Fact Sheet - October 1999

United States Environmental Protection Agency

US Army Corps of Engineers
New England District

Long Island Sound Dredged Material Disposal EIS

Evaluation Factors for Site Screening

FACTOR	EVALUATION BASIS	GOAL
I. For All Sites		
1. Endangered Species and Federally Managed Fisheries		
a. Federally Listed Threatened or Endangered Species	Amount and Type of Habitat, Species, Time of Year Occupied, Designated Critical Habitat	Protect Habitat Integrity, Avoid Disturbance during Period of Use/Occupation
b. State listed Rare/Endangered Species or those of State Concern	Amount and Quality of Habitat, Species, Time of Year Occupied	Protect Habitat Integrity, Avoid Disturbance during Period of Use/Occupation
c. Essential Fish Habitat	Amount and Type of Habitat, Species, Lifestage and Time of Year Occupied	Protect Habitat Integrity, Avoid Disturbance during Period of Use/Occupation.
2. Cultural/Archaeological Resource Sites or Historic Districts	Type of Site, Presence, Significance of Features	Protect Site Integrity
3. Existing Habitat(s) at Site	Type, Amount, Quality Diversity and Integrity of Plant and Animal Species, Existing Conditions, Proposed or Existing Restorations Efforts	Long-Term Protection of Existing Habitats, Avoid disturbance during period of use/occupation
4. Site Accessibility		
a. Route	Neighborhood Types, Road Types, Navigation Limitations, Interference with other Activities, Vertical Clearance Limitations	Minimize Disruption to Other Activities and Collateral Impacts
b. Location	Distance, Time & Cost to Transport, Time of Year Restrictions	Maximize Operational Efficiency
c. Logistics	Rehandling Requirements, Equipment Needs and Limitations	Maximize Efficient use of Equipment, Assure Safe Operation, Reduce Risks (Physical and Environmental) Inherent in Multiple Rehandling Operations
5. Site Characteristics		
a. Physical Area of Impact	Cubic Yards/Size of Disposal Area	Minimize Area Adversely Affected
b. Site Capacity	Volume for Both Suitable and Unsuitable Dredged Materials	Maximize Among Fewer Sites (but Not Eliminating Combination Sites)
6. Site Protection Requirements	Exposure to Erosive Wave Actions Storm Exposure, Currents, Foundation Conditions, Non-Federal Future Liability	Minimize Risk and Consequences of Failure, Maximize Potential for Corrective Action
7. Site Use Conflicts		
a. Military Practice, Research or Restricted Areas	Distance, Type of Use, Restrictions	Eliminate Conflicts
b. Extractable Resources Present	Type, Amount, Value, Developed or Not	Minimize Conflicts
c. Public Parklands	Type of Use, Distance	Minimize Conflicts
d. Other Commercial Uses	Type, Amount, Value	Minimize Conflicts
e. Odors, Dust, Aesthetics	Distance to Nearest Neighbors and Prevailing Wind Direction, Buffer Width	Reduce Associated Nuisance and Health Impacts
8. Economic Impacts	Amount of Dredging Dependent Activities and Potentially Adversely Affected Activities	Maintain Economic Viability, Minimize Adverse Impacts & Conflicts
9. Duration of Potential Adverse Impacts	Time, Severity, Recovery Period	Minimize Long-Term Impacts
10. Recreational Uses	Types, Area, Period of Use	Minimize Conflicts
II. Upland Sites		
1. Surface Water Quality		
a. Relation to Water Supply Watersheds	Distance, Potential Pathways, Potential for Degradation	Protect Water Quality
b. Rivers	Distance from Major Rivers and Tributaries	Protect River Water Quality and Habitats
2. Groundwater Quality		
a. Wellhead Protection Zones	Distance, Potential Pathways, Potential for Degradation, Type of Well (Such as Community Well, Transient Wells, Private Wells)	Protect Water Quality
b. High Quality Groundwater	Within GAA Classification	Protect High Quality Groundwater
3. Agricultural Use	Amount, Type, Value, Agricultural Capacity, Impact Potential	Retain Long-Term Viability

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5. Existing Habitat Types		
a. Wetlands	Amount, Type, Benefits, Impacts, Recovery Potential	Minimize Adverse Impacts
b. Mudflats	Amount, Type, Benefits, Impacts, Recovery Potential	Minimize Adverse Impacts
c. Spawning/Nursery Habitat	Amount, Quality, Species, Benefits, Impacts, Recovery Potential, Time of Year Issues	Avoid Long-Term Adverse Impacts to Important Habitat Avoid Disturbance During Period of Use/Occupation
d. Submerged Aquatic Vegetation	Amount, Type, Benefits, Impacts Recovery Potential	Minimize Adverse Impacts
e. Shellfish Beds	Amount, Type, Benefits, Impacts, Recovery Potential, Time of Year Issues	Minimize Adverse Impacts
f. Benthic Habitat	Amount/Type, Benefits, Impacts and Recovery Potential	Avoid Long-Term Adverse Impacts to Important Habitat
6. Current Patterns, Water Circulation	Current Speed and Directions, Eddy Presence, Potential for Change and Resulting Impact on Environment and Vessel Traffic	Avoid Significant Changes to Water Circulation Patterns, and Current Velocities
7. Site Exposure to Erosive Currents, Boat Wakes, Waves and Storm Events	Wave Heights, Direction, Currents, Potential for Alteration of Wave Climate, Storm Effects Anticipated	Maximize Long-Term Containment Confidence, Minimize Adverse Impact on Adjacent Areas
8. Commercial and Recreational Fisheries	Amount, Type, Quality, Time of Year Issues, Gear Used	Minimize Loss/Long-Term Impacts Avoid/Minimize Site-Use Conflicts
9. Water Related Recreation	Amount, Type, Quality	Maximize Long-Term Retention of Opportunities
10 Foundation Conditions for Retaining Structure	Geotechnical Stability, Dredging Requirements if any	Ensure Containment
11. Adjacent Land Ownership/Present and Projected Use	Amount, Type, Quality, Impacts, Enhanced Protection	Retain long-term availability Protect riparian rights
12. Marine Habitat Development	Type, Amount, Value to be Created Versus Existing Habitat to be Altered	Maximize long-term Beneficial Use
13. Port Facilities Development	Type, Amount, Value to be Created and Related Development Issues	Improve/expand utility, maximize Beneficial use

V. Open Water		
1. Conservation Areas		
a. Federally Designated Marine Sanctuaries, Wildlife Refuges, National Seashores & Parks or Similar Preserves	Amount, Type, Time of Year Restrictions, Level and Types of Use	Meet Federally-Imposed Requirements
b. State Designated Marine Sanctuaries and Preserves or Fish Havens (including Artificial Reefs)	Amount, Type, Affected Ecosystem, Distance, Time of Year Restrictions	Minimize Adverse Impacts
2. Navigation Considerations		
a. Marine Shipping/Transit Lanes	Amount, Vessel Type, Vessel Draft, Prop Wash	Minimize Adverse Impacts
b. Anchorage Areas & Harbors of Refuge	Volume of Use, Vessel Drafts	Minimize Adverse Impacts
c. Aids to Navigation	Location, Purpose	Minimize Conflicts
d. Recreational Navigation	Volume of Use, Purpose, Vessel Drafts	Minimize Conflicts
3. Existing Habitat Types		
a. Mudflats & Sandflats	Amount, Type, Benefits, Distance, Impacts, Recovery	Minimize Adverse Impacts
b. Spawning/Nursery Habitat	Amount, Type, Benefits, Impacts, Distance, Recovery Potential, Time of Year Issues	Impacts to Important Habitat
c. Fisheries Feeding/Migration Habitat	Amount, Type, Benefits, Impacts, Distance, Recovery Potential, Time of Year Issues	Avoid Long-Term Adverse Impacts
d. Submerged Aquatic Vegetation	Amount, Type, Benefits, Distance, Impacts, Recovery Potential	Minimize Adverse Impacts
e. Shellfish Beds	Amount, Type, Benefits, Time of Year Issues, Impacts, Recovery Potential, Distance	Minimize Adverse Impacts
f. Benthic Habitat (Unique, Hard Bottom or Complex Habitats)	Amount, Type, Benefits/Value, Impacts and Recovery Potential, Distance	Avoid Long-Term Adverse Impacts to Important, Valuable, Sensitive Habitats

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4. Commercial and Recreational Fisheries	Time of Year Issues	
a. Commercial Fisheries Harvest Areas	Distance, Amount, Type, Value	Minimize Loss/Long-Term Impacts
b. Shellfish Harvest Areas	Distance, Amount, Type, Value	Minimize Loss/Long-Term Impacts
c. Shellfish Propagation Areas	Distance, Amount, Type, Value	Minimize Loss/Long-Term Impacts
d. Bottom Harvest/Disturbance of Bottom	Type & Amount of Gear Disturbance	Avoid Conflicts - Ensure Disposal Mound Integrity
e. Aquaculture Sites (Including Oysters)	Amount, Type, Value	Minimize Loss/Long-Term Impacts
f. Recreational Fisheries Areas	Distance, Amount, Type, Value	Minimize Loss/Long-Term Impacts
5. Site Characteristics		
a. Current Patterns, Water Circulation	Current Speed and Directions, Eddy Presence, Adequate Dilution Potential, Disposal Mound	Minimize Adverse Impacts to Water Quality, Maximize Material Stability Containment, Minimize Significant Changes to Water Circulation Patterns and Current Velocities
b. Ambient Sediment Conditions/Type	Grain Size, Existing Quality	Minimize Adverse Change to Existing Bottom
c. Bathymetry (Depths and Slopes at Site)	Depth and Slopes Relative to Environmental and Navigational Use, Stability of Site for Disposal Mound Formation & Retention	Protect Navigation, Maximize Containment (Minimize Adverse Impacts to Mound Stability)
d. Nuisance Species	Type, Distribution, Relation to Past Disposal Activities	Minimize Recruitment of Nuisance Species
e. Eutrophication Potential	Inadequate Dilution, Excess Nutrient Problems, Dilution Potential, Disposal Mound Stability Noxious Algae Blooms	Minimize Adverse Impacts to Water Quality
6. Disposal Site Feasibility/Stability		
a. Containment Characteristics (Deposition v. Dispersal Sites)	Currents, Grain Size, Value of Adjacent Areas	Maximize Long-Term Containment Confidence
b. Dispersal Site Effects	Impacts on Marine Life and Habitats at Site and Adjacent Areas & Fate of Dispersed Materials	Minimize Significant Adverse Effects
c. Site Exposure to Erosive Currents and Storm Events	Wave Heights, Wave and Wind Direction, Currents	Maximize Long-Term Containment Confidence
d. Disposal Plume Migration Potential	Distance, Concentrations, Depositional Fate of Dispersed Material, Impacts	Minimize Significant Adverse Effects
e. Species/Habitat Changes	Past Disposal-Induced Changes in Habitat Species Composition, Diversity, Density, or Lack of Pollution Sensitive Forms	No Significant Adverse Disposal-Induced Changes
f. Contaminant Bioaccumulation and Toxicity from Current/Past Use	Past Disposal-Induced Progressive Accumulation of Toxics in Sediments and Food Web (Impacts and Relation to FDA Levels)	No Significant Adverse Disposal-Induced Effects
g. Contaminant Bioaccumulation and Toxicity Potential	Potential for Disposal-Induced Progressive Accumulation of Toxics in Sediments and Food Web (Impacts and Relation to FDA Levels)	Minimize Significant Adverse Effects
7. Other Site Use Conflicts		
a. Public Beaches	Distance, Type, Quality, Level of Use	Maximize Retention of Opportunities
b. Utilities (Submarine Pipelines and Cables)	Distance, Type, Relocation Cost	Minimize Conflicts and Costs
8. Site Management Issues and Feasibility		
a. Monitoring Feasibility	Site Location and Conditions	Ensure Adequate Monitoring
b. Physical Isolation of Contaminants	Cap Designs Adequate to Sequester Contaminants - Exposure from Burrowing or Benthic-Feeding Organisms	Maximize Long-Term Cap Integrity
c. Disposal Mound Height Limits	Mound Height and Cap Design Adequate to Offset Effects of Storm Induced Erosion	Ensure Long-Term Cap Integrity
d. Minimum Capping Requirements	Cap Materials Design Considerations (Thickness, Type of Material and Coverage) to Negate Effects of Currents and Erosion	Ensure Long-Term Cap Integrity

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