

New Haven Harbor, Connecticut Navigation Improvement Feasibility Study and Environmental Impact Statement

Public Informational Meeting
NEPA Scoping

24 January 2017

Planning Division
New England District



US Army Corps of Engineers
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Outline

- Study purpose
- Existing Channel
- Non-Federal Sponsor
- Study Process
- Study Schedule
- Cost Sharing

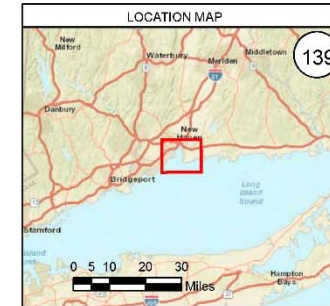
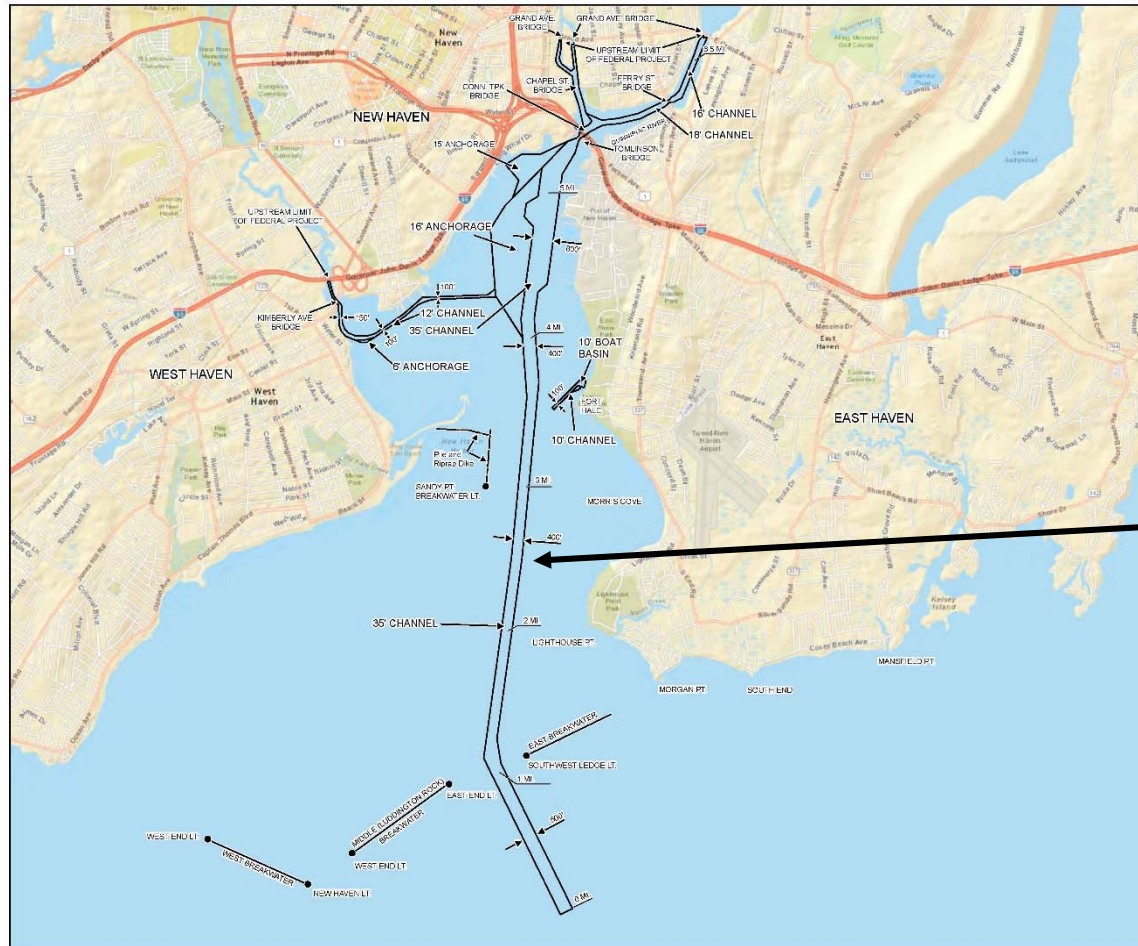


FEASIBILITY STUDY PURPOSE

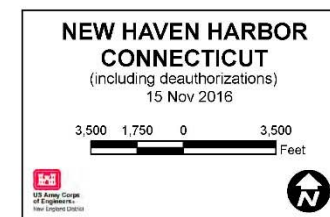
- Examine navigation improvements to the existing New Haven Harbor Federal navigation project
- The study will examine deepening of the port's main ship channel to depths greater than -35 ft. MLLW authorized by Congress and maintained by the USACE
- A recommendation to Congress on port deepening will require a determination that such improvements are engineering feasible, environmentally acceptable, and economically justified



Existing Federal Navigation Channel



The main channel and turning basin have a depth of -35 feet MLLW.



- * Largest deep water port in Connecticut
- * Highest volume port on Long Island Sound
- * 8.7 million tons of cargo handled in 2014
- * Ranked 59th by the Army Corps of Engineers ranking of top 150 US Ports by cargo volume
- * Intermodal Connections – Water, Rail, Truck and Pipeline
- * Home of the Long Island Sound Sector US Coast Guard Station



View of New Haven Harbor, CT – Looking Northwest.





The Port District encompasses 366 acres

* 116 of which are currently being used for port related activities

7 privately owned terminals

12 berths – over 6,000 feet of quay length

Pipeline connections

* Bukeye pipeline transports jet fuel
to Bradley International Airport and the
Massachusetts Air National Guard

Looking North at
Head of Hew
Haven Harbor

NON-FEDERAL SPONSOR

- New Haven Port Authority (City Agency)
 - ▶ FCSA Non-Federal Sponsor
- Connecticut State Port Authority
 - ▶ State Funding Source
 - ▶ State Port Authority established in 2016



Problems

- Inadequate channel depths and dimensions
- Larger vessels now lighter outside the breakwaters to decrease vessel draft or delay transit to use the few hours of high tide to transit the channel
- Lightering, waiting for high tides, and light loading reduces efficiency and increases transportation costs
- Lightering of liquid petroleum products also carries a risk of spills and environmental impacts



Formulation Tasks



NEPA Tasks

USACE Planning Process

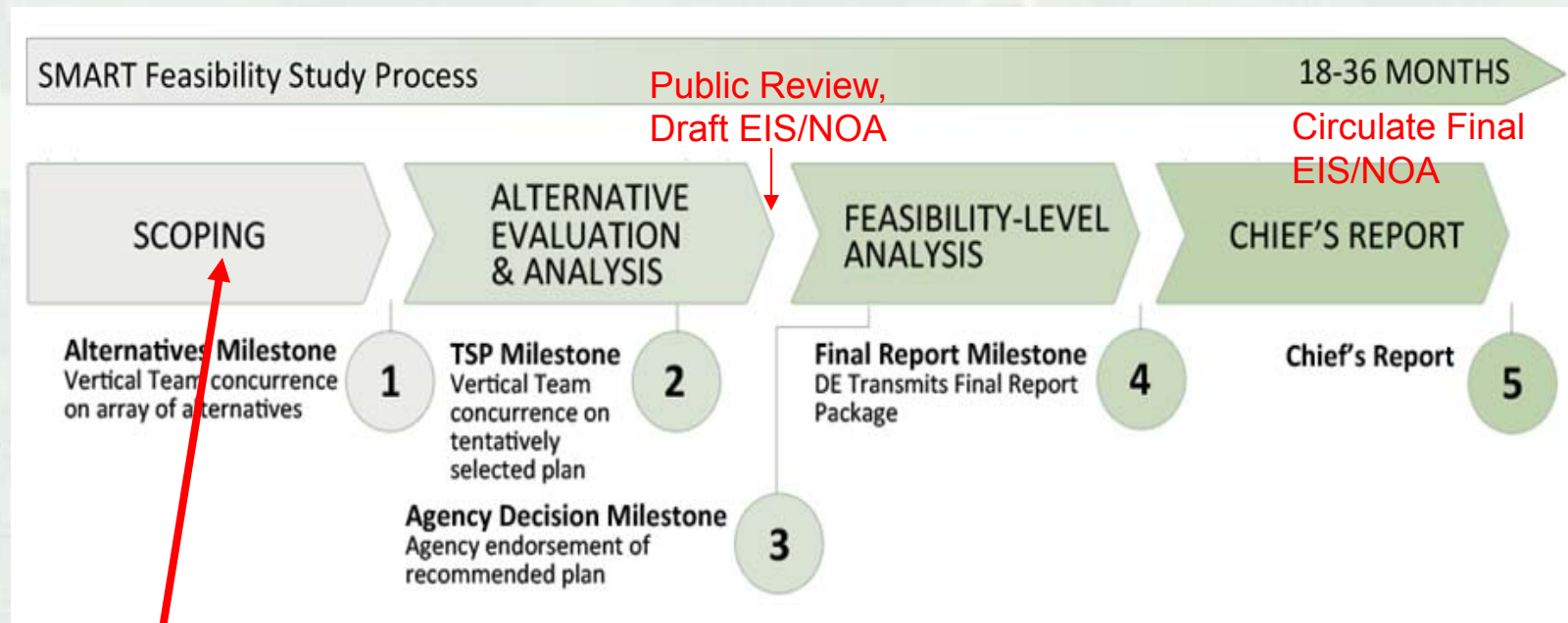
- Scope for project
- Specify Problems and Opportunities, Purpose & Need
- Inventory and Forecast Conditions (Future Without)
- Formulate alternative plans
- Evaluate effects of alternative plans
- Compare alternative plans
- Select a Tentative Selected Plan
- Release for Public Review

NEPA Compliance

- Scope for NEPA
- Describe Purpose and Need
- Describe Existing Conditions, trends, No Action alternative
- Include reasonable range of alternatives that address purpose and need
- Evaluate effects to resources
- Compare alternatives to No Action, ID the Environmental Alternative
- Identify the Agency Preferred Plan
- Release for Public Review



Feasibility/EIS Study Schedule



Study Currently in
Scoping Phase



SMART PLANNING MILESTONES

❖ Alternatives Milestone (AM)

- Signing FCSA
- Develop preliminary alternatives
- Scoping and initiate interagency regulatory tasks

❖ Tentatively Selected Plan (TSP)

- Project alternatives evaluation and analysis
- Justification of plan selection & mitigation measures
- Draft Report, Draft BA, & 404(B)(1) analysis

❖ Agency Decision (ADM)

- Review processes
- Draft Integrated Report out for review
- Response to review comments

❖ Civil Works Review Board (CWRB)

- Improving accuracy of implementation costs, engineering effectiveness, and economic analysis (feasibility level analysis) on the TSP
- Finalizing the Integrated Final Report.

❖ Chief's Report (CRM)

- Final Document released for State & Agency Review
- Final Document released for NEPA review
- Chief Signs Report to ASA, ROD signed after ASA review

* The identified tasks are to be completed **prior to**, & facilitate getting to, the identified milestones.



Improvement Alternatives

- An array of navigation improvement measures to consider in the feasibility study:
 - ▶ deepening and widening the existing main ship channel from Long Island Sound to the head of deep draft navigation at the terminals seaward of I-95
 - ▶ deepening and expansion of the adjacent turning area. It is likely that a range of depths of -37 to -42 feet MLLW will be examined



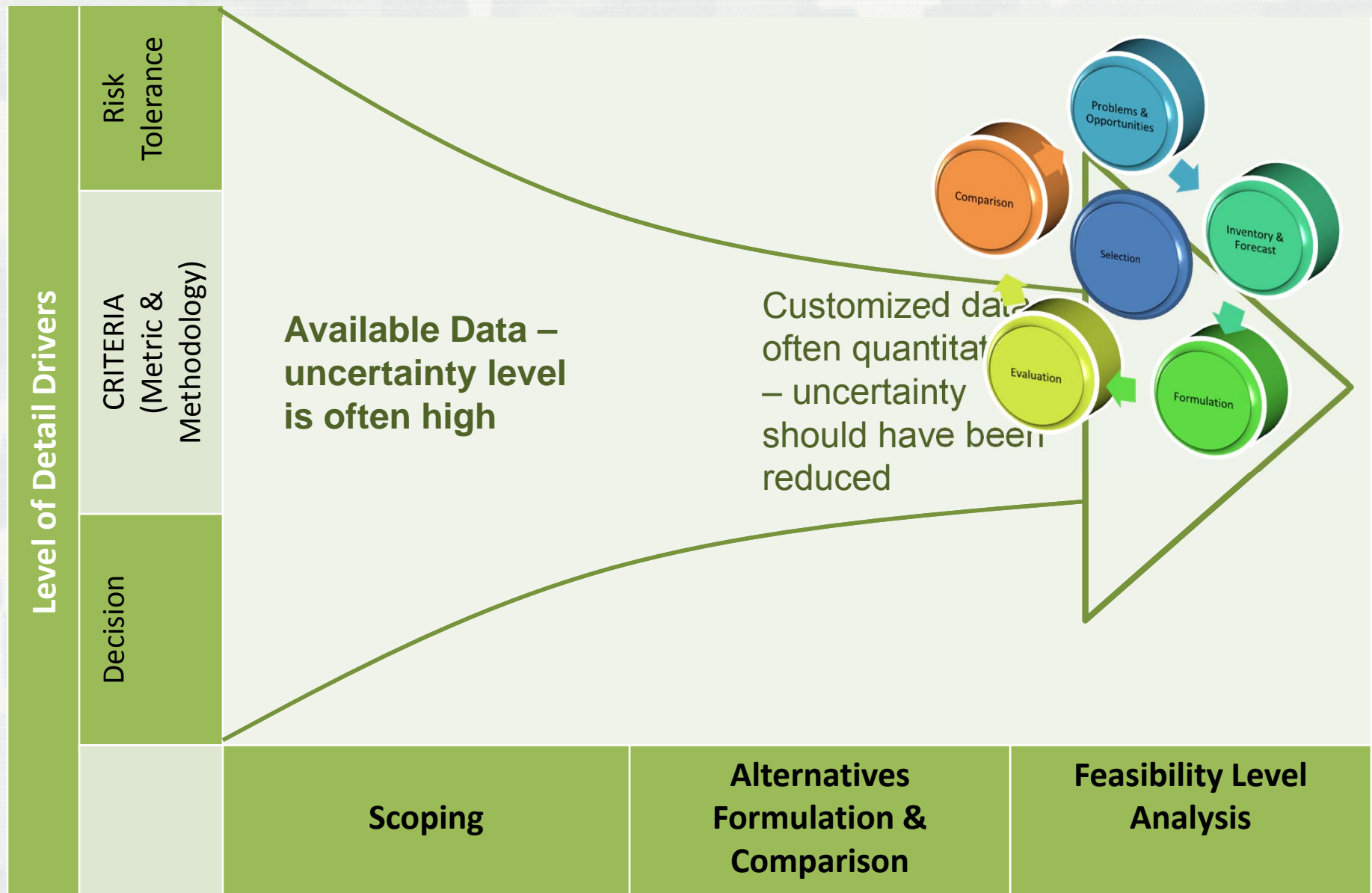
Navigation Improvement

Economic Benefits – HarborSym

- Benefits will be based on decreasing transportation cost inefficiencies at the port. These benefits are based on estimated/projected savings of transporting cargo on the improved waterway
- Benefits arise when terminals choose to transport cargo in larger vessels, thereby achieving efficiencies of scale and lower unit transportation costs. Savings also result from a reduction in tidal delays and lightering costs with a deeper channel
- The Federal without and with project conditions will be evaluated and considered over a **50-year period of analysis**
- HarborSym to be used for Economic Benefits evaluation



The Right Level of Detail at the Right Time



Milestone Schedule

(Pending USACE - HQ approval)

Activity	3X3X3	Date
Sign FCSEA		December 2015
Alternatives Milestone		March 2017
Tentatively Selected Plan Milestone		February 2018
Release Draft FR/EIS for Public Review		April 2018
Agency Decision Milestone (ADM)		July 2018
Final FR/EIS (MSC transmittal)		April 2019
Civil Works Review Board		June 2019
Chief's Report	December 2018	September 2019

Cost Sharing

Federal/Non-Federal in percent

Feasibility Study cost share 50/50

Construction cost share:

Project depth	20 feet or less	>20 to 45 feet
General navigation feature**	10/10*	25/10*
Mitigation	10/10*	25/10*
Aids to navigation	0	0
Service facilities	100	100
LERR	100	100

*The second 10% is the amount of total cost of general navigation features that the local sponsor must pay over a period not to exceed 30 years. This amount may be offset by the value of LERR. If the project only involves widening, the cost share is the same as the existing project. However, if there have not been any improvements, the widening is assessed at the **naturally** controlling depth and entrance channels are governed by the deepest protected interior channel depth.



Next a Brief Look at Some Disposal Alternatives for New Haven Harbor from the Long Island Sound Dredged Material Management Plan



Material Type and Typical Placement Options

Material Type	Potential Options				
Sand	Direct Beach Placement	Nearshore Bar/Berm Placement	CDF/CAD Cell Capping	Construction Fill	Other Coastal Resiliency
Suitable Fine-Grained Material	Open Water	Marsh Creation and SLR Enhancement	Land Elevation	Brownfields (after Treatment)	CDF Fill and Capping
Unsuitable Material	CAD Cells	CDF (Interior)	Treatment and Re-use	Landfills	

Actual Material Types at New Haven to be Classified during the Feasibility Study



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Marsh Creation Restoration

New Haven Harbor

Sandy Point
Marsh Creation Site

70 Acre Site

1.1 MCY Capacity

This site could be sized to partially accommodate the needs of the FNPs for New Haven Harbor and West River. A CAD Cell

could be developed here to meet the needs of New Haven's unsuitable upper tributary channels materials, before filling the marsh area atop it. The fill would also buttress the Sandy Point spit and its value as a coastal protection feature.



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Beach Nourishment if Sand

Some Sand Deposits were Found during the 1956 Improvement Deepening for the 35-Foot Channel and were used on Area Beaches in New Haven & West Haven



Prospect Beach, West Haven, CT



**Lighthouse Point Park Beach,
New Haven, CT**



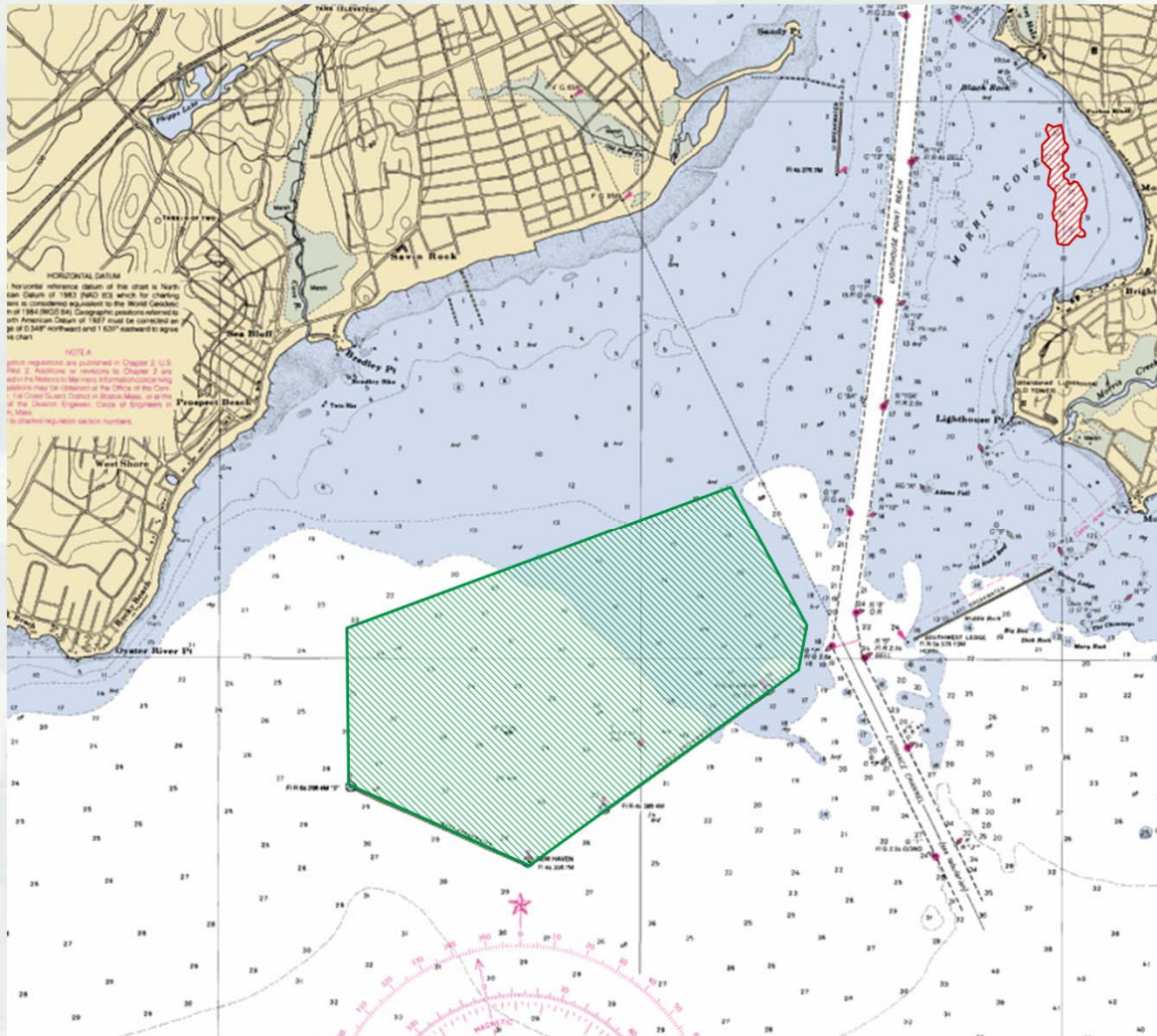
Remediation of Disposal Mounds

- **One of the DMMP recommendations was for the States and the Corps to consider using fine-grained dredged materials, particularly those parent materials dredging for future improvement projects, as restoration material for disposal mounds that date from eras prior to the advent of sediment testing requirements.**
- **The DAMOS program could assist in identifying the areas most needing restoration. Partnerships between the Corps and the states could be established to target future placement to those sites to isolate the prior placed materials and assist in the long-term ecological recovery of those sites.**



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CDFs and Filling Borrow Pits



Island creation for development of wetlands and other wildlife habitat or park land has been successfully practiced in other parts of the country. However such options can be very expensive.



Other Solutions for Placement and Beneficial Use of Dredged Materials

- **Processing and Upland Transport for use in Brownfields Remediation.**
- **Use as Fill in Highway Projects.**
- **Use as Fill in Land Elevation Efforts for Coastal Resiliency.**
- **All of these Require a Project on the same Schedule as the Harbor Deepening.**
- **Most also Require an Onshore Dewatering, Storage and Processing Facility with Highway or Railway Access.**



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Looking Northeast at Head of New Haven Harbor

