Case Study: San Francisco Bay Region

A major interagency, regional planning effort led to the development of the Long-Term Management Strategy (LTMS) and other planning programs in the San Francisco Bay area. These programs incorporate beneficial uses of dredged material into local projects.

The LTMS is a cooperative effort to develop a new approach to dredging and dredged material disposal in the San Francisco Bay area. The LTMS serves as the "Regional Dredging Team" for the San Francisco area, implementing the National Dredging Policy in cooperation with the National Dredging Team. An emphasis on all aspects of dredged material management serves as the basis for the LTMS. This includes beneficial uses, a full range of disposal options, and streamlined permitting. Core agency participants are the U.S. Environmental Protection Agency (EPA) Region 9, U.S. Army Corps of Engineers (USACE), San Francisco Bay Conservation and Development Commission (BCDC), California Regional Water Quality Control Board for the San Francisco Bay region, and the State Lands Commission. Other federal and state resource management agencies as well as numerous industry, environmental, and public interest groups are contributing in a review capacity.

Other regional planning programs influencing disposal of dredged material are also underway. These programs include the San Francisco Estuary Project and CALFED, an effort similar to the LTMS that is set to begin addressing dredged material in the Sacramento/San Joaquin River Delta. Selected beneficial use planning and projects developed by the LTMS, and other programs are summarized below.

Beneficial Use Projects in the San Francisco Bay Region

The Sonoma Baylands Project. The California Coastal Conservancy (CCC) arranged the purchase of 830 acres of former tidal and seasonal wetlands for habitat restoration. Two and a half million cubic yards of dredged material from the San Pablo Bay and Oakland Harbor were used to build up subsided diked land before dikes were breached and tidal wetlands were restored in 1996. Congress directed USACE to conduct the project as a beneficial use of dredged material. The project was funded through the Water Resources Development Act (WRDA 1992), State of California funds, and bonds issued by the CCC. EPA participated in project planning and provided support through a grant to the State for long-term monitoring of the project.

CALFED Sacramento/San Joaquin Habitat Enhancement and Levee Stabilization. The CALFED Program comprises numerous federal and state agencies and local partners concerned with issues in the Sacramento/San Joaquin River Delta and Central Valley watershed. CALFED planning calls for various forms of habitat restoration, and for stabilization and maintenance of key levees in the Delta. CALFED is currently reevaluating the long-term future of the Delta, considering such threats as sea level rise and seismic risk; this reevaluation may alter planned levee configuration. Nonetheless, many CALFED projects could use suitable dredged material. By previous estimates, potentially several million cubic yards of dredged material could be used for levee stabilization alone. Some state funding can be used to meet non-federal cost sharing requirements for dredged material beneficial use. Two small levee pilot projects have been completed with dredged material, and LTMS is working with CALFED to increase beneficial use in the Delta.

Hamilton Army Airfield Wetlands Restoration. Hamilton Wetland Restoration Project, located on the former Army Airfield, is a USACE ecosystem restoration project that is sponsored by the California Coastal Conservancy. The project will use up to 7 million cubic yards of clean dredged material to restore seasonal wetlands and tidal marsh on 700 acres adjacent to San Pablo Bay. The State also owns 300 acres of diked land that is the former antenna field for the airfield. In 2001, the Conservancy purchased the adjacent 1,500–

acre farm site which, pending WRDA authorization, will constitute later phases of the project and expand the total restoration project to 2,600 acres and up to 30 million cubic yards of dredged material use. USACE has constructed levees and containment dikes for sediment management, as well as the on-shore portion of the offloading pipeline. The site should begin receiving dredged material in late 2007. It is estimated that it will take 5 to 8 years to fill the airfield portion of the wetland restoration, and perhaps decades to complete the entire project.

Montezuma Wetlands Restoration. A private company, Montezuma Wetlands LLC, is in the process of restoring some 1,800 acres of tidal wetlands by operating a receiving area for dredged materials within a 3,500-acre site the company owns. Due to the depth of the site and the site's ability to sequester moderate levels of metals and organics, this project has been permitted to accept dredged material that is not suitable for unconfined aquatic disposal (and is not hazardous waste), as well as clean dredged material that will provide the cover layer. The site has so far successfully received about 2.5 million cubic yards of sediment from the Port of Oakland federal channel deepening project, and begun restoring vernal pools and other habitat on the site. An extensive monitoring program is an integral part of site operation.

Port of Oakland Harbor 50 Foot Deepening Project. This 12-million-cubic-yard project is the first major project in the Bay Area to fully adopt the LTMS goals by proposing beneficial use for 100 percent of its dredged material. The Port is using about 5 million cubic yards of dredged material from the deepening project to enhance aquatic habitat (for eelgrass, fisheries, and seabird foraging) in the Oakland Middle Harbor. In addition, the harbor deepening project is providing the Hamilton Army Airfield and Montezuma wetland restoration projects with about 5.5 million cubic yards of suitable dredged material. The approximately 500,000 cubic yards of dredged material will be used beneficially to cap a nearby landfill. Dredging of this project is ongoing, and is expected to be completed in 2008.

Landfill Daily Fill, Beach Nourishment, and Other Beneficial Uses. Dredging projects in the Bay Area also supply material that is beneficially used in various other ways, including landfill daily cover (largely for material that is unsuitable for unconfined aquatic disposal), sand and beach nourishment, sand for use by aggregate companies, and construction fill in separately approved upland or aquatic fill projects (for both material that is clean and that is unsuitable for aquatic disposal). The LTMS is working to increase the opportunities for such use, with a long-term goal of 40 percent of all area dredged material going for some kind of beneficial use.

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