Selection of Sites for Placement
of Dredged Material

Central Long Island Sound Disposal Site

Projection: Conformal Conic
Coordinate System: CT State Plane (m)
Datum: NAD 83
Depth in meters, MLW
Waste characterization

Consider Waste Prevention Audit and Waste Management Options

Are there practicable opportunities to re-use, recycle or treat waste?

reject

yes

Action List

Is material acceptable?

no

Can material be made acceptable?

reject

yes

Identify and characterize disposal Site

Determine potential impacts and prepare Impact Hypotheses

Issue permit?

no

reject

yes

Implement project and monitor compliance

Field monitoring and assessment
SITE SELECTION PROCEDURE

1. Assessment of need for a new site.
2. Identification of potentially suitable areas.
3. Identification of site requirements related to sediment characteristics.
4. Selection of candidate sites.
5. Determination of potential adverse effects at each candidate site.
6. Comparison of candidate sites.
7. Assessment of acceptability of potential adverse effects.
8. Site selection.
Assessment of Need

- Other organization’s needs
- Suitability/capacity of existing sites
- Acceptability of sediment for sea disposal
- Evaluation of alternative disposal options
2. Identification of Suitable Areas

- Determine Zone of Siting Feasibility
- Compile information on incompatible uses
- Screen sites
- Identify remaining potentially suitable areas
Identification of Suitable Areas

• Determine Zone of Siting Feasibility
• Compile information on incompatible uses
• Identify remaining potentially suitable areas
Potentially Incompatible Uses - 1

- Subsistence, commercial and sport fishing areas
- Spawning, recruitment and nursery grounds of important fisheries
- Migration routes of marine organisms
- Sites used for aquaculture
- Engineering uses of the sea floor e.g. cables, pipelines etc.
- Areas used to exploit mineral resources e.g. sand, gravel, metal placer deposits
- Shipping lanes and anchorages
Bathymetry and Erosion Depths on GIS Map
Shipwrecks – Cultural Value
Initial Excluded Areas
Potentially Incompatible Uses - 2

- Military exercise areas e.g. firing ranges
- Areas of natural beauty or significant cultural or historical importance
- Areas of special importance for scientific or conservation purposes e.g. marine parks/reserves/sanctuaries
- Sites at which sea water is abstracted for cooling purposes,
- Desalination, ocean energy conversion, aquaculture etc.
- Recreational areas
Fishing Areas
Other Excluded Areas
Overall Excluded Areas
Selection of Candidate Sites

- 2 or more to allow comparisons
- Adequate size
- Physical characteristics appropriate for disposal strategy (e.g., containment or dispersion)
Determination of Potential Effects

• Near- and far-field fates
• Short- and long-term effects
• Information required on:
  ➢ Nature of seabed
  ➢ Physical nature of water column
  ➢ Chemical/biological nature of water column
  ➢ Biological/ecological effects of the dredged material
Comparison of Candidate Sites

- Evaluate relative potential adverse effects
- Evaluate relative advantages
- Use established environmental criteria where available
- Use risk assessment models where appropriate
Assess Acceptability of Effects

- Assess acceptability of the potential adverse effects at each site
- If not acceptable, reconsider selection of sites
- If no preferable sites available, either potential adverse effects have to be accepted or sea disposal cannot take place
Site Selection

Select site or sites

Narraguagus Disposal Site