

Dredging & Dredged Material Management



Dredging to maintain Tampa Bay's shipping channels generates about a million cubic yards of material each year, enough to fill Raymond James Stadium 10 times.

Photo courtesy of the Tampa Port Authority

DR-1

Manage Dredging and Dredged Material in Tampa Bay

ACTION:

Implement the long-term dredging and dredged material management strategy for Tampa Bay.

STATUS:

Complete as written.

BACKGROUND:

This action is essentially complete as written in the original CCMP.

The U.S. Army Corps of Engineers completed the long-term dredge material management plan for Tampa Bay in July 2000. The report outlined dredging projections, spoil placement options, and capacity shortfalls, noting that existing dredge disposal sites may be full to capacity within five to ten years unless steps are taken soon to expand storage areas or find beneficial uses for the material.

The long-term plan will be updated to incorporate new projections for capacity, short-fall and timing based on reassessments and recent surveys of islands 2D and 3D, along with updates on beneficial use projects.

Dredging to maintain the bay’s nautical highways – up to 43 feet deep in places – generates about a million cubic yards of material each year, enough to fill Raymond James Stadium 10 times. Sediment dredged from the upper portions of the bay, where most dredging occurs, has traditionally been piped onto two manmade islands in Hillsborough Bay but they are rapidly reaching capacity. An offshore dredged material site with unknown capacity receives sediment material from the lower bay.

Plans are being finalized now to double the height of the dikes on the Hillsborough Bay spoil islands to 40 feet using dredged material already stored inside the dikes. That will increase total capacity to about 30 million cubic yards each, extending the life of the dikes until at least 2030. Another option calls for raising the dikes again, this time to 50 feet, when additional capacity is needed.

Since 1999, the Corps has found beneficial uses for all material from federal dredging projects in the bay, reflecting its strong commitment to alternative options. Beneficial use projects – including stabilizing the shoreline at Egmont Key— helped redirect almost 2 million cubic yards of sediment. Another 200,000 cubic yards of sediment from maintenance dredging in the Alafia River is being used to create a series of habitats at abandoned shell pits near Cockroach Bay.

One of the challenges in identifying beneficial uses is that the Corps must find “the least-cost environmentally acceptable” option, which limits alternatives. Another is that most dredged material from Tampa Bay is not suitable for beach renourishment,

and even when it is, the cost of transporting the material is too high.

Finding non-federal partners to help support and fund beneficial use projects will be critical for these projects to materialize in the future.

One possible use for material from maintenance dredging may be filling manmade holes dug decades ago for fill material used to create residential finger canals, but only in cases where filling or partially filling the holes will improve habitat value. The Tampa Bay Estuary Program, Fish and Wildlife Research Institute and EPC spearheaded an effort to assess habitat value in existing holes, with the assistance of local fishermen. That research project identified three holes where filling or partial filling might enhance water quality and habitat, while concluding that eight holes should be left intact. Another beneficial use the Corps is considering is re-creating longshore bars in areas where tidal flows may be restricting seagrass recovery. Habitat restoration projects such as the one at Cockroach Bay also are attractive, saving taxpayers money that would otherwise be spent on fill material.

Another idea in the formative stages is to use rocky dredged material to enhance hard bottom habitat in Tampa Bay.

While discussions of dredged material often focus on new construction, material from maintenance dredging currently outpaces new work by a ratio of 3:1. According to the Corps, maintenance dredging will create an estimated 30 million cubic yards of material through 2030, compared with about 11 million cubic yards in planned construction projects. That doesn't include projections from the expansion at Port Manatee, which has its own upland disposal site.

The ratio may change as the Corps completes its projections related to the Tampa Harbor and St. Petersburg Harbor Re-evaluation studies. For instance, widening the shipping channel to create a "passing zone" for ships near the turnoff to Port Manatee might generate from 1.5 to 2.8 million cubic yards of material. Along with the costs – estimated at \$20 million – scientists must also consider the environmental impact of further widening the channel (including the impacts of ship wakes) and other projects being pursued.

STRATEGY:

STEP 1 Complete annual updates to the long-term dredging and dredged material management plan, including new projections on capacity and shortfalls.

Responsible parties: U.S. Army Corps of Engineers

Schedule: Annual updates

STEP 2 Continue to pursue beneficial uses for dredged material to facilitate and accelerate bay habitat restoration and enhancement supporting the CCMP, identify cost-sharing sponsors, and encourage expedited permitting for beneficial uses.

Responsible parties: U.S. Army Corps of Engineers; FDEP

Schedule: Ongoing

STEP 3 Identify critical environmental issues and potential impacts associated with

ACTION PLAN

the Tampa and St. Petersburg Harbor Re-evaluation studies for delivery to ACOE.

Responsible parties: ABM and TBEP TAC joint workshop

Schedule: Comments submitted in 2005

STEP 4 Ensure that environmental impacts are adequately addressed in the U.S. Army Corps of Engineers Tampa and St. Petersburg Harbor Reevaluation studies.

Responsible parties: U.S. Army Corps of Engineers

Schedule: Ongoing