



**LONG-TERM MANAGEMENT STRATEGY (LTMS) FOR THE PLACEMENT OF
DREDGED SEDIMENT IN THE SAN FRANCISCO BAY REGION:
BENEFICIAL REUSE FACT SHEET**

May 2018

Since its inception, the LTMS program has successfully reduced in-Bay disposal of dredged sediment to 1.25 million cubic yards per year, improving Bay water quality and reducing other adverse impacts of disposal (LTMS 2013). At the same time, maximizing the beneficial reuse of dredged sediment (also called beneficial use of dredged sediment in federal documents) is one of the LTMS's key goals (LTMS 2001, 2012). LTMS pertains to dredged sediment generated for navigation purposes, and not, for example, sand mining. Beneficial reuse allows dredged sediment to be redefined as useful instead of identifying it only as a waste product (USEPA/USACE 2007). When dredged sediment can be redirected from ocean and in-bay disposal sites, benefits accrue to the public such as coastal habitat restoration or levee maintenance. Further, dredging projects that address multiple economic, public safety, and environmental objectives simultaneously provide the greatest public benefit (e.g., navigation channel maintenance, wetlands creation, flood resiliency, and recreational opportunities) (USEPA/USACE 2007).

Dredged sediment can be reused in any number of ways, but the key aspects of whether any proposed reuse can be considered "beneficial" include: 1) that the benefits outweigh the adverse impacts and these impacts are fully mitigated; and 2) that the dredged sediment is of suitable physical and chemical quality for the proposed use (see testing guidance: USEPA/USACE 1991, 1998, and 2004). Projects that satisfy these broad tests are at a minimum suitable for LTMS consideration. There are broad categories of nationally recognized beneficial uses (USACE ERDC 2007, USEPA/USACE 2007):

- Habitat restoration and development, especially aquatic-based habitats (wetlands, offshore reefs, nesting islands, etc.)
- Beach nourishment (primarily sandy material)
- Parks and recreation
- Agriculture, forestry, horticulture, and aquaculture
- Strip mine reclamation and solid waste management
- Shoreline stabilization and erosion control
- Construction and industrial use (including urban and residential)

Several of these beneficial reuse options require dredged sediment to first be dried at a re-handling facility prior to delivery to the end-use site (SFRWQCB 2000), while other options (e.g. baylands restoration) allow for direct placement of the material. Dredged sediment with elevated contaminant levels can also be beneficially reused at sites designed and operated to contain and isolate the sediment appropriately relative to the environmental sensitivity of the placement site (USACE ERDC 2015).

The LTMS program originally identified the following categories of beneficial reuse as generally feasible and appropriate for consideration in the Bay Area (LTMS 1998):

- Baylands restoration (habitat development)
- Sanitary landfill cover material
- Levee maintenance and rehabilitation
- Beach nourishment
- Construction fill

With the advent of sea level rise and increased episodic flooding, shoreline resiliency has become increasingly important to the SF Bay region, as have beneficial reuse options that improve that resiliency. The LTMS is currently studying the potential for strategic placement of dredged sediment in SF Bay. In addition, the LTMS agencies continue to look for other sustainable beneficial reuse options.

Numerous completed, currently active, and future designated beneficial reuse placement sites around the SF Bay are shown in Figure 1. Re-handling or stockpiling facilities are not depicted. The goal for future iterations is an interactive map fully integrated with SediMatch (SFBJV et al. 2017).

Citations

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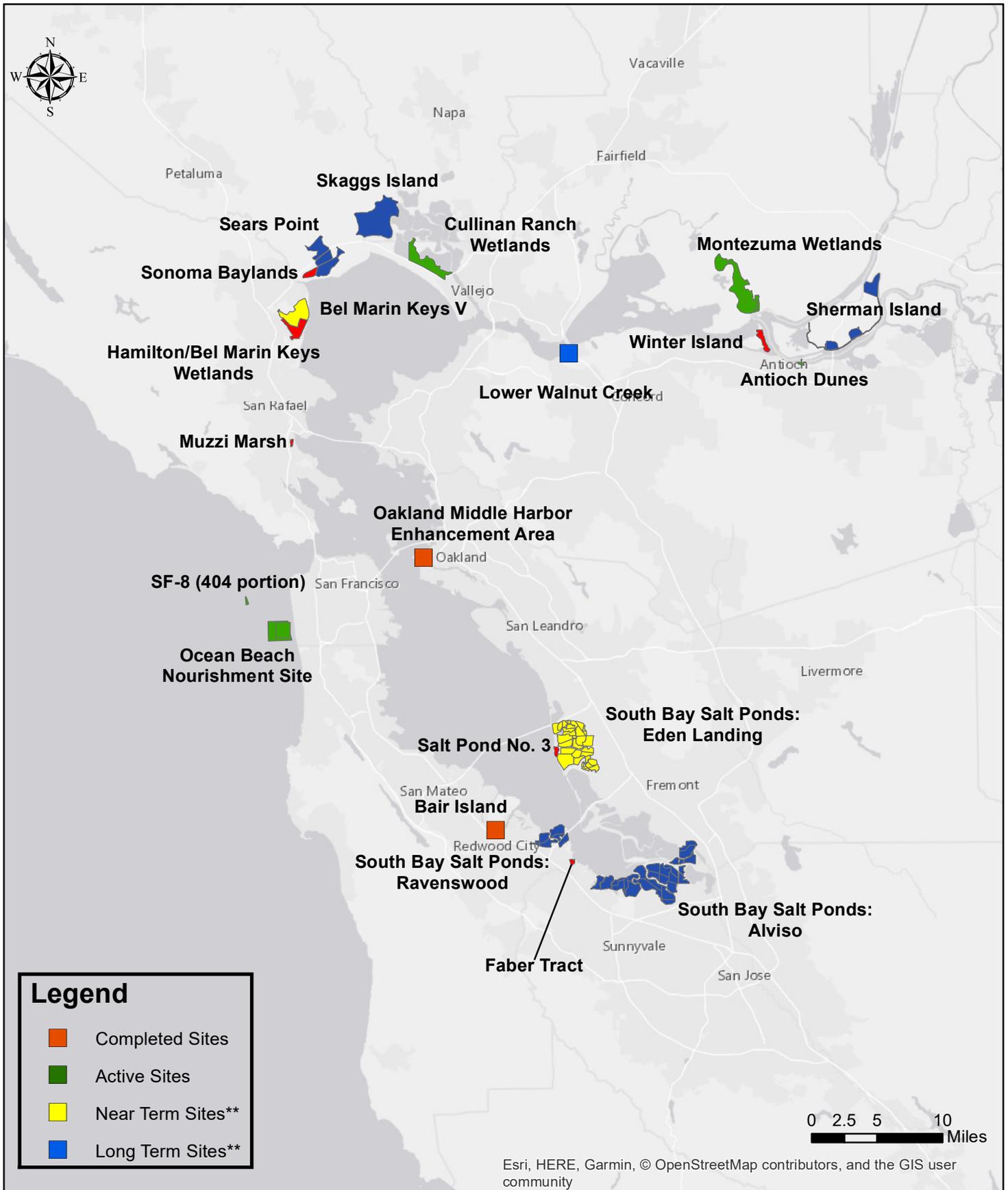
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Figure 1. LTMS Beneficial Reuse Placement Sites in San Francisco Bay*



*Sites located within LTMS Program Area, as of May 2018. Does not represent all sites where beneficial reuse is possible or has occurred.

**Preliminarily defined as being available to receive dredged material within the next three years (Near Term Sites) or more than three years (Long Term Sites).