

ALTERNATIVES					GENERAL INFORMATION					
Objective	Type	Category	Description	Examples	Capacity (Order of Magnitude)	Estimated Typical Dredging and Placement Cost \$/CY	Sediment Testing for Placement	Min % Sand	Contaminated Sediments Accepted	Estimated Costs to Project Costs to Create Option (Order of Magnitude)
Disposal of Dredged Material	Open Water Disposal	Ocean Disposal	Federally designated offshore ocean disposal.	Cold Spring/Cape May Inlet	10,000,000	\$20	Physical Chemical Biological	0	No	\$1,000,000
		Confined Aquatic Disposal Site (CAD)	Subaqueous disposal site within a confined facility to prevent offsite transportation of dredged material.	Newark Bay CAD	100,000	\$25	Physical Chemical Biological	0	Site Specific	\$100,000
		Sidcasting	Unconfined open water disposal beyond the dredging area.	N/A	100,000	\$15	Physical Chemical Biological	0	No	\$100,000
		Reprofiling	Unconfined open water disposal within the dredging area.	N/A	1,000	\$10	Physical Chemical	0	Site Specific	\$10,000
	Upland Disposal	Confined Disposal Facility (CDF)	Disposal in an upland, nearshore, or island facility that is contained with a dike.	Nummy Island CDF Sedge Island CDF Gravens Island CDF	100,000	\$30	Physical Chemical	0	Site Specific	\$100,000
		Landfill	Disposal at an active sanitary landfill.	Cape May County MUA Landfill	10,000	\$55	Physical Chemical	0	Yes	\$1,000,000
		Dredged Material Processing Facility (DMPF)	Disposal at a facility that is permitted to receive, process, and reuse dredged material.	Cape Atlantic Recycling Dredged Material Processing Facility	100,000	\$45	Physical Chemical	0	Site Specific	\$100,000
Beneficial Use of Dredged Material	Environmental Restoration	Wetland Restoration	Intertidal placement to increase elevations that are suitable for wetland growth.	Gull Island	10,000	\$20	Physical Chemical Biological	0	No	\$100,000
		Quarry Restoration	Upland placement to restore a quarry to its preexisting conditions.	N/A	100,000	\$40	Physical Chemical Biological	0	No	\$10,000
		Intertidal Habitat Enhancement	Intertidal placement to increase elevation to enhance intertidal habitat.	Stone Harbor Point	10,000	\$20	Physical Chemical Biological	0	No	\$100,000
		Dredge Hole Restoration	Open water placement to restore an open water quarry site to depths that promote habitat growth.	Dredge Hole #35	10,000	\$15	Physical Chemical	0	No	\$10,000
		Edge Restoration	Intertidal placement along the edge of wetlands to restore areas of erosion.	N/A	10,000	\$25	Physical Chemical Biological	0	No	\$100,000
	Environmental Remediation	Upland Remediation	Upland placement as fill to cover and cap a remediation project site.	Harbison-Walker Remediation Site	1,000,000	\$50	Physical Chemical	0	Site Specific	\$1,000,000
		Open Water Remediation	Open water placement as fill to cover and cap a remediation project site.	Historic Area Remediation Site (HARS)	10,000,000	\$20	Physical Chemical Biological	0	Site Specific	\$1,000,000
	Flood Protection	Beach and Dune Nourishment	Upland placement to restore and enhance the beach and dunes system.	Stone Harbor Beach Fill	1,000,000	\$30	Physical Chemical	90	No	\$10,000
	General Fill	Landfill Cover	Upland placement for daily and intermediate cover material.	Cape May County Landfill	10,000	\$40	Physical Chemical Geotechnical	65	Site Specific	\$1,000,000
		Pre-1982 Landfill Closure	Upland placement to provide required cover material to close pre-1982 landfill.	Wildwood Landfill	10,000	\$40	Physical Chemical Geotechnical	65	Site Specific	\$100,000
		Misc Construction	Upland placement for use as roadway subbase, embankment fill, or other construction fill.	GSP Interchange	10,000	\$35	Physical Chemical Geotechnical	65	No	\$1,000,000

Estimated dredging costs is only for dredging and placement. Does not include Mob/De-Mob  
Capacity is provided as an order of magnitude

ALTERNATIVES					STONE HARBOR EVALUATION		
Objective	Type	Category	Description	Examples	Option Currently Available to Stone Harbor (Order of magnitude capacity)	Evaluation for Stone Harbor Dredged Material Management	Recommended for Stone Harbor Dredged Material Management
Disposal of Dredged Material	Open Water Disposal	Ocean Disposal	Federally designated offshore ocean disposal.	Cold Spring/Cape May Inlet	No	Requires extensive permitting to open an active site that is typically done at the federal or state level. Once a site is active, costly biological testing is needed for approval.	No - The approved site offshore of Cape May Inlet is designated for inlet material only and is not active.
		Confined Aquatic Disposal Site (CAD)	Subaqueous disposal site within a confined facility to prevent offsite transportation of dredged material.	Newark Bay CAD	No	A site would need to be developed and permitted for dredged material disposal. If a site were developed it would be a cost effective option for placement.	No - A CAD site does not exist and the development of a site is cost-prohibitive.
		Sidcasting	Unconfined open water disposal beyond the dredging area.	N/A	No	This disposal method would require changes in regulatory policies.	No - Regulatory approval for this process is almost impossible.
		Reprofiling	Unconfined open water disposal within the dredging area.	N/A	No	This is feasible within the Stone Harbor man-made lagoons. The Shelter Haven lagoon has depths to accept reprofiling.	Yes - Evaluate cut/fill volumes and discuss with regulatory agencies.
	Upland Disposal	Confined Disposal Facility (CDF)	Disposal in an upland, nearshore, or island facility that is contained with a dike.	Nummy Island CDF Sedge Island CDF Gravens Island CDF	Yes 1,000 CY Capacity	Nummy Island CDF does not have capacity. Excavation and restoration of the CDF is needed to create capacity for placement. Stone Harbor is currently pursuing creating CDF capacity. Sedge Island CDF has minimal capacity. There is local opposition to actively using this site. Gravens Island CDF is owned and managed by Avalon. They have created capacity at the CDF.	Yes - Nummy Island CDF - Obtain permits to excavate and restore the site to increase local capacity. Yes - Gravens Island CDF - Discuss use with Avalon. No - Sedge Island CDF - Limited capacity and local opposition to use
		Landfill	Disposal at an active sanitary landfill.	Cape May County MUA Landfill	Yes 10,000 CY Capacity	Dredged material must pass the paint filter test for truck transport and disposal. Clean dredged material may be used for cover material. The current landfill fee for disposal of contaminated soil is \$20/cy (CMCMUA 2014) that does not include dredging or transportation costs.	Yes - Only for contaminated material or if processing facility is at capacity.
		Dredged Material Processing Facility (DMPP)	Disposal at a facility that is permitted to receive, process, and reuse dredged material.	Cape Atlantic Recycling Dredged Material Processing Facility	Yes 100,000 CY Capacity	The Cape Atlantic Recycling facility is the only NJDEP approved dredged material processing facility in South Jersey. They only accept clean dredged material. Material is typically trucked to the facility.	Yes - Although more expensive than CDF disposal, placement at the DMPP simplifies contracting and Stone Harbor does not need to develop a beneficial use project.
Beneficial Use of Dredged Material	Environmental Restoration	Wetland Restoration	Intertidal placement to increase elevations that are suitable for wetland growth.	Gull Island	No	A site would need to be permitted to accept dredged material for restoration. The USACE recently completed an Environmental Assessment of utilizing dredged material from the New Jersey Intracoastal Waterway for wetland restoration.	Pending approved project - There is limited capacity for wetland restoration and the permit and design process can be cost prohibitive. Should a project be developed by others, Stone Harbor should consider placement at an approved project site.
		Quarry Restoration	Upland placement to restore a quarry to its preexisting conditions.	N/A	No	A site would need to be permitted to accept dredged material for restoration. To our knowledge this is not being pursued by any local quarries.	Pending approved project - Should a project be developed by others, Stone Harbor should consider placement at an approved project site.
		Intertidal Habitat Enhancement	Intertidal placement to increase elevation to enhance intertidal habitat.	Stone Harbor Point	No	A site would need to be permitted to accept dredged material for restoration. Stone Harbor has identified that the Stone Harbor Point is a potential option for habitat enhancement however the dredged material must meet project specific requirements.	Pending approved project - There is limited capacity for intertidal habitat enhancement and the permit and design process can be cost prohibitive. Should a project be developed by others, Stone Harbor should consider placement at an approved project site.
		Dredge Hole Restoration	Open water placement to restore an open water quarry site to depths that promote habitat growth.	Dredge Hole #35	No	A site would need to be permitted to accept dredged material for restoration. NJDOT OMR is identifying and evaluating dredge holes but they have not identified any site in Stone Harbor.	Pending approved project - The NJDOT OMR has not identified any local dredge holes in need of restoration. Should a project be developed by others, Stone Harbor should consider placement at an approved project site.
		Edge Restoration	Intertidal placement along the edge of wetlands to restore areas of erosion.	N/A	No	A site would need to be permitted to accept dredged material for restoration. Areas in need of edge restoration can be identified from comparing shoreline locations along the intertidal waterways to identify areas of erosion that are in need of restoration.	Pending approved project - There is limited capacity for edge restoration and the permit and design process can be cost prohibitive.
	Environmental Remediation	Upland Remediation	Upland placement as fill to cover and cap a remediation project site.	Harbison-Walker Remediation Site	No	An environmental remediation project that needs upland fill would need to be approved to accept dredged material.	Pending approved project - We are not aware of any local upland remediation projects in that area that will accept dredged material. Should a project be developed by others, Stone Harbor should consider placement at an approved project site.
		Open Water Remediation	Open water placement as fill to cover and cap a remediation project site.	Historic Area Remediation Site (HARS)	No	An environmental remediation project that needs open water fill would need to be approved to accept dredged material.	Pending approved project - We are not aware of any local open water remediation projects in that area that will accept dredged material. Should a project be developed by others, Stone Harbor should consider placement at an approved project site.
	Flood Protection	Beach and Dune Nourishment	Upland placement to restore and enhance the beach and dunes system.	Stone Harbor Beach Fill	Yes	The USACE has a federally authorized shore protection project in Stone Harbor. It is possible to utilize dredged material for beach fill that has > 90% sand. It may be possible to utilize fine grained sediments contained within geotextile tubes to reinforce dunes.	Yes - Evaluate the grain size of the dredged material. If the material is >90% sand discuss placement of dredged material on the beach with USACE.
	General Fill	Landfill Cover	Upland placement for daily and intermediate cover material.	Cape May County Landfill	Yes 10,000 CY Capacity	Dredged material must pass the paint filter test for truck transport and use as landfill cover.	Yes - Discuss daily and intermediate cover requirements with CMCMUA.
		Pre-1982 Landfill Closure	Upland placement to provide required cover material to close pre-1982 landfill.	Wildwood Landfill	No	A site would need to be permitted to accept dredged material for closure. The NJDOT OMR is currently identifying and evaluating potential pre-1982 landfill sites that could utilize dredged material for final cover material.	Yes - Discuss Wildwood Landfill Closure project with Wildwood to evaluate current need for the closure project.
		Misc Construction	Upland placement for use as roadway subbase, embankment fill, or other construction fill.	GSP Interchange	Yes 10,000 CY Capacity	If the dredged material meets the construction specifications it can be used in a project. Due to the availability of fill material in South Jersey there is limited incentive for the use of dredged material and Stone Harbor would likely need to pay for its use.	Yes - Evaluate local projects that need general fill and evaluate dredged material to see if it meets the material specifications. Should a project be developed by others, Stone Harbor should consider placement at an approved project site.

Estimated dredging costs is only for dredging and placement. Does not include Mob/De-Mob  
Capacity is provided as an order of magnitude