Eastern Long Island Sound Dredged Material Disposal Site Supplemental Environmental Impact Statement (SEIS)

Public Hearings

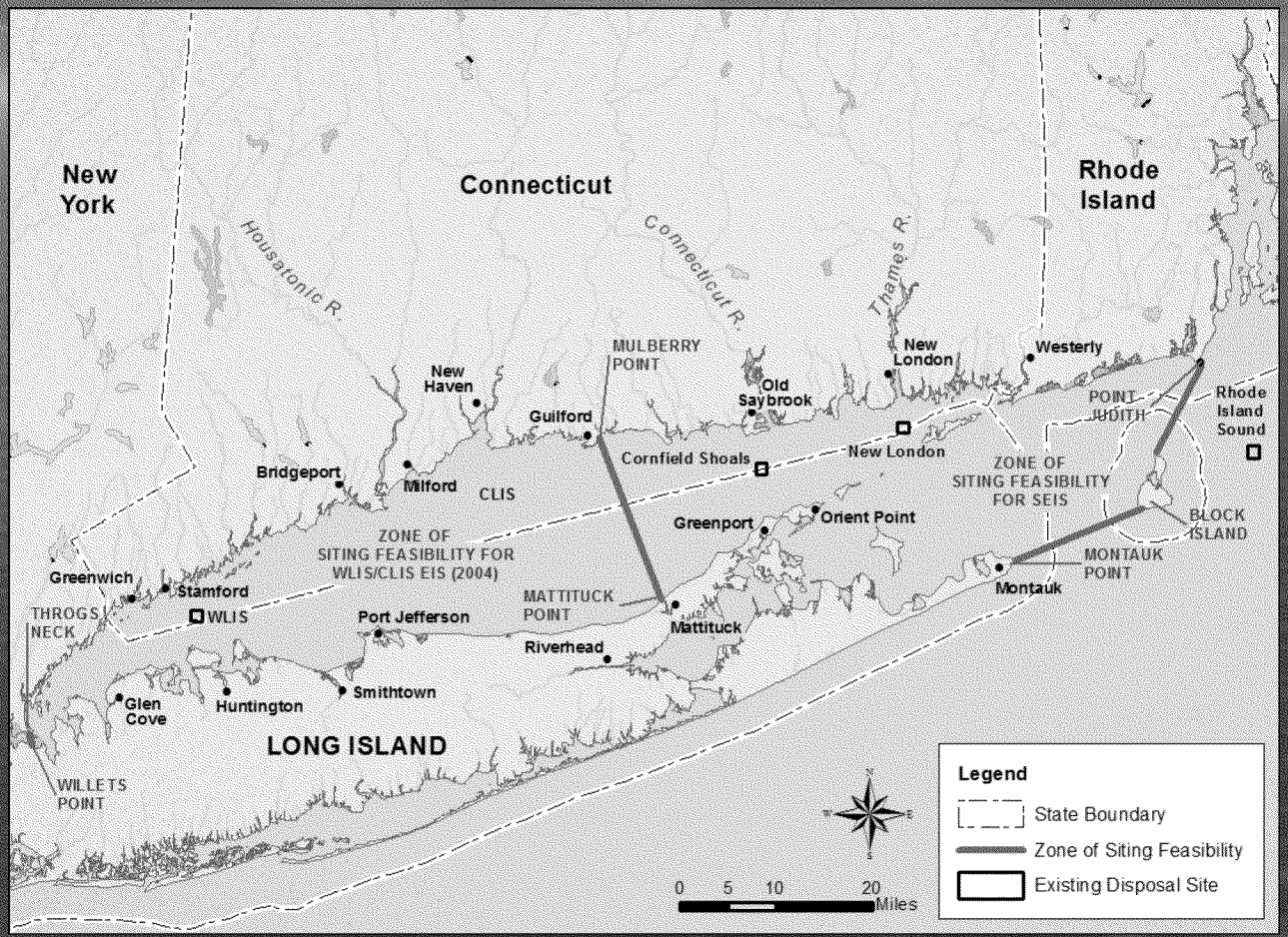
U.S. EPA Region 1
May 25-26, 2016

SEIS-EPA-USACE Share Responsibility

- Marine Protection, Research, and Sanctuaries Act (MPRSA, aka Ocean Dumping Act)
  - Section 102: EPA designates sites
  - Section 103: USACE selects sites subject to EPA concurrence
- Dredged material disposal at these sites must meet criteria in Ocean Dumping Regulations (40 CFR Parts 220-229)
- Clean Water Act (CWA)
  - Section 404: USACE issues permits subject to EPA concurrence
  - Section 404(c): EPA has veto authority

SEIS Approach

- Notice of Intent
- Public Participation
- Alternatives to open water disposal
- Site screening Studies
- Analysis of three Alternatives
- Selection of Preferred Alternative



SEIS- Existing Dredged Material Disposal Sites

Designated by EPA in July 2005:

- Western Long Island Sound
- Central Long Island Sound

Selected by USACE in 1990s, scheduled to close December 23, 2016:

- Cornfield Shoals
- New London

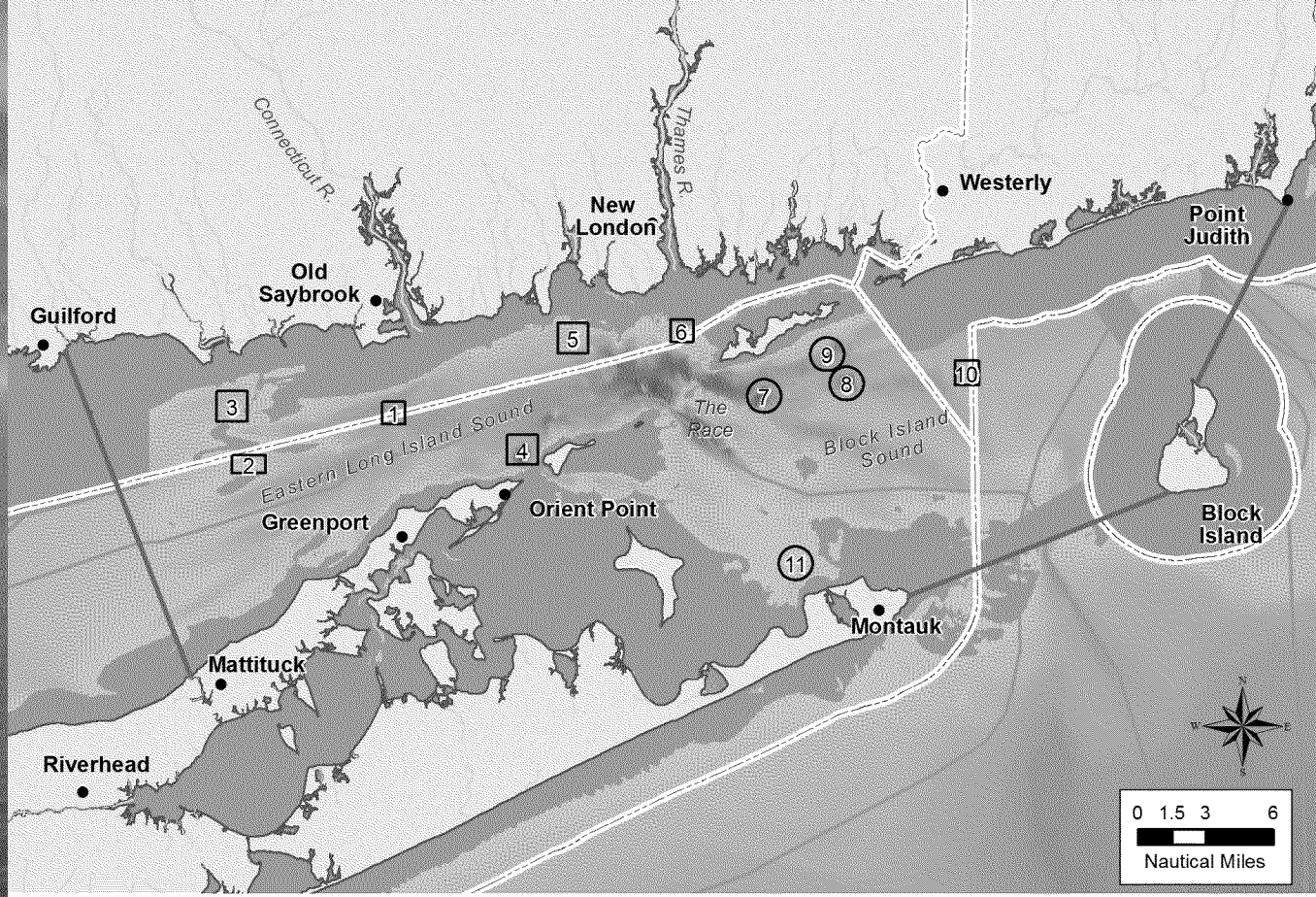
ELIS SEIS Process

- Notice of Intent published on October 16, 2012.
- Cooperating agency and Public meetings in 2012 and 2013.
- Cooperating agency conference calls in 2014 and 2015.
- Draft Rulemaking and SEIS Published on April 27, 2016.
- EPA website revised: https://www.epa.gov/ocean-dumping/dredged-material-management-long-island-sound
- Email notification system revised and email box established (ELIS@epa.gov).

SEIS -Zone of Siting Feasibility

Site Screening

- Screening Criteria for ocean dredged material site designation based on Marine Protection, Research, and Sanctuaries Act of 1972 (MPRSA) 40 CFR 228



Legend

- Zone of Siting Feasibility
- State Boundary
- Alternative Site
- Area Removed From Consideration

Depth (m)
0
-60
-120

ID	Site Name	Status
1	Cornfield Shoals Disposal Site	Active
2	Six Mile Reef Disposal Site	Historic
3	Clinton Harbor Disposal Site	Historic
4	Orient Point Disposal Site	Historic
5	Niantic Bay Disposal Site	Historic
6	New London Disposal Site	Active
7	Deep Hole South of Fishers Island – West	New
8	Deep Hole South of Fishers Island – East	New
9	Deep Hole South of Fishers Island – Center	New
10	Block Island Disposal Site	Historic
11	Area North of Montauk	New

SEIS-Site Screening

- Sedimentary Environment
  - Bathymetry
  - Currents and Waves; Bottom Stress
  - Sediment Texture (resuspension potential; habitat)
- Biological Resources
  - Shellfish Beds
  - Benthic Community
  - Fish Habitat, Fish Concentrations, and Fishing Areas
  - Breeding, Spawning, Nursery, Feeding, and Passage Areas
- Areas of Conflicting uses
  - Infrastructure (cables, pipelines)
  - Navigation (shipping lanes, anchoring areas)
  - Recreation (areas and navigation)
  - Conservation Areas (sanctuaries, wildlife refuges, National Seashores, parks, artificial reefs, etc.)
  - Cultural and Archaeological Resources

SEIS - Purpose

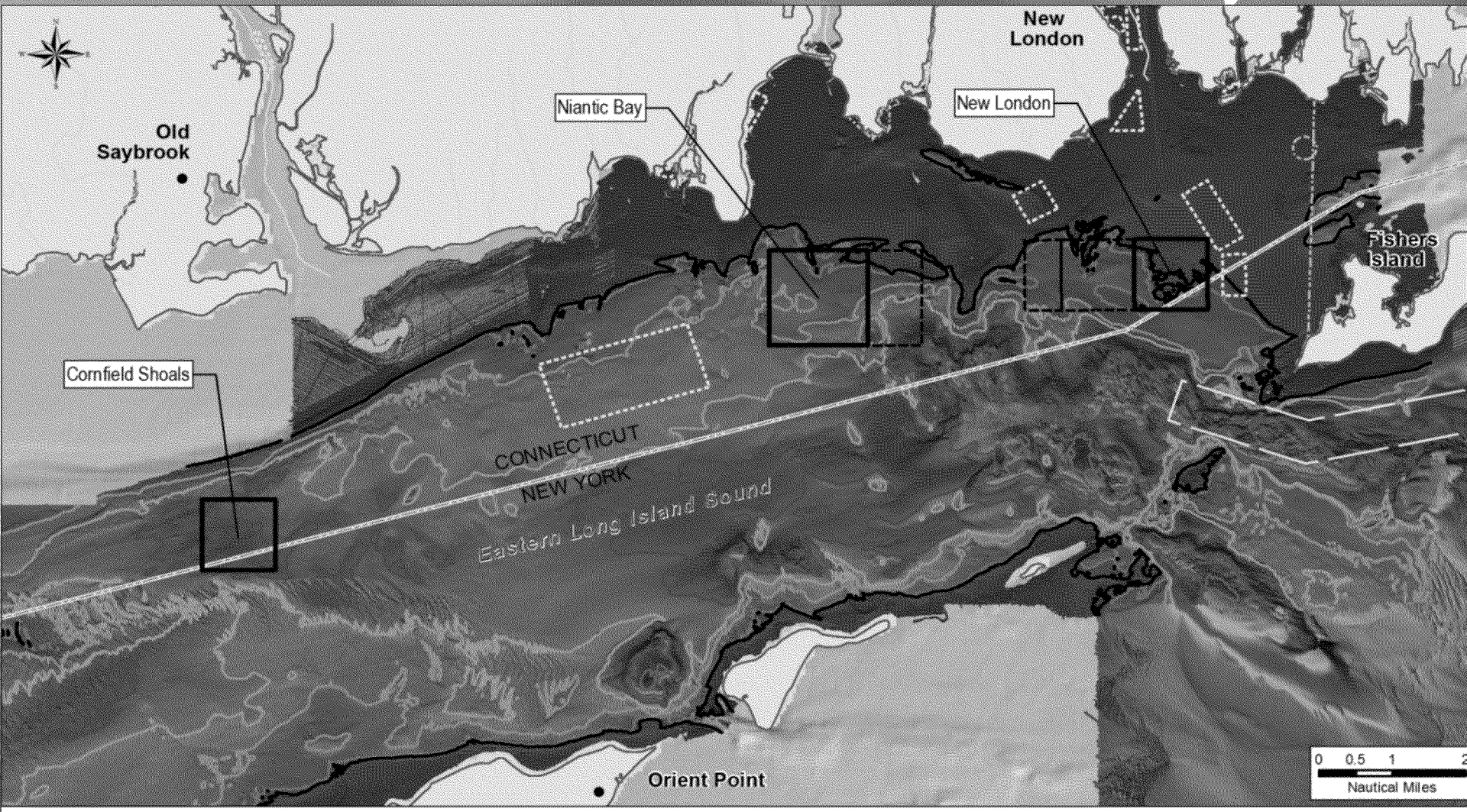
- Dredging Needs
  - Assessed in LIS DMMP in 2009 and updated in 2015. The Dredging needs for Eastern Long Island Sound is 22.6 mcy and total for LIS is 33 mcy. (see Chapter 2 of the Draft SEIS).
  - Capacity – there is not enough capacity to meet the needs over the next 30 years.
- Environmental Review
  - CT River is largest dredging-center with a haul distance to New London of 12 nmiles and twice that to CLDS.
  - Increase in haul distance increases potential for spills, interference with competing uses.
- Site Monitoring
  - Designated sites have a Management and Monitoring Plan (SMMP).
  - Plans are updated every ten years.
  - EPA and USACE meet annually to discuss the SMMP and may include other agencies (SMMP includes a plan for Physical, Chemical, and Biological monitoring at EPA designated disposal sites.

SEIS – Purpose

- Site Restriction
  - Designated sites have restrictions on site use.
  - Designated sites have specific coordinates approved for disposal each dredging season.
  - Representatives from the states of CT, NY, RI, and other Federal agencies will be members of the Regional Dredging Team to review projects to ensure the use of alternatives to open water disposal.
  - Designated sites are restricted and managed to ensure no adverse impacts to the environment which includes a determination of acceptable dredged material (i.e., not toxic).

- Site Reduction
  - There are currently four dredged material disposal sites in LIS (Central, Western, Cornfield Shoals, and New London). This designation reduces the number of disposal sites in LIS from four to three.

SEIS: Three Alternative Sites Analyzed



Legend

- Zone of Siting Feasibility
- State Boundary
- Alternative Site
- Marine Transportation (2012)
- Anchorage (2012)
- Safety Security Regulated Area

Depth (m): 0.05, -18, -40

-60, -80, -100, -120

Depth (m): -18, -20, -30

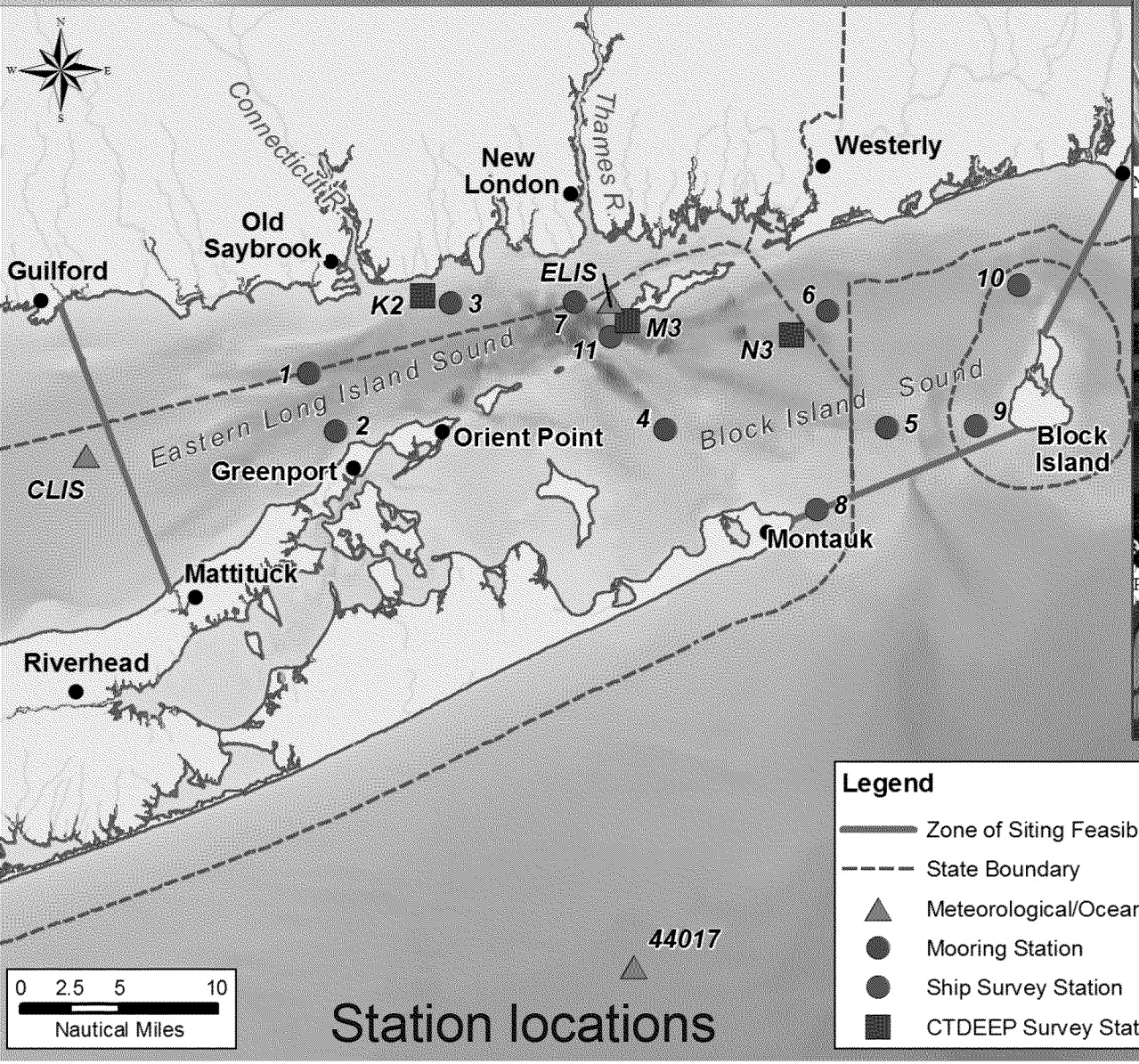
-40, -50, -75, -100

SEIS: Studies

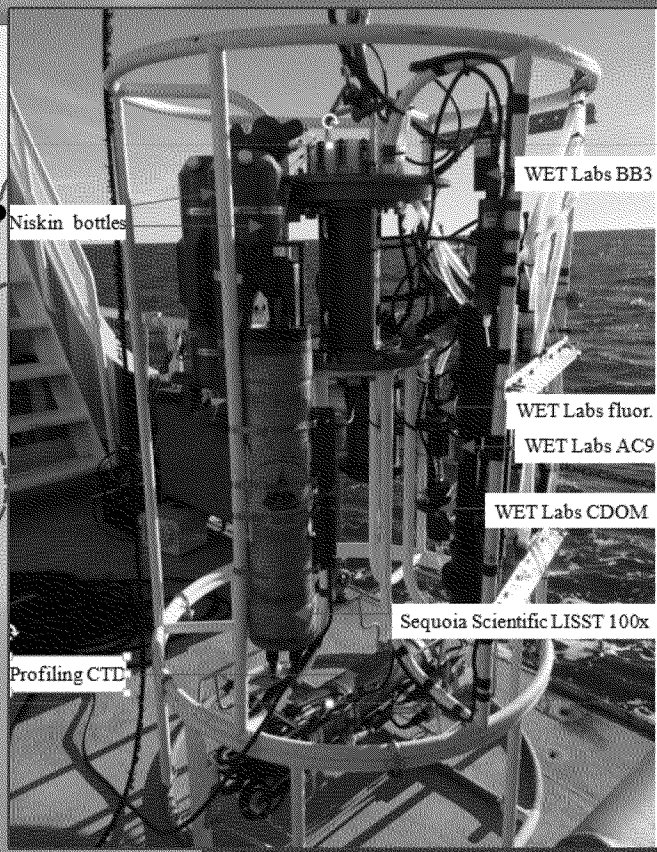
- Physical Oceanography *(UConn)*
- Sidescan Sonar Survey of Seabed *(Woods Hole Group)*
- Biological Characterization *(TetraTech)*
- Sediment Chemistry *(Louis Berger and UConn)*
- Sediment Profile Survey *(DamosVision and USACE)*

SEIS: Physical Oceanography - Stations

Understanding fate of disposed dredged material

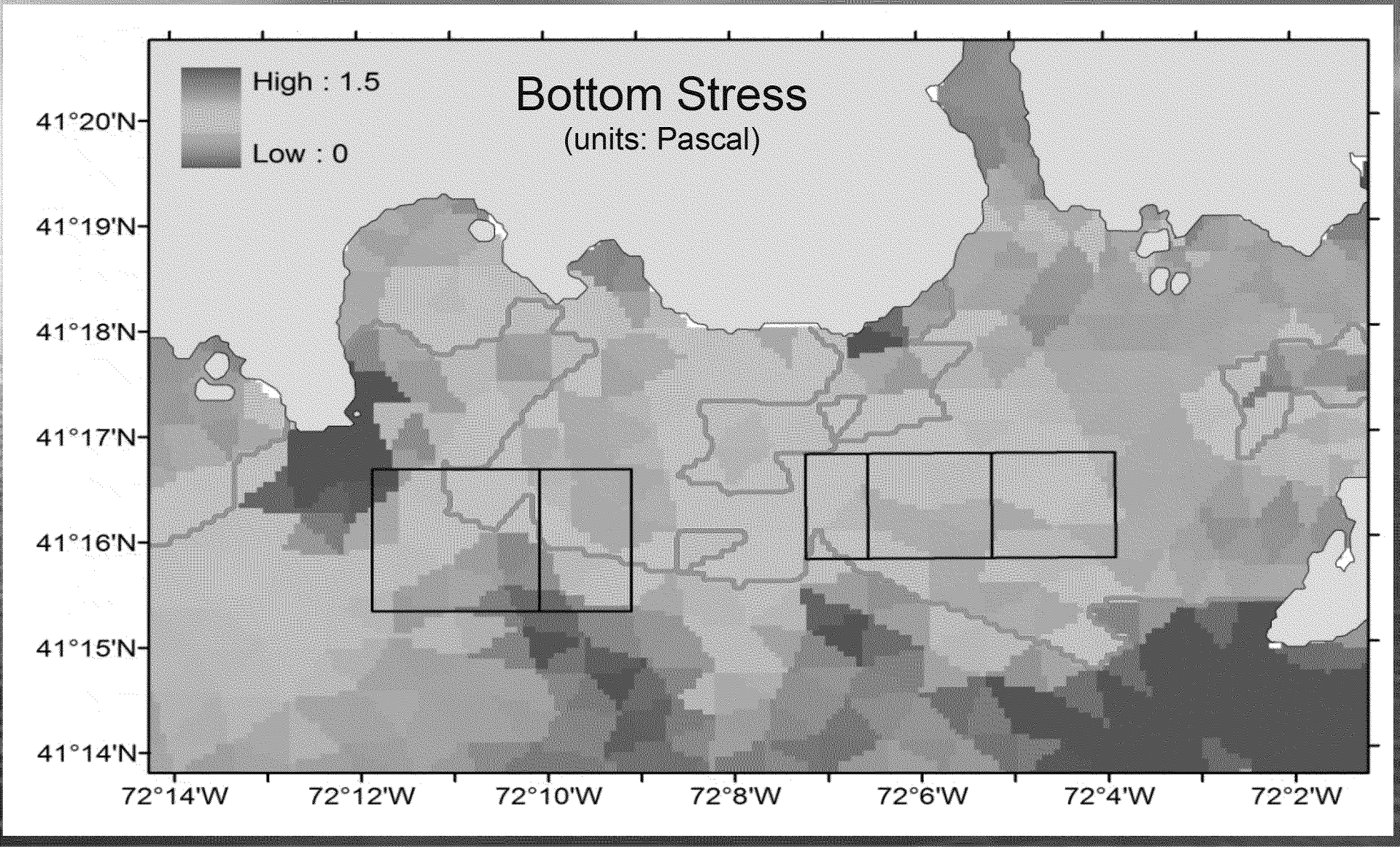


Station locations



SEIS: Physical Oceanography – Modeling

- Understanding fate of disposed dredged material



SEIS: Sidescan Sonar Survey of Seabed

- Characteristics of seabed and locating potential archaeological resources

(Cornfield Shoals Disposal Site - close-up)

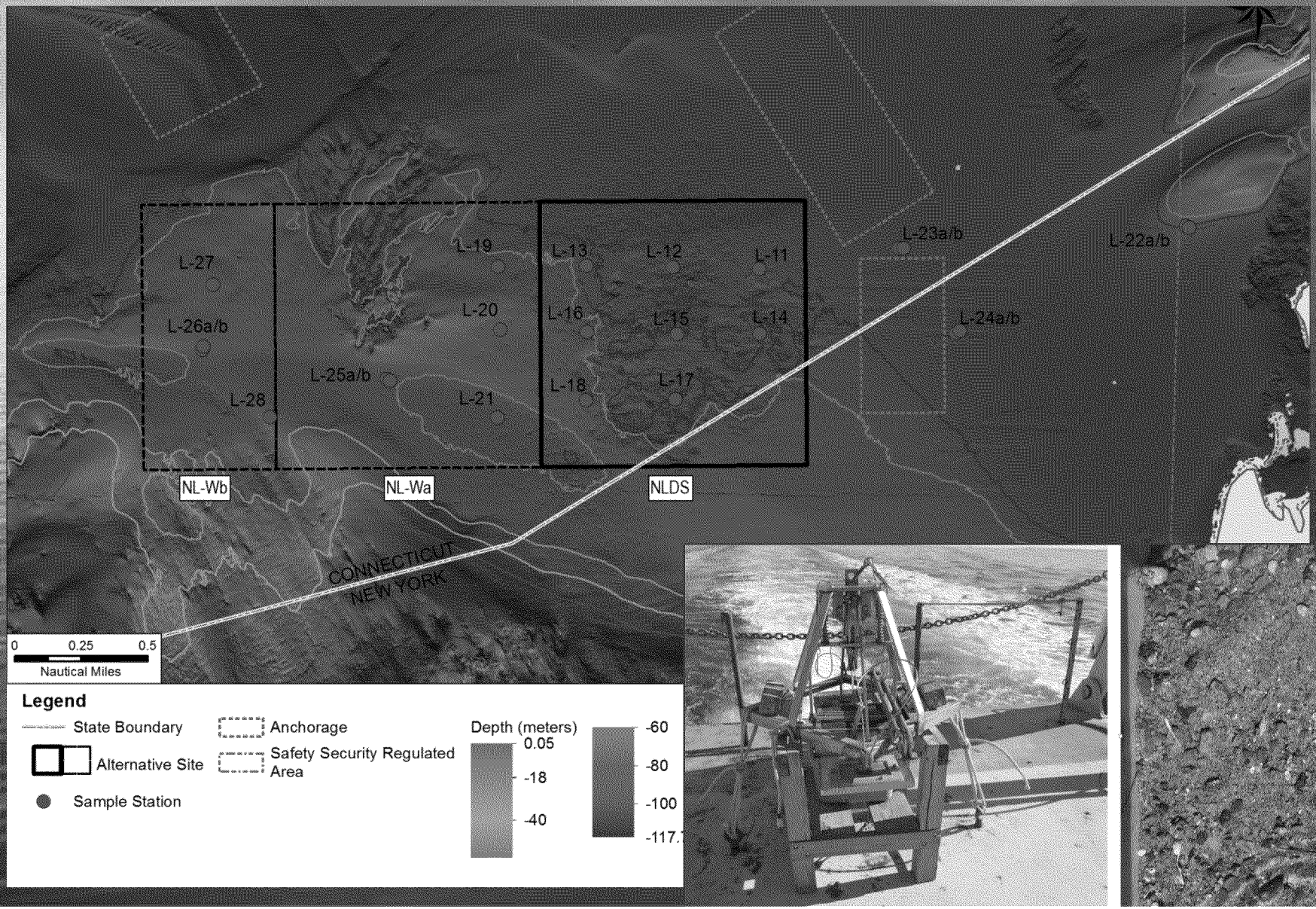
SEIS: Sidescan Sonar Survey of Seabed

- Characteristics of seabed and locating potential archaeological resources

New London Disposal Site - close-up

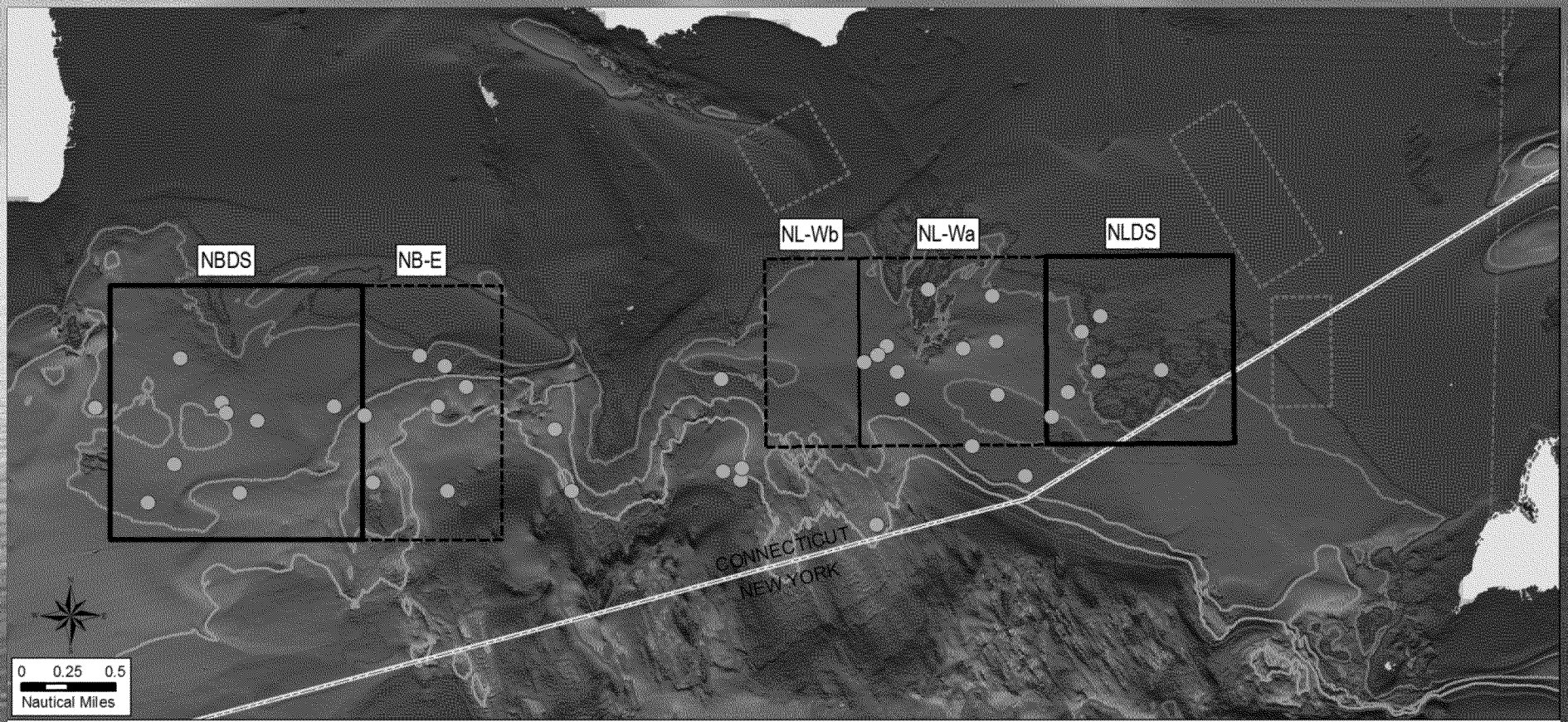
SEIS: Sediment Chemistry

- Physical and chemical characteristics of sediments



SEIS: Biological Characterization

- Benthic health and diversity; fish characterization (w/ CTDEEP LISTS program)



Legend

- Zone of Siting Feasibility
- State Boundary
- Alternative Site
- Anchorage
- Safety Security Regulated Area

Sample Station

- Benthic and Sediment Station

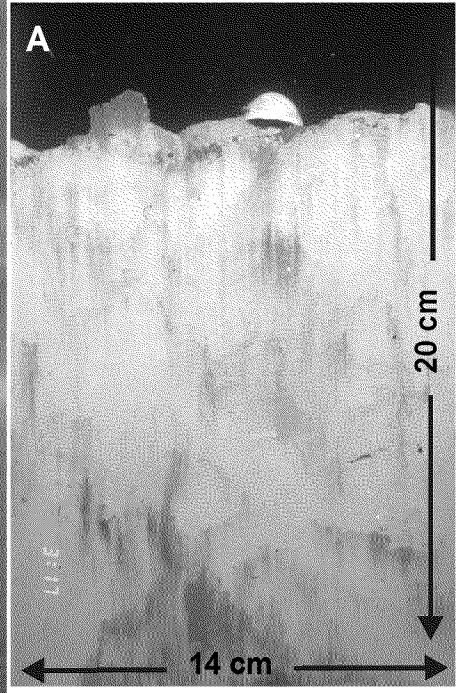
Depth (m): 0.05, -18, -40

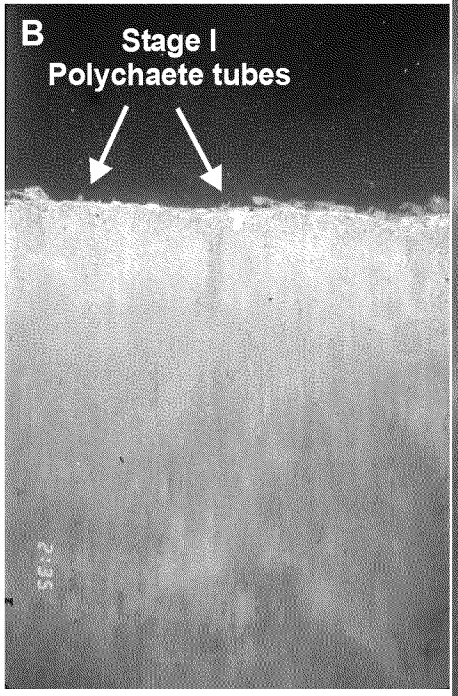
-60, -80, -100, -120

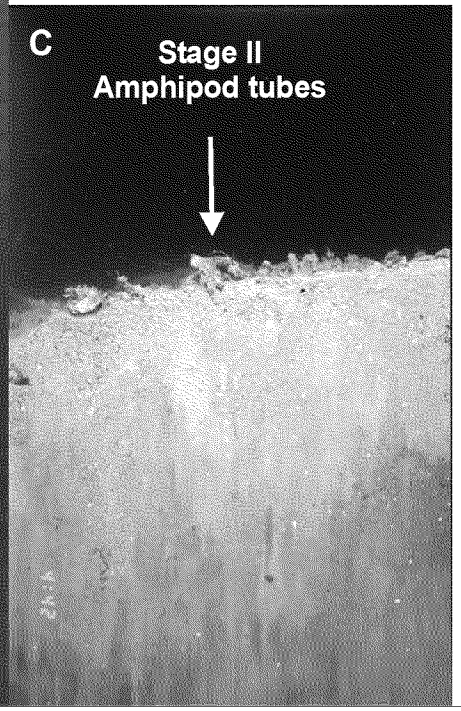
Depth (m): -18, -20, -30, -40, -50, -75, -100

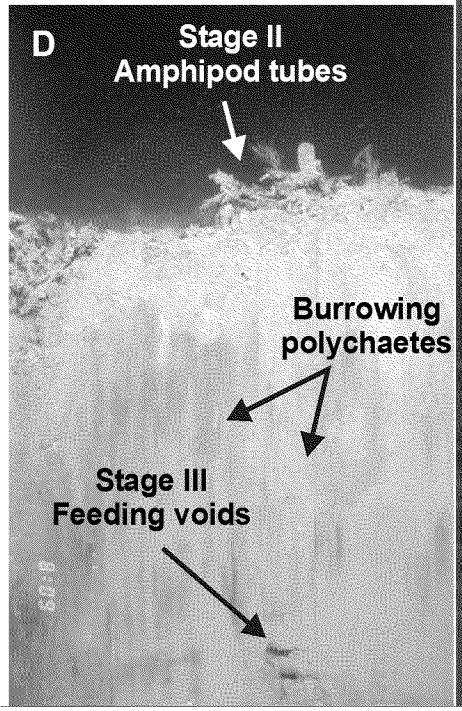
SEIS: Sediment Profile Survey

Diversity and health of benthic community

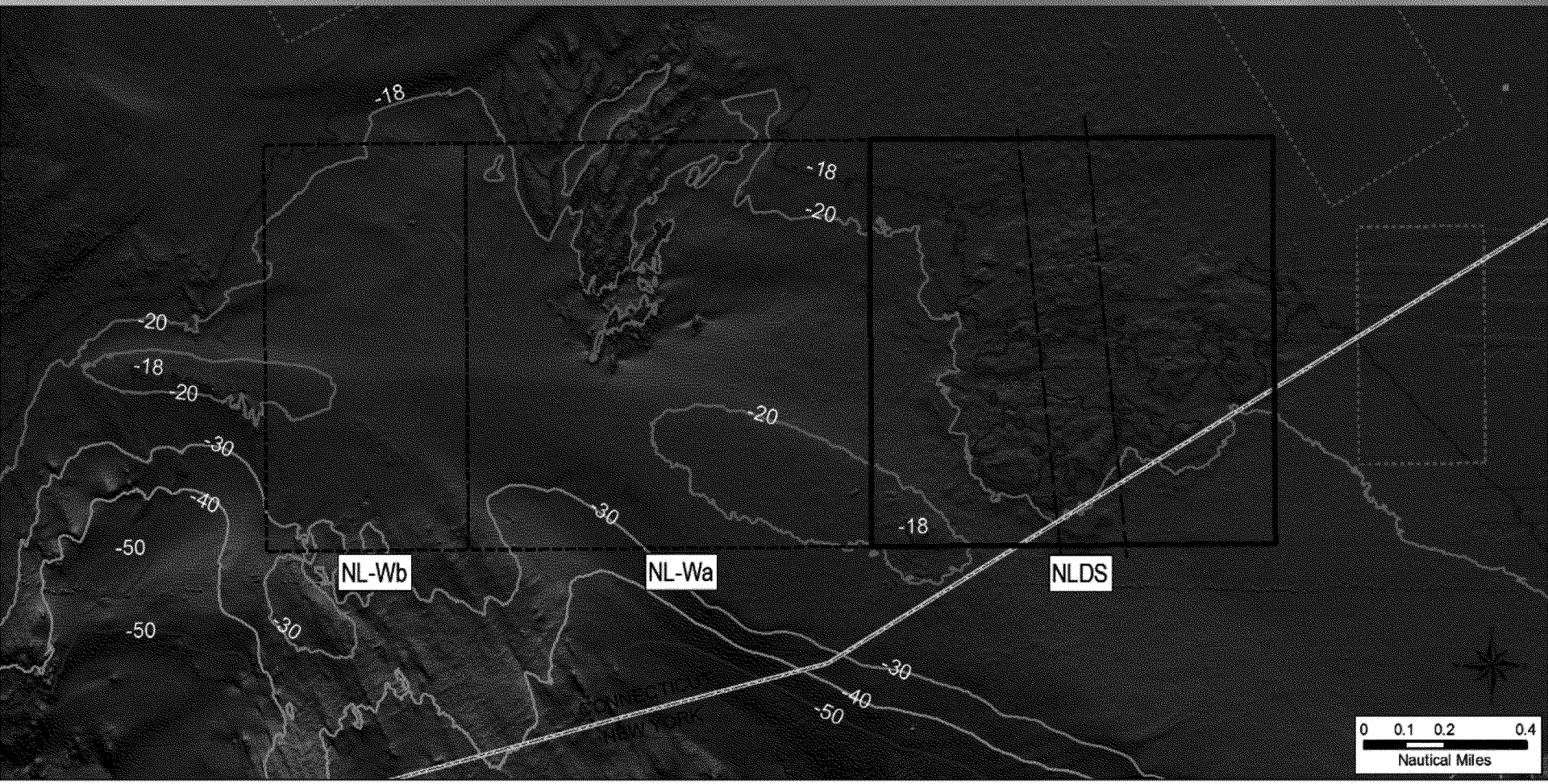








SEIS: New London Alternative



Legend

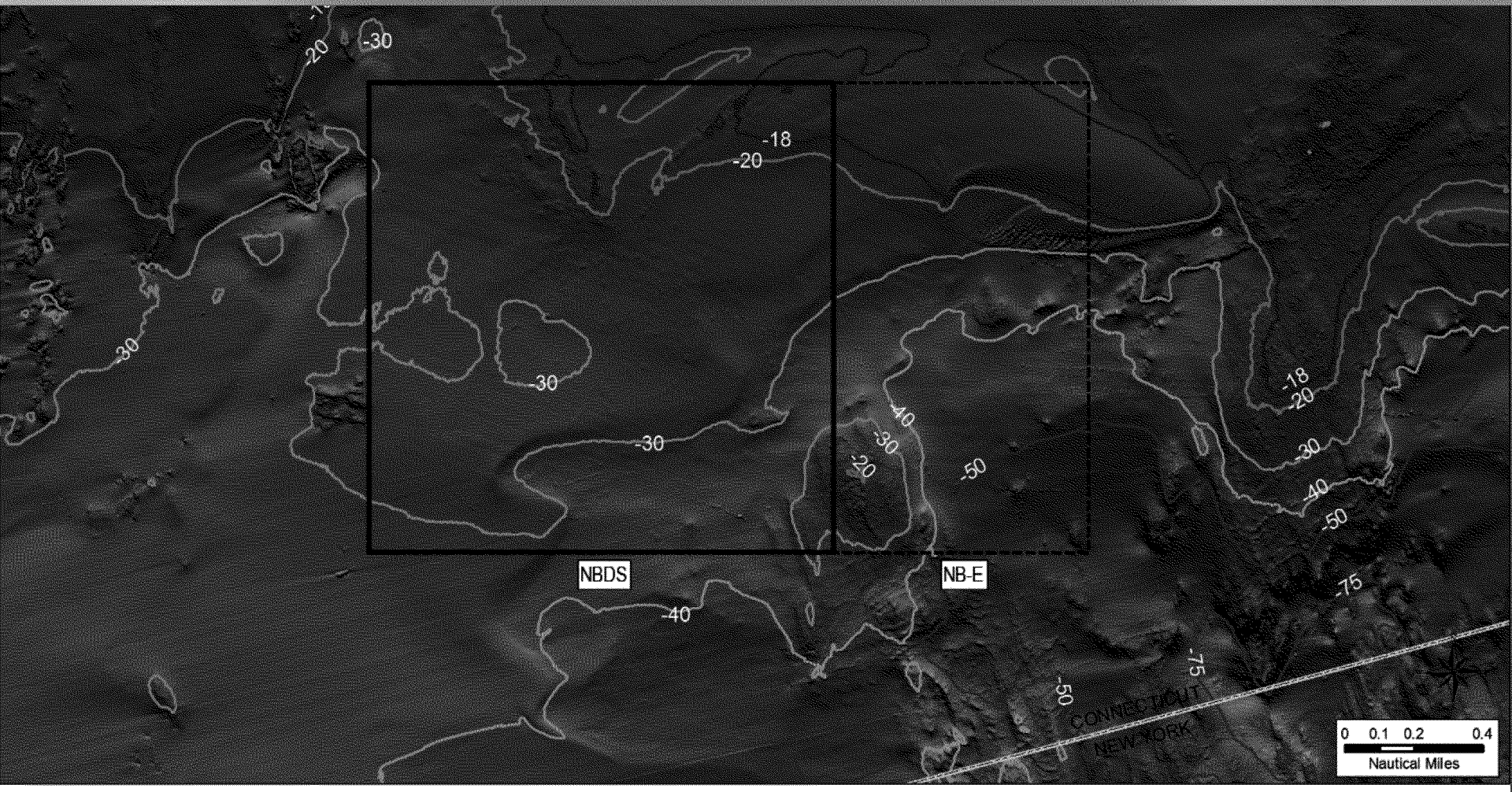
- Zone of Siting Feasibility
- State Boundary
- Alternative Site
- Anchorage
- Submarine Transit Corridor

Depth (m): 0.05, -18, -40

-60, -80, -100, -120

Depth (m): -18, -20, -30, -40, -50, -75, -100

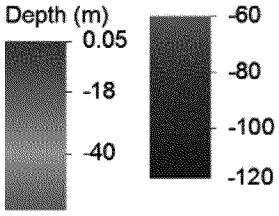
SEIS: Niantic Bay Alternative



Legend

- Zone of Siting Feasibility
- State Boundary
- Alternative Site

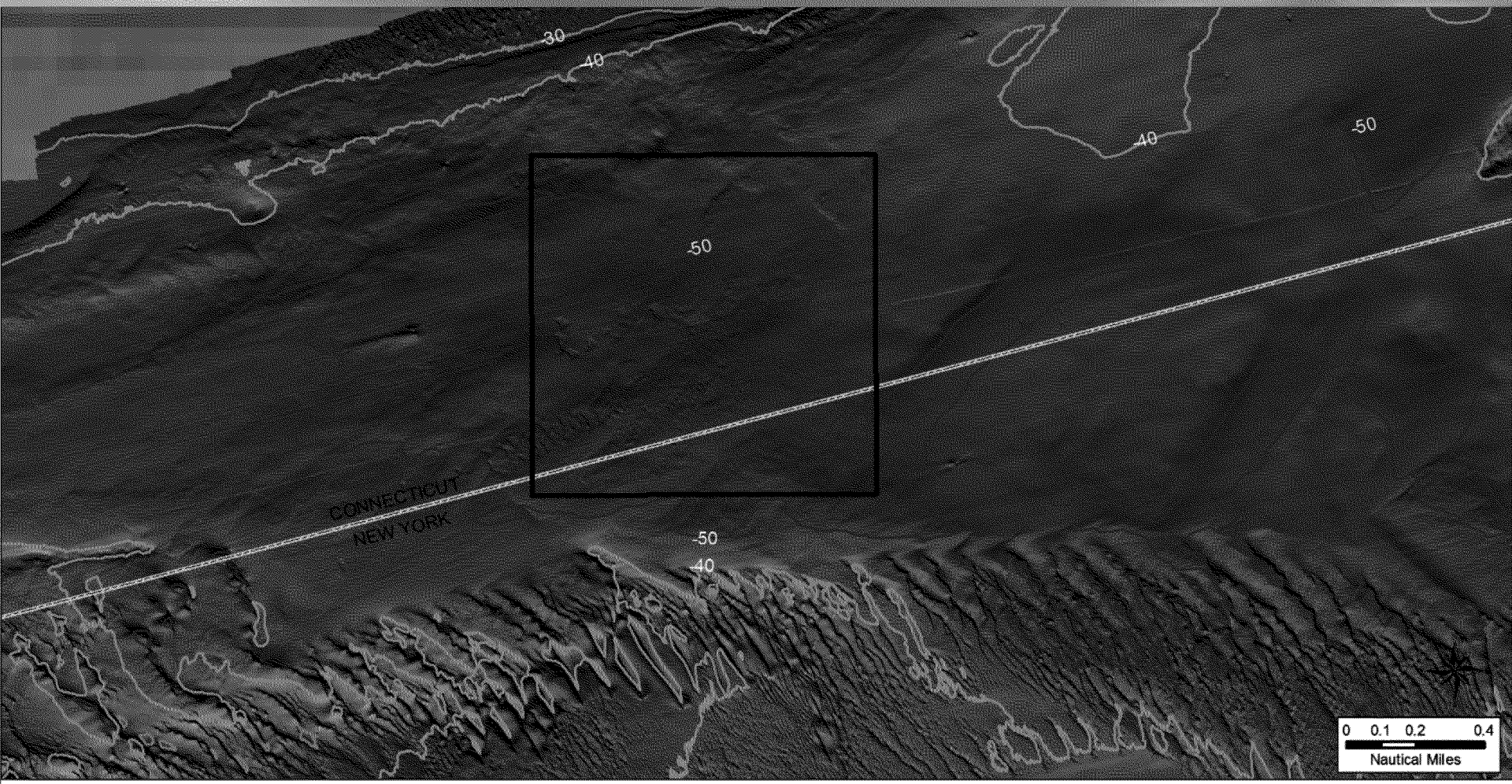
Depth (m)



Depth (m)

-18
-20
-30
-40
-50
-75
-100

SEIS: Cornfield Shoals Alternative



Legend

- Zone of Siting Feasibility
- State Boundary
- Alternative Site

Depth (m)
0.05
-18
-40

-60
-80
-100
-120

Depth (m)
-18
-20
-30

-40
-50
-75
-100

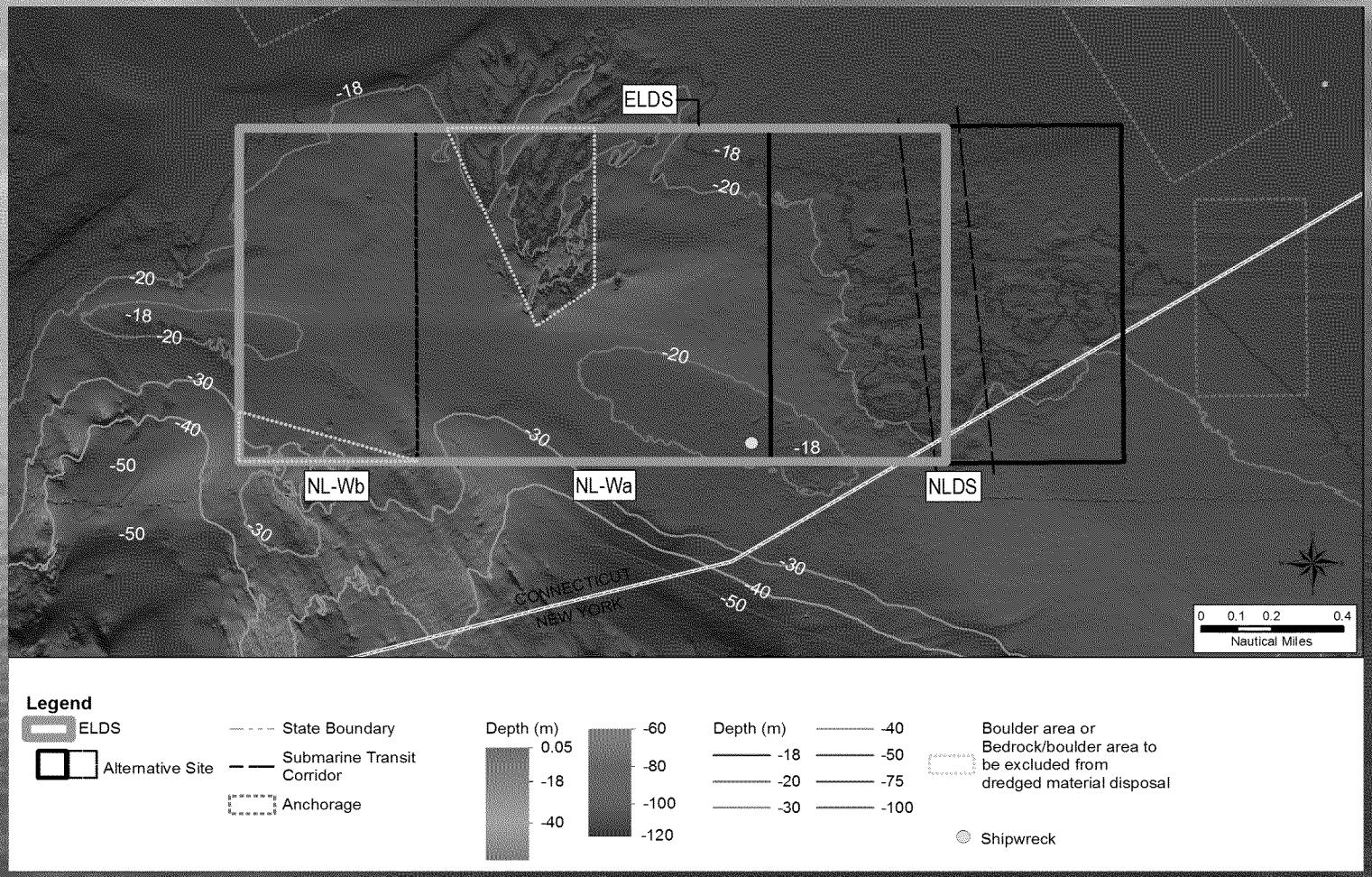
SEIS: Existing Conditions

- Sedimentary Environment
  - *Texture:* Mostly sand; New London finer-grained
  - *Bottom Stress:* Lowest for New London; highest for Cornfield Shoals
  - *Contaminants:* Concentrations low or not detected
- Biological Resources
  - *Shellfish Beds:* None.
  - *Commercial and recreational shellfish:* Low abundance
  - *Fish Habitat:* Similar to other parts of Eastern Long Island Sound
- Socioeconomic and Cultural Resources
  - *Infrastructure:* No cables or pipelines
  - *Navigation:* No interference; no anchoring areas
  - *Conservation Areas* (sanctuaries, wildlife refuges, National Seashores, parks, artificial reefs, etc.): None.
  - *Cultural and Archaeological Resources:* Shipwreck in New London site

SEIS: Environmental Consequences

- Sedimentary Environment
  - *New London:* Containment site
  - *Cornfield Shoals:* Dispersive site
  - *Niantic Bay:* Containment in NE; dispersive in remainder of the site
- Biological Resources
  - *Benthic Community:* Short-term impacts during disposal, but rapid recolonization
  - *Fish Habitat and Fish Concentrations:* Potential impacts minimal
  - *Mammals, Reptiles, Endangered and Threatened Species:* Potential impacts minimal
  - *Bioaccumulation:* Dredged material is required to go through stringent testing before disposal.
- Socioeconomic and Cultural Resources
  - *Commercial fishing:* Potential impacts minimal - not prime finfish or shellfish habitats
  - *Recreational fishing:* Also minimal
  - *Commercial shipping and navigation:* No impact. Site would be managed to avoid navigation hazards.
  - *Beaches, parks, and natural areas:* No impacts
  - *Cultural Resources:* Shipwreck at New London site. Managed with buffer zone.

SEIS: Preferred Alternative – Eastern Long Island Sound Disposal Site



- Sediment is contained within the area
- Previously used disposal area
- Environmental consequences minor, minimal or none
- Shipwreck and boulder areas excluded from disposal
- Close proximity to larger dredging centers