

Cleanup Dredged Material Management Options

- Evaluated multiple options for management of dredged material
- Options include beneficial use (i.e. use for another purpose), disposal and combinations of the two
- Beneficial use preferred where feasible
- Considered the physical and chemical qualities of the material
- Compared costs, capacity, and ability to implement
- Factored in the level of in-kind match provided for securing federal funds
- Using yardsticks above identified the best options for dredge material management
 - ◇ Erie Pier Processing and Reuse Facility (shipping channel material)
 - ◇ Wisconsin Point Landfill (cleanup project material)

Category	Option	Cost per Cubic yard	Capacity (Cubic Yards)	Why Option Not Selected
Beneficial Use	In-water Habitat Placement (Cummings Slip)	\$19.41	20,000	Permitting requirements are significant, time consuming, and may not be approved. Cummings slip is bounded by industrial land uses with steel sheet pile walls. Limited habitat benefits, high maintenance to sustain, and future use of slip would be limited.
	Wisconsin Point Landfill	\$46.48	> 90,000	N/A – This option was selected by the project team based on costs, capacity, and ability to implement. In addition, this option contributes significant in-kind cost share needed to match federal funds.
	Duluth Brownfield Sites via Erie Pier*	\$41.36	0	Would require transport of material to Erie Pier after first removing and relocating an equal amount of material from Erie Pier to brownfield sites. Permitting requirements are significant.
	Landfill Daily Cover	NE	5,000	Very low capacity, limited ability for cost share (Moccasin Mike Landfill).
Disposal	Fill Baxter Slip & Embayment	NE	28,000	Project could not be timed to coincide with dock wall project & limited volume. Permitting requirements are significant, time consuming, and may not be approved.
	Cummings Slip CDF	NE	30,000	Permitting requirements are significant, time consuming, and may not be approved.
	Erie Pier CDF*	NE	0	Placing material dredged from outside the federal navigation channel in Erie Pier requires mitigation for the loss of capacity in Erie Pier, making this option cost prohibitive.
	Upland Placement at Fraser	\$52.43	37,500	Wetlands would be filled. Land use. Permitting requirements are significant.
	Landfill Disposal Vonco	\$63.32	Unlimited	High cost. No ability for cost share.

N/A – Not Applicable

NE - Not Evaluated - Project team determined option was not feasible before preparing cost estimates.

CDF – Confined Disposal Facility

* **Erie Pier** exists to support the **federal navigation channel** in the harbor. In coordination with the clean-up project, the **U.S. Army Corps** will dredge the shipping channel and that material will go to the **Erie Pier processing and reuse facility**.