

RMP Special Study Proposal: Workshop on Sediment Screening and Testing Guidelines for Beneficial Reuse of Dredged Sediments

Summary: The San Francisco Bay Regional Water Quality Control Board has guidelines for chemical testing requirements and evaluation of test results for the placement of dredge materials in beneficial reuse environments, such as wetland restoration (SFBWRCB. 2014). These guidelines sometimes prevent dredged sediments from the Bay and flood control channels from being beneficially reused despite the fact that there is an urgent need for sediment for wetland restoration around the Bay. The purpose of this study is to organize a workshop with technical experts and stakeholders to discuss whether the current approach to screening contaminants in dredged sediments is too protective, not protective enough, or just right. The deliverable will be a workshop summary that will distill the findings relative to the charge questions and recommendations to the Water Board regarding revisions to the Sediment Screening and Testing Guidelines.

Estimated Cost: \$30,000

Oversight Group: Sediment Workgroup

Proposed by: Philip Trowbridge

Proposed Deliverables and Timeline

Deliverable	Due Date
Workshop	March 2019
Workshop Summary	May 2019 (draft) September 2019 (final)

Background

The San Francisco Bay Regional Water Quality Control Board (the “Water Board”) has guidelines for chemical testing requirements and evaluation of test results for the placement of dredge materials in beneficial reuse environments, such as wetland restoration (SFBWRCB. 2014). These guidelines sometimes prevent dredged sediments from the Bay and flood control channels from being beneficially reused despite the fact that there is an urgent need for sediment for wetland restoration around the Bay. The goals for wetland restoration around the Bay are to reduce impact to wildlife through habitat loss and restore 100,000 acres (Goals Project, 2015). A total of \$0.5 billion from Measure AA will be invested to reach this goal. However, preliminary estimates show that there is not enough sediment for these projects, even if all the sediments delivered to the Bay are used. The deficit gets even larger when sea level rise is considered. Failure to reuse as much sediment as possible for restoring wetland area and helping to maintain marsh elevations presents its own risks to wildlife from habitat loss.

The purpose of this study is to organize a workshop with technical experts and stakeholders to discuss whether the current approach to screening contaminants in dredged sediments is too protective, not protective enough, or just right. It is not clear how much sediment is prevented from being reused because of these thresholds alone and whether changing the guidance will make a significant difference. However, updating the guidance is a low cost way to increase beneficial reuse. The impacts of revising the guidelines may be especially important at the local scale where sediment from flood control channels could be reused for marsh restoration nearby rather than being disposed in landfills.

Study Objectives and Applicable RMP Management Questions

The objectives of the project and how the information will be used are shown in Table 1 relative to the management questions for the Sediment Workgroup.

Table 1. Study objectives and questions relevant to RMP management questions.

Management Question	Study Objective	Example Information Application
MQ1: What are acceptable levels of chemicals in sediment for placement in the Bay, baylands, or restoration projects?	To organize a workshop with technical experts and stakeholders to discuss whether the current approach to screening contaminants in dredged sediments is too protective, not protective enough, or just right.	Revisions to the Sediment Screening and Testing Guidelines for Dredged Sediments by the Water Board
MQ2: Are there effects on fish, benthic species, and submerged habitats from dredging or placement of dredged material sediment?	NA	
MQ3: What are the sources, sinks, pathways, and loadings of sediment and sediment-bound contaminants to and within the Bay and subembayments?	NA	
MQ4: How much sediment is passively reaching tidal marshes and restoration projects and how could the amounts be increased by management actions?	NA	
MQ5: What are the concentrations of suspended sediment in the Estuary and its segments?	NA	

Approach

Task 1. Assemble Technical Experts and Key Stakeholders

SFEI will identify and invite technical experts in ecotoxicology and other related disciplines to participate in the workshop. In particular, these experts will have experience with direct toxicity effects of contaminants on invertebrates, bioaccumulation to higher trophic levels, and beneficial reuse of dredged sediments. In addition, local stakeholders from the following organizations will be asked to participate:

- Resource Agencies: US Fish and Wildlife Service, National Marine Fisheries Service, California Department of Fish and Wildlife
- DMMO Agencies: USEPA, Water Board, BCDC, and USACE
- Flood Control Agencies: BAFCAA
- Dredgers: BPC, Port of San Francisco, Port of Oakland, and others
- Restoration Agencies: South Bay Salt Pond Restoration Project and others
- NGOs: Baykeeper, Save the Bay

The meeting will be open to all interested participants. The list above just identifies the participants who are likely to have an interest in the workshop.

Task 2. Prepare Background Materials for the Workshop

To facilitate discussion at the Workshop, SFEI will prepare summary materials on the current Sediment Screening and Testing Guidelines, typical beneficial use applications, and concentrations of contaminants in dredged sediments. DDT, PAHs, and cadmium are the contaminants that exceed the screening levels most frequently. Therefore, these contaminants will be top priorities for review but will not be limited to these chemicals. The RMP database, the DMMO database, and readily available information on sediment removed from flood control channels will be mined for information. The goal is to present the technical experts with ranges of concentrations typically present in dredged sediments and its physical characteristics.

Task 3. Organize and Facilitate Workshop Related to Sediment Screening and Testing Guidelines for Beneficial Reuse of Dredged Sediments

SFEI will provide meeting space, prepare an agenda, ensure that key participants will attend the workshop, and facilitate the discussion. The workshop will be held during the spring of 2019.

Proposed charge questions for the workshop will be:

- Are the current Sediment Screening and Testing Guidelines too protective, not protective enough, or just right?
- Are there other approaches besides those in the Guidelines that could be used to manage the risk from beneficial reuse of dredged sediment?
- Can modeling or ambient monitoring play a role in evaluating the existing

- guidelines?
- How might the Water Board balance the risks to wildlife from wetland habitat loss with the risks from exposure to contaminants in dredged sediments?

Task 4. Publish a Workshop Summary with Recommendations

SFEI will prepare a Workshop Summary. The summary will distill the findings relative to the charge questions and recommendations to the Water Board regarding revisions to the Sediment Screening and Testing Guidelines. The summary report will be reviewed by the workshop participants, Sediment WG, and TRC before being finalized.

Budget

The following budget represents estimated costs for this proposed special study (Table 2).

Table 2. Proposed Budget.

Expense	Estimated Cost
Labor	\$23,500
Subcontracts	\$0
Direct Costs	\$6,500
Grand Total	\$30,000

Budget Justification

Labor Costs

The majority of the work will be completed by an Environmental Scientist (50 hours) with administrative and research assistance from an Environmental Analyst (40 hours) and Database Manager (20 hours). Oversight and assistance by Program Manager (20 hours) and Senior Scientist (20 hours). The total labor cost for this level of effort is \$23,500.

Direct Costs

\$6,000 has been budgeted for honoraria for technical experts in ecotoxicology and other subjects. \$500 has been budgeted for food for the workshop.

Reporting

A summary report will be prepared by May 31, 2019 as a draft. The final report will be prepared by September 30, 2019. The draft report will be reviewed by the workshop participants, Sediment WG, and TRC.

References

Goals Project. 2015. The Baylands and Climate Change: What We Can Do. Baylands Ecosystem Habitat Goals Science Update 2015. Prepared by the San Francisco Bay Area Wetland Ecosystem Goals Project. California State Coastal Conservancy, Oakland, CA.

SFBWRCB. 2014. Beneficial Reuse of Dredged Materials: Sediment Screening and Testing Guidelines, Draft Staff Report. Prepared by the San Francisco Bay Regional Water Quality Control Board staff, Oakland, CA. March 2014.