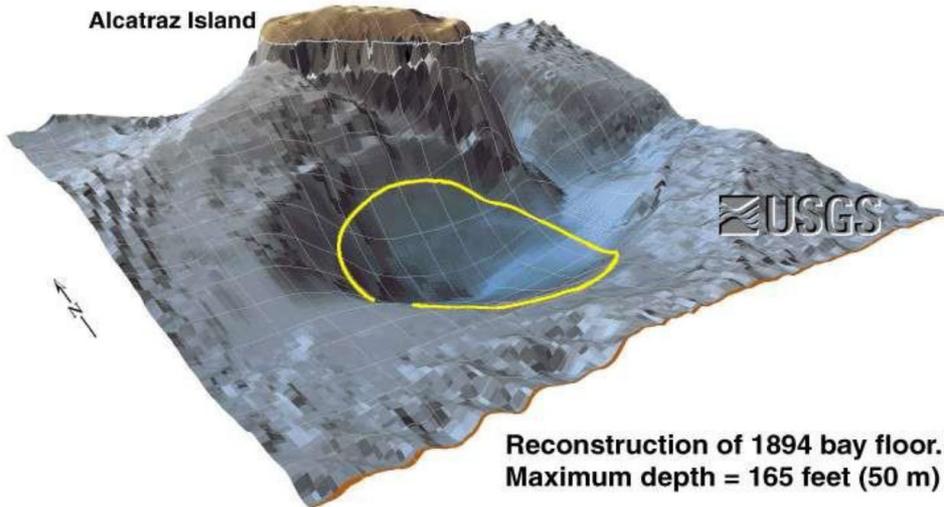
Public Objections to In-Bay Disposal - Blockade!





## Severe Mounding at the Alcatraz Disposal Site

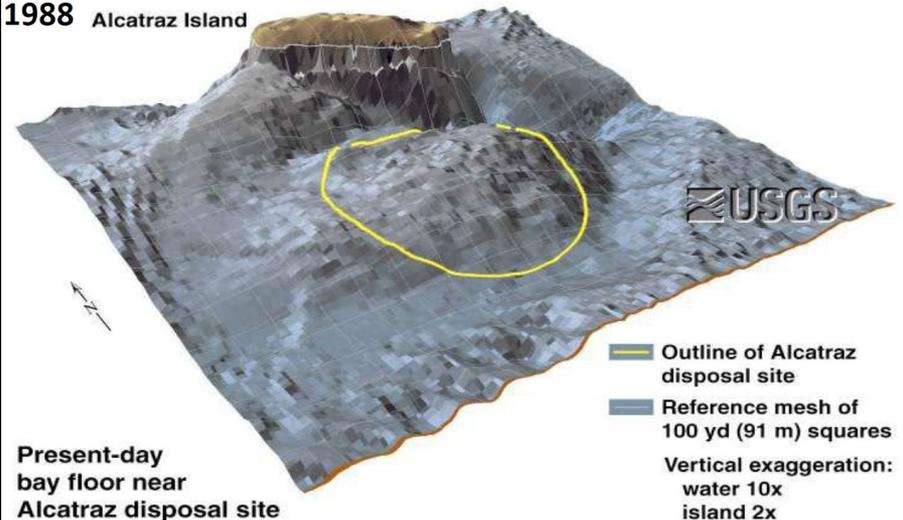
Alcatraz Island



Reconstruction of 1894 bay floor.  
Maximum depth = 165 feet (50 m)

## Severe Mounding at the Alcatraz Disposal Site

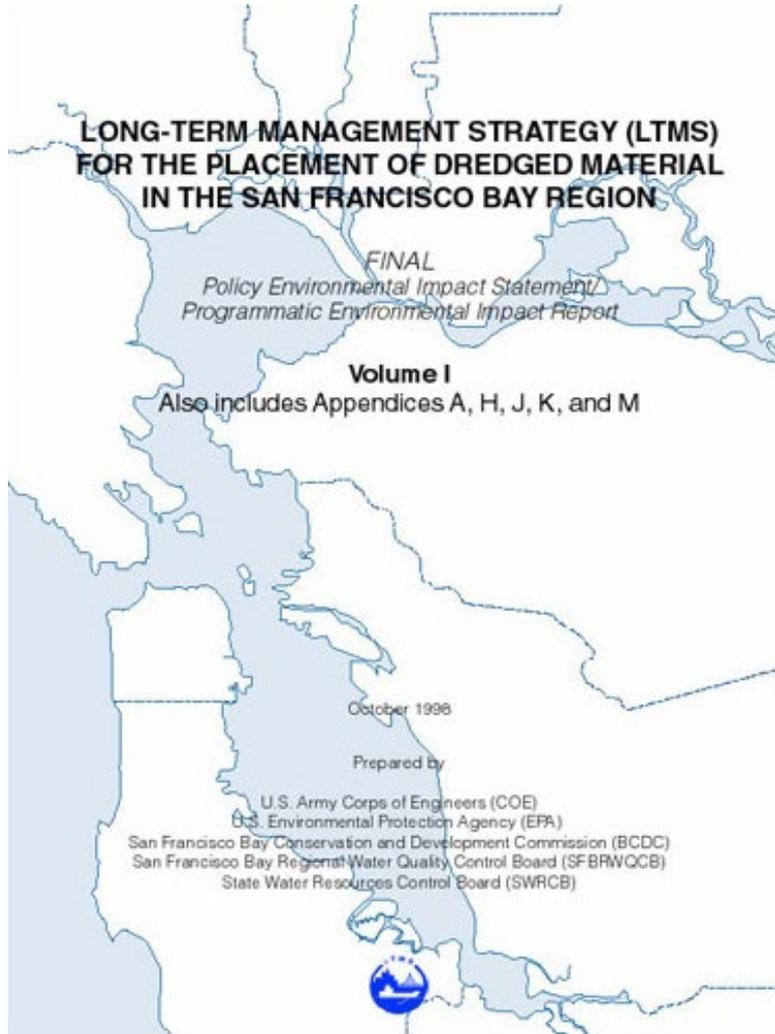
1988 Alcatraz Island



Present-day bay floor near  
Alcatraz disposal site



# LTMS Goals



- Approved in 2001
- Manage dredging in an economically and environmentally sound manner
  - Environmental Work Windows
  - Reduced In-Bay Disposal Volume
- Maximize beneficial reuse
- Establish one stop permit shop

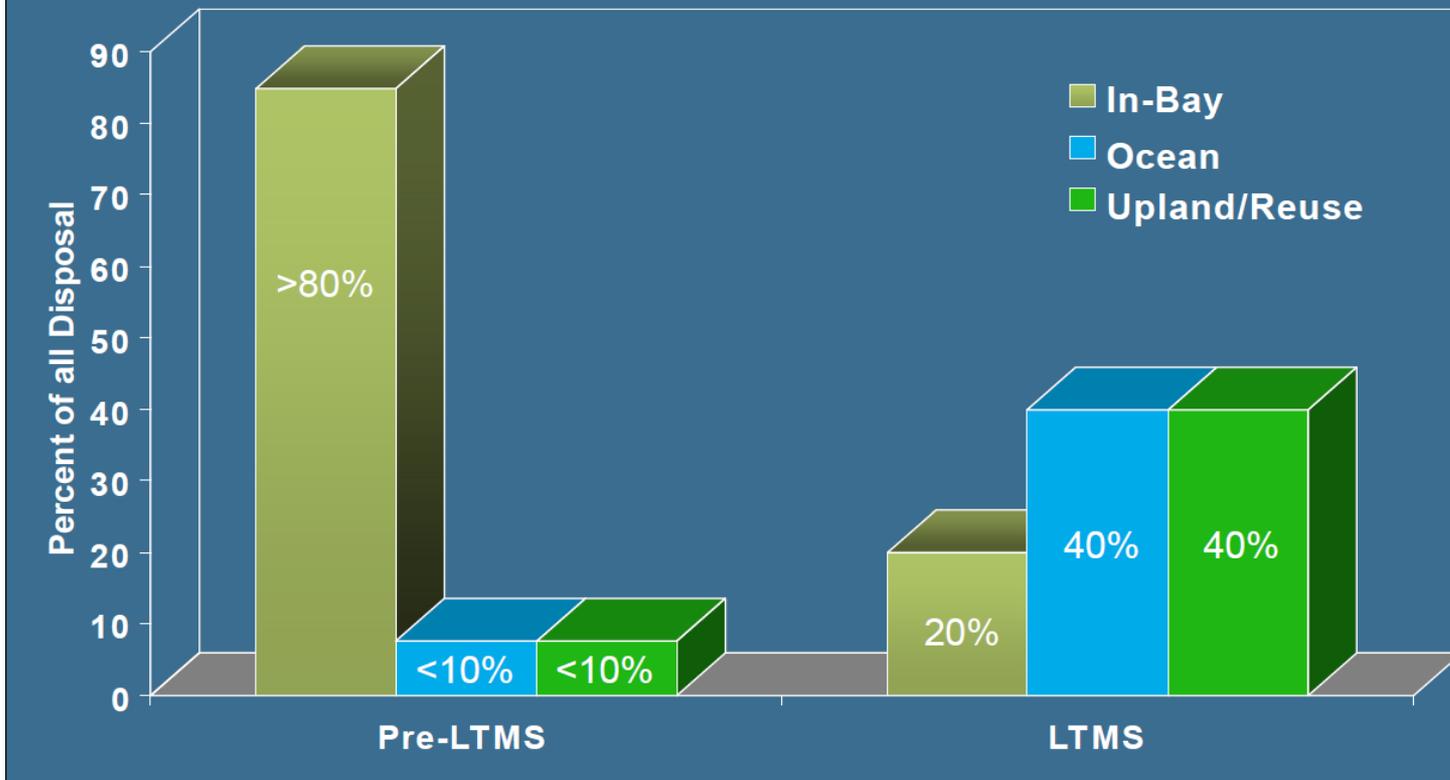


# Long Term Management Strategy for the Disposal of Dredged Materials (LTMS)

- The LTMS was formed in 1990 as a cooperative effort among the U.S. EPA, USACE, Regional Water Quality Control Board, the o Bay Conservation and Development Commission, and stakeholders in the region to develop a new approach to dredged material management in San Francisco Bay.
- Goals:
  - Reduce in-Bay disposal to 20% or less of material dredged
  - 40% of dredged material to be designated for beneficial reuse
  - The remaining 40% to be designated for ocean disposal at SF-DODS
- BPC helped to shape and implement the LTMS, and contributes to the assessment reports prepared every six years.

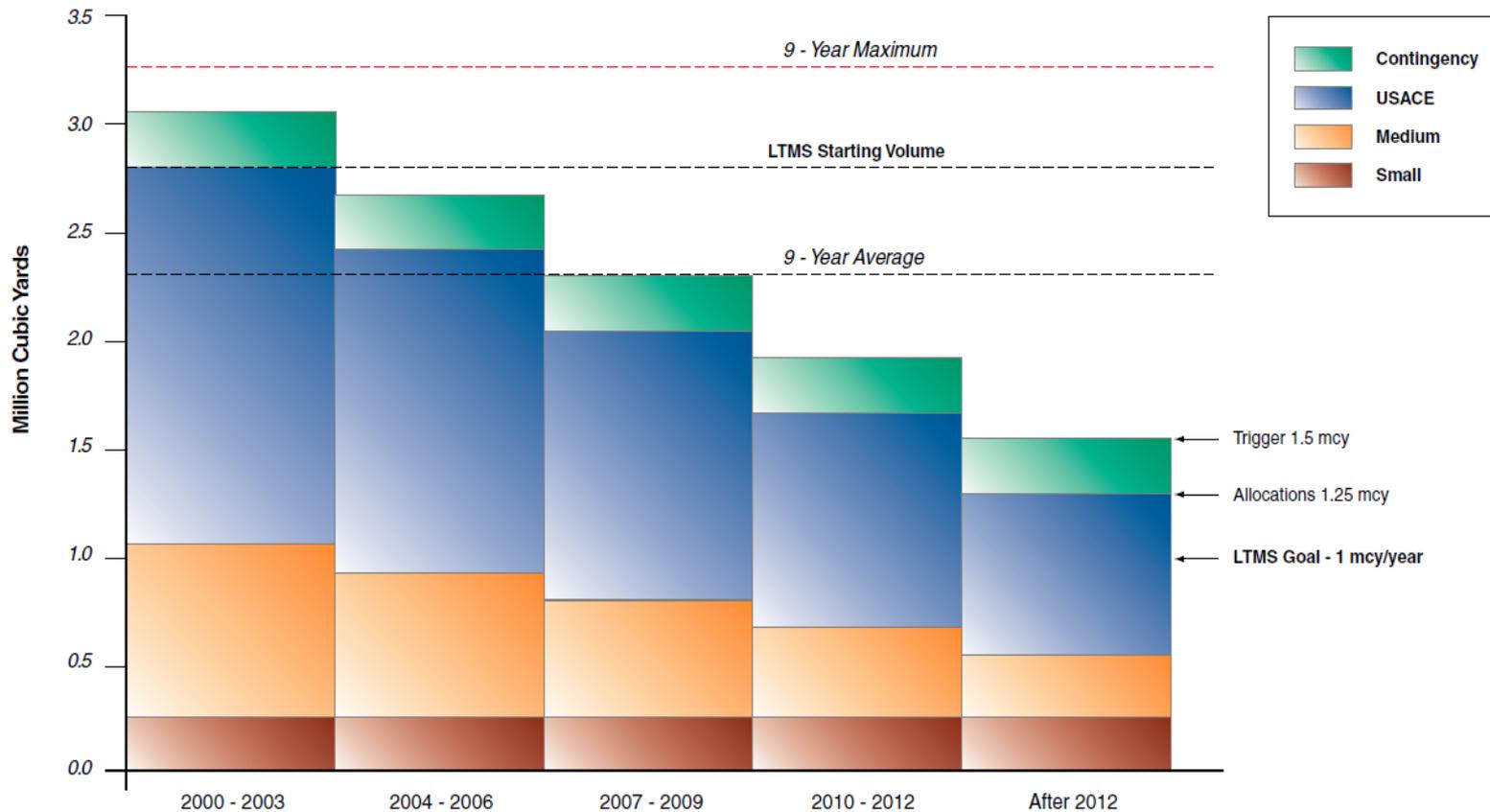


## The LTMS EIS/EIR Decision (1998-1999)





# LTMS Goals – Transition Period





# Many Laws, Many Stakeholders

## State and Federal Laws Affecting San Francisco Bay:

- McAteer-Petris Act
- NEPA
- CEQA
- Clean Water Act
- Endangered Species Act
- Magnuson-Stevens Fishery Conservation & Management Act
- The Water Resources Recovery Development Act (WRRDA)
- and many more

## Stakeholders:

- Federal Government (NOAA, Army Corps of Engineers, DOI, EPA)
- State Government
- Regional & Local Government (the Bay Area consists of 9 counties and 101 municipalities)
- Stakeholder Groups such as: Save the Bay, the Audubon Society, SF Baykeeper, and more.



# BPC: Facilitating LTMS Implementation and Fair Policy Development

- BPC supported the goals of the LTMS while helping to ensure it accounted for fiscal impacts to dredgers.
- After LTMS promulgation, BPC continued to engage the LTMS agencies and stakeholders to effectively implement the LTMS and shape policy:
  - Port of Oakland 50-Ft Project starts LTMS off with a bang.
  - Addressing LTMS data gaps
  - Getting TMDLs right
  - Using science to guide Essential Fish Habitat policy change



# Case Study: Port of Oakland



Image used with the permission of the  
Port of Oakland



# Case Study: Port of Oakland

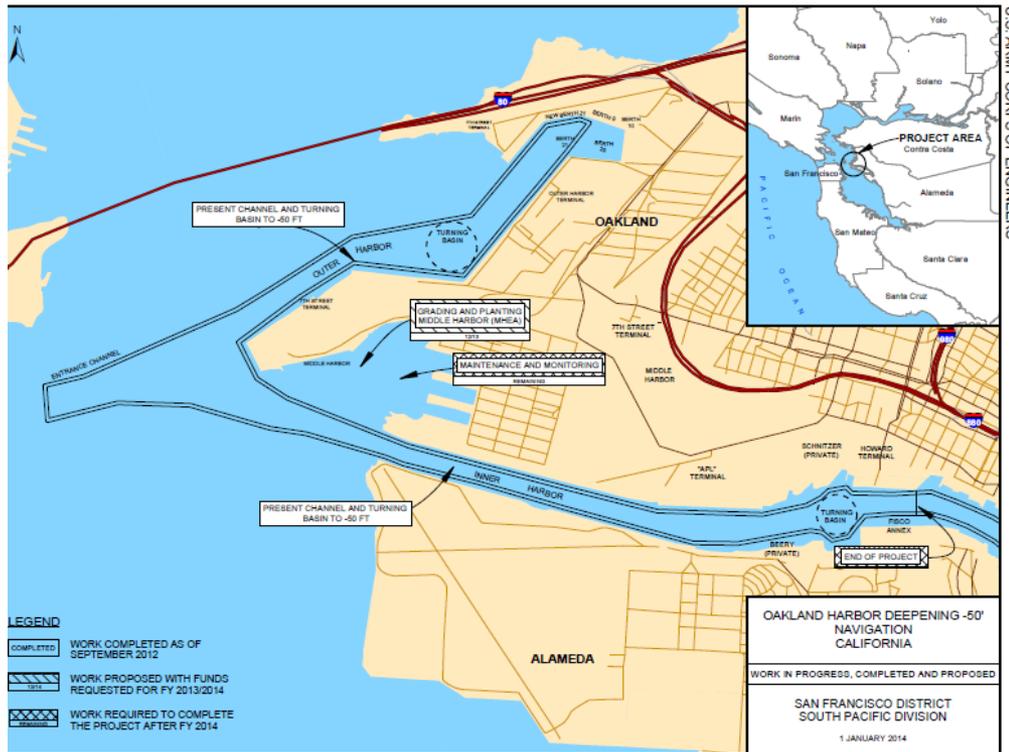
### Port of Oakland:

- **5<sup>th</sup> Busiest Seaport in the Nation**
- Including the Aviation, Maritime, and Real Estate divisions, the Port of Oakland generated 73,000 jobs in the region, and contributed over \$617 million in tax revenue in 2010.
- Exports (2013) – 6.5 million metric tons, valued at \$19.2 billion
- Imports (2013) – 5.2 million metric tons, valued at \$23.8 billion
- Total Twenty Foot Equivalent Unit (TEU) throughput, 2013: 2.3 million TEUs



# LTMS & Dredging Policy – Transition Period

## Case Study: Port of Oakland



Oakland Harbor Deepening -50' Project Map

Source: USACE



# LTMS & Dredging Policy – Transition Period

## Project Purpose

- Accommodate the **Latest Generation of Container Vessels**
- The design vessel transports over **6500 twenty-foot equivalent units (TEU's)** of containers.
- 46 ft. design draft, 1,139 ft. long, and 140 ft. wide





# Minus 50 Foot Project Timeline

- **1961:** The Ramification of Mechanization and Modernization Agreement allowed the introduction of technology and mechanization into the loading and offloading of ships, which enabled the Port to introduce containerization.
- **1980s:** channels dredged to Minus 38 feet
- **1990s:** channels dredged to Minus 42 feet
- **1996:** The formal process to achieve Minus 50foot channels at the Port of Oakland began with an official agreement between the Port and USACE. Minus 50 feet depths would allow the Port to accommodate container vessels with a capacity of 6000-8000 TEU, which is considered the optimal capacity for operational limitations.
- **1998:** Completed Feasibility Study, Environmental Impact Statement, and Environmental Impact Report
- **2009:** Minus 50 Foot Project completed
- **2010:** one year after the completion of the 50-foot deepening, some 150 deep draft vessels have called.



# Project Components



Outer Harbor Dredging



# Results of the Minus 50 Foot Project

- Dredging:
  - Value to Date: \$422.5 Million
  - Total Quantity Removed: 11,998,177 CY of silty, consolidated, sandy materials
- Beneficial Reuse:
  - Hamilton Wetlands: 3,558,580 CY; 900 acres restored
  - Montezuma Wetlands: 2,338,737 CY
  - Middle Harbor Habitat: 4,421,797 CY; 180 acres restored
- Deep Ocean Disposal: 1,326,319 CY
- Removal of Contaminated Sediment: 352,744 CY
- Minus 50-foot channel depths to accommodate extended “K” class and “S” class container vessels



# Addressing LTMS Data Gaps

- **BPC, in partnership with the LTMS agencies and other stakeholders, established the LTMS Science Working Group to address LTMS data gaps.**
- BPC leadership was instrumental in obtaining annual funding for and managing the Science Working Group.
- Relying on local BPC members and agencies, several key studies were funded and subsequently conducted.
  - Multiple fish tracking studies
  - Suspended sediment impacts to early life stages of Pacific Herring
  - Dredging plume studies
  - Methyl-mercury surveys
- Set the stage for the RMP Sediment Working Group



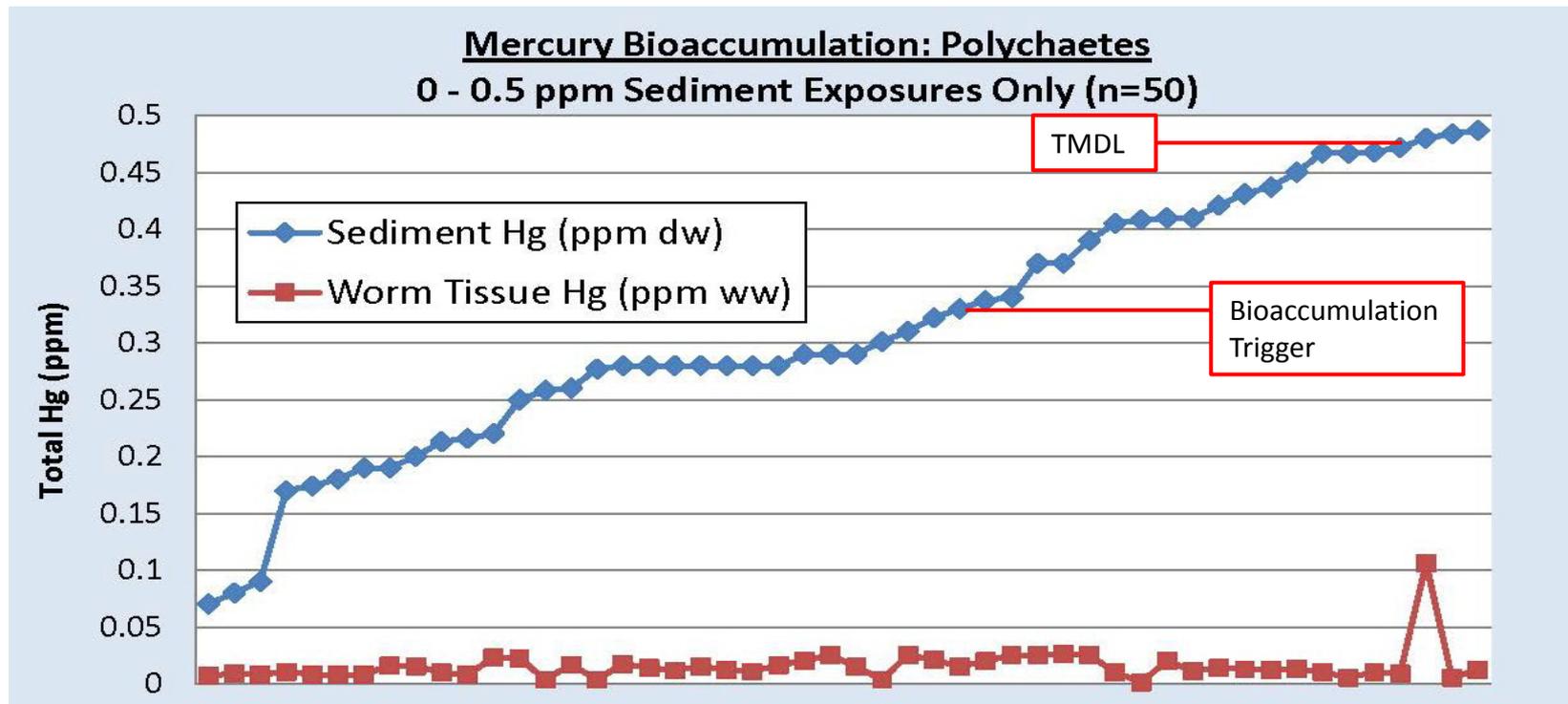
# Getting TMDLs Right for Dredgers

- **2004 Promulgation of Mercury Total Daily Maximum Load.** Restrictions on in-Bay disposal based on waste load allocation for suspended sediment of 0.2 mg/kg which was below ambient.
- The new restriction **would force the use of the costly ocean disposal site** for nearly all dredging projects.
- **BPC in collaboration with the Regional Water Board**, convinced the State Water Quality Control Board that the LTMS goals were already reducing the mercury load attributable to dredging. present in the Bay and its waters.
- The TMDL was subsequently remanded and revised to the Bay ambient concentration, **an important precedent for future TMDLs.**



# EFH Consultation Modification

2011 – As part of the NOAA Fisheries Programmatic Consultation for Essential Fish Habitat Impacts, Bioaccumulation Triggers were imposed using aggressive means to calculate thresholds.





# EFH Consultation Modification

- Soon after promulgation, BPC made significant contributions to the U.S. EPA's effort to synthesize available sediment testing data to assess necessity of the mercury bioaccumulation trigger
- Conclusion: Little or no bioavailability in the sediments with concentrations below the TMDL and relationship between sediment and tissue concentrations
- Outcome: In March, 2012 the Programmatic EFH Consultation was amended to eliminate the mercury bioaccumulation trigger for in-Bay disposal.



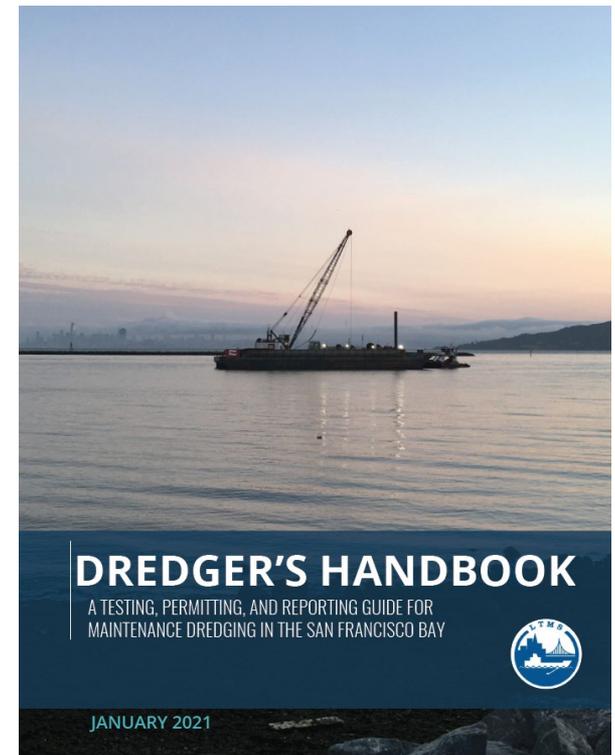
# **BPC: Current Challenges and Vision for the Future**

**Bay Planning Coalition Vision:** Provide visionary leadership for San Francisco Bay stakeholders as an effective coalition that vigorously advances solutions for a thriving economy, environment and community.



# BPC DREDGING AND BENEFICIAL REUSE COMMITTEE ADVOCACY/ENGAGEMENT

- DMMO *Dredger Handbook* review
- Quarterly meetings with LTMS Program Managers
- Regional Monitoring Program
  - Sediment Working Group
  - Steering Committee
  - Annual Meeting
- LTMS Science Committee (LTMS Data Gaps)
- BCDC
  - Contributed to *Bay Adapt: Regional Strategy for Rising Bay*
- USACE
  - Regional Dredged Material Management Plan Gap Analysis Interagency Working Group





**Volume of sediment** needed for tidal marshes and tidal flats by 2100

**~450 Million cy**



## Volume of sediment needed for tidal marshes and tidal flats by 2100

Current landscape and management approaches

- natural deposition
- dredged sediment in subsided areas

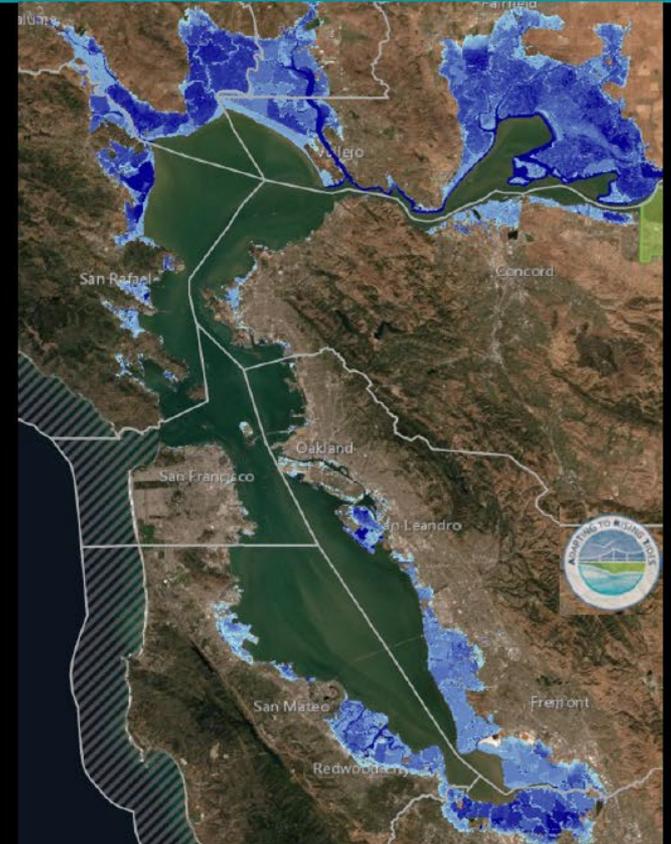
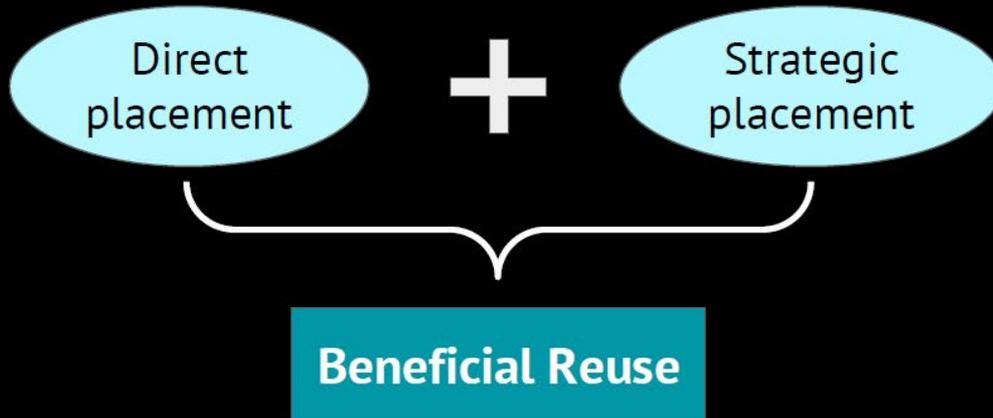
New management approaches to access more in-bay and watershed sediment

- upland excavated sediment
- upland reservoir sediment
- additional dredged sediment



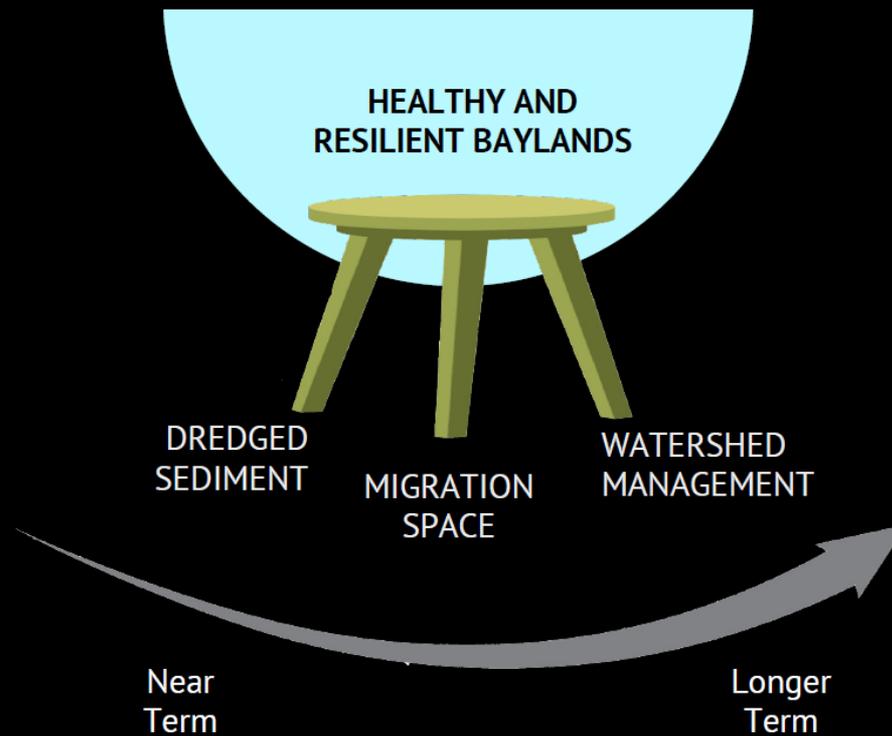
# SFEI Suggestions

## Beneficial reuse - Future





# Bayland Adaptation - Not just dredged sediment



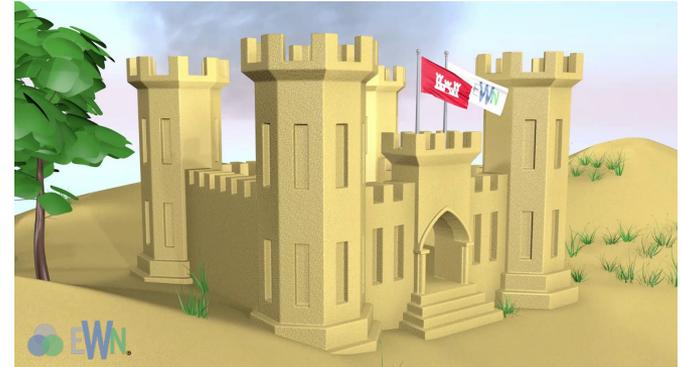


## **- A Call to Action -**

### **An Imperative for the 21<sup>st</sup> Century: 100% Beneficial Use of Dredged Sediment**

**Beneficial Use Innovation: *There's something for everyone to do!***

- **Government Agencies Doing Dredging:** Doing business differently
- **Ports / Navigation Sector:** Multi-purpose projects
- **Regulatory Agencies:** Efficiently pursuing win-wins
- **Dredging / Engineering Companies:** Innovative engineering and operations
- **Environmental NGOs:** Facilitating P3s



**The Key: Affordability, Affordability, Affordability**