

## FACT SHEET:

# Management Technologies - Treatment/ Disposal

### Description:

**Treatment** - Management of removed sediments prior to disposal. Typical process options include dewatering (e.g., filter press hydrocyclone), and stabilization (typically used to meet disposal requirements). High cost and limited marginal increased benefit typically precludes use of chemical removal/destruction treatment processes.

**Disposal** - The final disposition for sediments that are removed/treated. Typical process options include in-water/upland confined disposal facilities (CDF), on-site/off-site landfills, and beneficial reuse.

### Scale of Implementation:

#### Full-Scale

#### Precedence (full-scale):

Treatment

- ✓ Dewatering and/or stabilization typically utilized at most removal sites

Disposal

- ✓ CDF: New Bedford Harbor (MA) and many navigational dredging sites
- ✓ Landfills: most other removal sites

#### Documented Effectiveness Toward Risk Reduction:

Treatment

- ✓ dewatering reduces wet volume (and potentially weight) of sediment for disposal
- ✓ stabilization increases volume of sediment
- ✓ may decrease mobility of sediment

Disposal

- ✓ mitigation of potential risks associated with removed sediment



Confined Disposal Facility

### Critical Engineering Design Issues Influencing Effectiveness:

Treatment

- ✓ sediment/constituent type
- ✓ available space
- ✓ water content of removed sediments and final desired solids content
- ✓ constituent concentration
- ✓ management of water generated from dredge spoils
- ✓ ultimate disposal location
- ✓ location of treatment facility
- ✓ presence of oils

Disposal

- ✓ volume of sediment
- ✓ constituent concentration
- ✓ access/space requirements
- ✓ navigational traffic

### Short-/Long-Term Issues:

Treatment

- ✓ obtaining necessary space requirements
- ✓ can limit removal operation rates

Disposal

- ✓ necessary space requirements
- ✓ interference with boat traffic
- ✓ location of disposal facility
- ✓ availability and capacity
- ✓ increased risk of exposure and transportation accidents
- ✓ permitting

#### For More Information:

- ✓ USEPA. *National Conference on Management and Treatment of Contaminated Sediments*. Proceedings Cincinnati, OH. May 13-14, 1997. EPA-625-R-98-001, August 1998.
- ✓ National Research Council. *Contaminated Sediments in Ports and Waterways: Cleanup Strategies and Technologies*. National Academy of Sciences. 1997
- ✓ USEPA ARCS Program. *Remediation Guidance Document*. EPA-905-R94-003. October 1994.