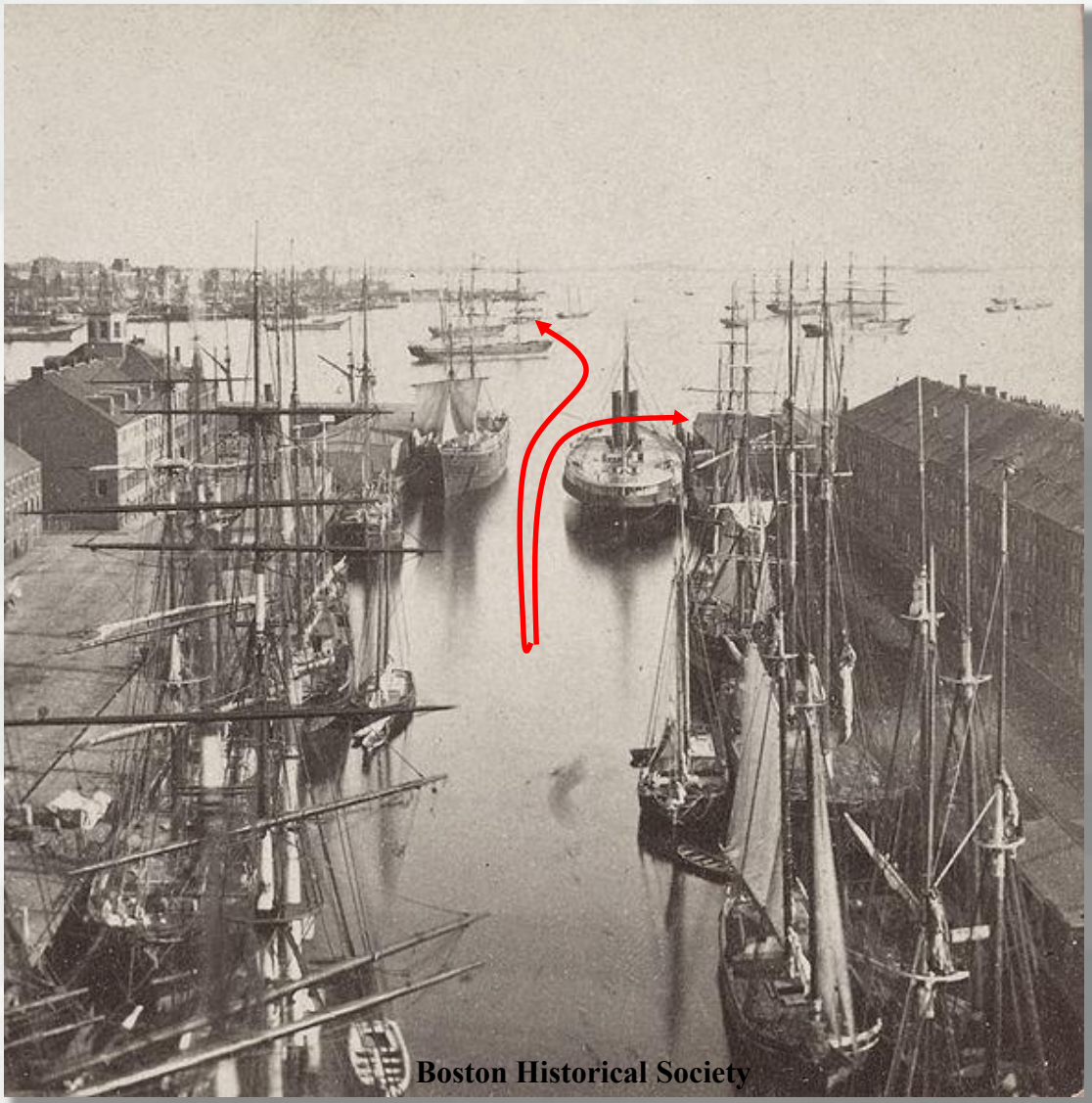
Overview of Monitoring at Open Water Dredged Material Placement Sites

• scow loaded with 3000+ cubic yards of dredged material

Overview of Monitoring at Open Water Dredged Material Placement Sites

- Can you place dredged material accurately?
- Will it stay where you place it?
- Impacts to water quality?
- Impacts to the benthic community on the seafloor?

History of Aquatic Placement of Dredged Material

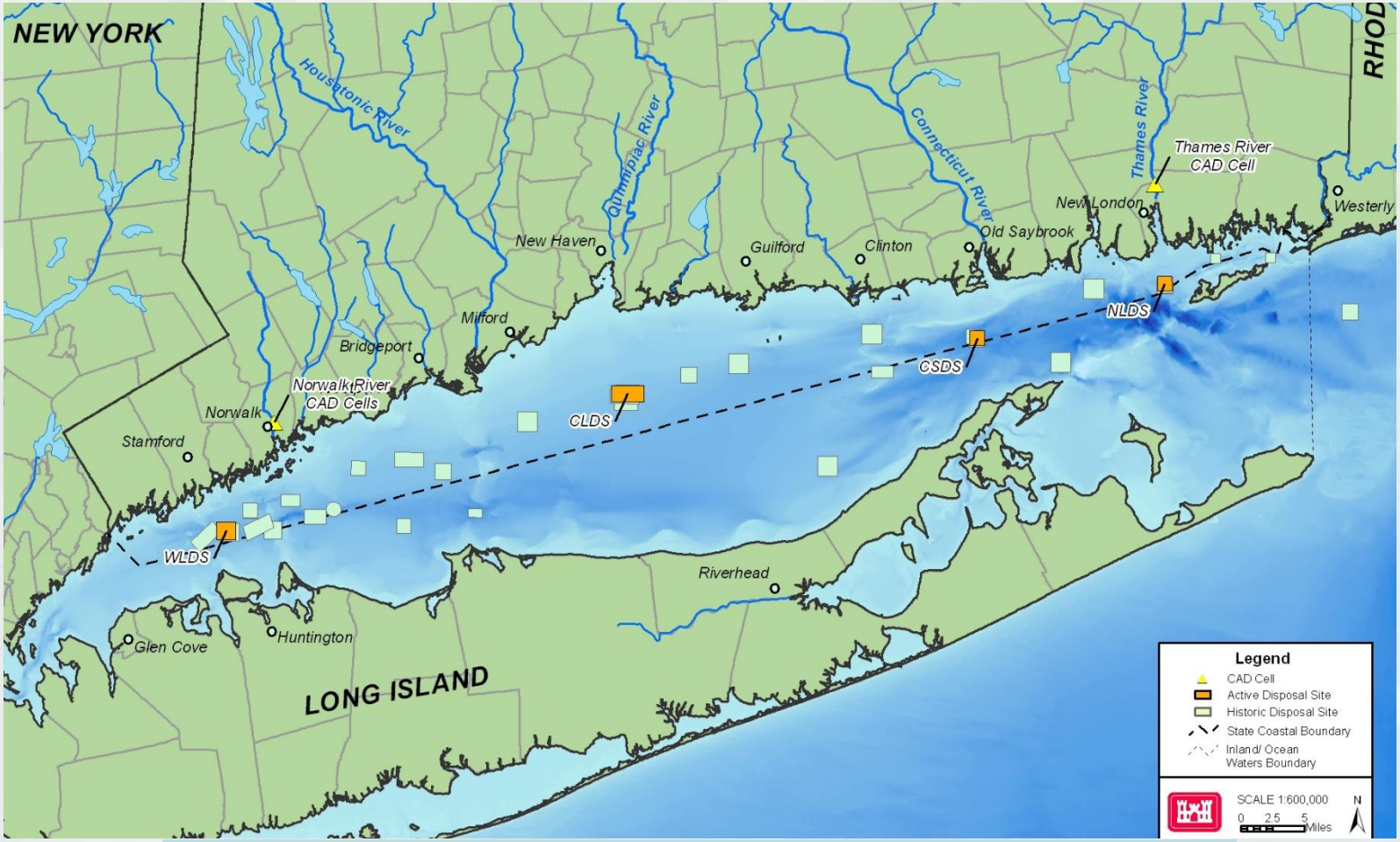


- early dredging efforts relocated dredged material only a short distance

History of Aquatic Placement of Dredged Material

- historical dredged material placement scattered along the NE coast through the early 1900's

History of Aquatic Placement of Dredged Material



- some sites specified in early to mid 1900's but limited placement guidelines

History of Aquatic Placement of Dredged Material

- with passage of the Clean Water Act and Marine Protection Research and Sanctuaries Act, more rigorous process for selecting/designating placement sites and controls on placed material

Placement & Monitoring of Dredged Material

Disposal Area Monitoring System (**DAMOS**) Program was initiated in 1977 and now draws on nearly 40 years of monitoring NE waters

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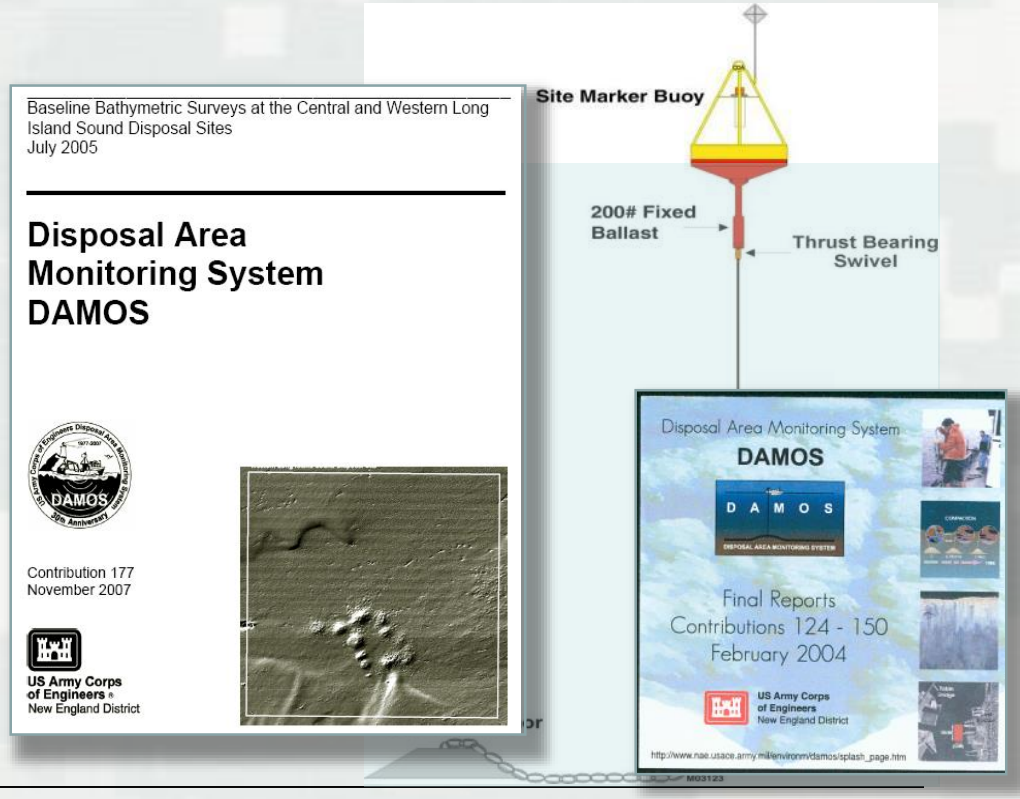

Required Testing for Dredged Material

- toxic material ***IS NOT*** placed at the open water sites

East End Beacon
news from the twin forks

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As LI Sound Dredge Dumping Plan is Released, Politicians Voice Opposition

Posted by East End Beacon · August 18, 2015 · Environment · 6 Comments

On the Sound

Update: Aug. 20, 2015:

The Army Corps of Engineers has responded to public pressure to extend the deadline for public comment on their plan to renew dumping of dredge spoils in the Long Island Sound. The new deadline is October 16, one month later than origionally proposed. The two public hearings will be still be held in New York on Monday, Aug. 24, 2015 in the Village Center at Port Jefferson at 101-A East Broadway in Port Jefferson, N.Y.; and on Tuesday, Aug. 25, 2015 at the Marriott Long Island at 101 James Doolittle Blvd. in Uniondale, N.Y.

Original Story Follows:

The U.S. Army Corps of Engineers released its plan Monday to continue to allow the dumping of toxin-laden dredge spoils from Connecticut rivers into the Long Island Sound, and elected leaders on Long Island were quick to announce their opposition to the plan.

Newsday.com Page 1 of 2

Newsday

Reprints

Cuomo urged to veto plan to dump dredge spoils in LI Sound

February 23, 2016 By Rick Brand

scored an F grade. (Credit: Julia Za

Suffolk County lawmakers, civic leaders Tuesday to veto a U.S. Army Corps of million cubic yards of dredge spoils in

"There are toxic sands running through Legis. Sarah Anker (D-Mt. Sinai), who news conference in Hauppauge.

"The sound is dying and they are trying (R-Fort Salonga) a longtime spear fishe Island."

The U.S. Environmental Protection Age next week will hold public hearings on at the Port Jefferson Free Library Tues from 5-7 p.m., and another hearing in Stamford, Connecticut, the next day.

Cuomo will have until May 10, the dead final adoption of the plan, to act, accord the EPA. Cuomo's office did not return comment Tuesday.

http://www.newsday.com/long-island/poli

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Editorial OPINION

Stop dumping dredge waste in Long Island Sound

January 14, 2016 6:39 PM

By By the Editorial Board

Reprints

The Long Island Sound. Photo Credit: Joseph D. Sullivan

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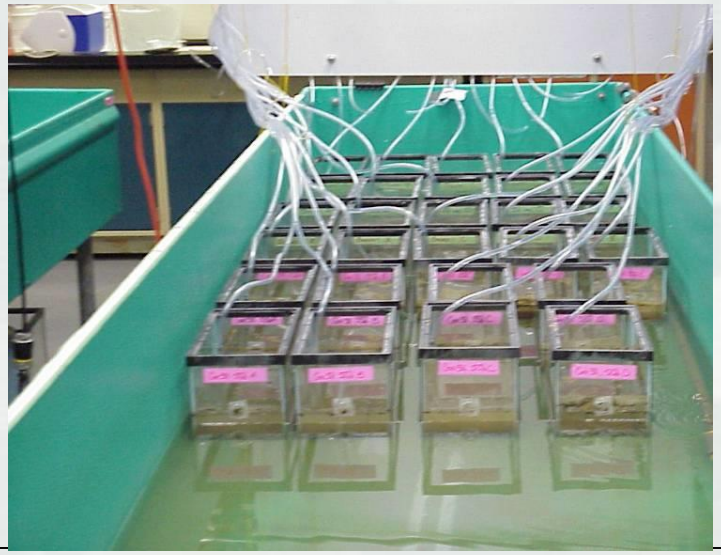
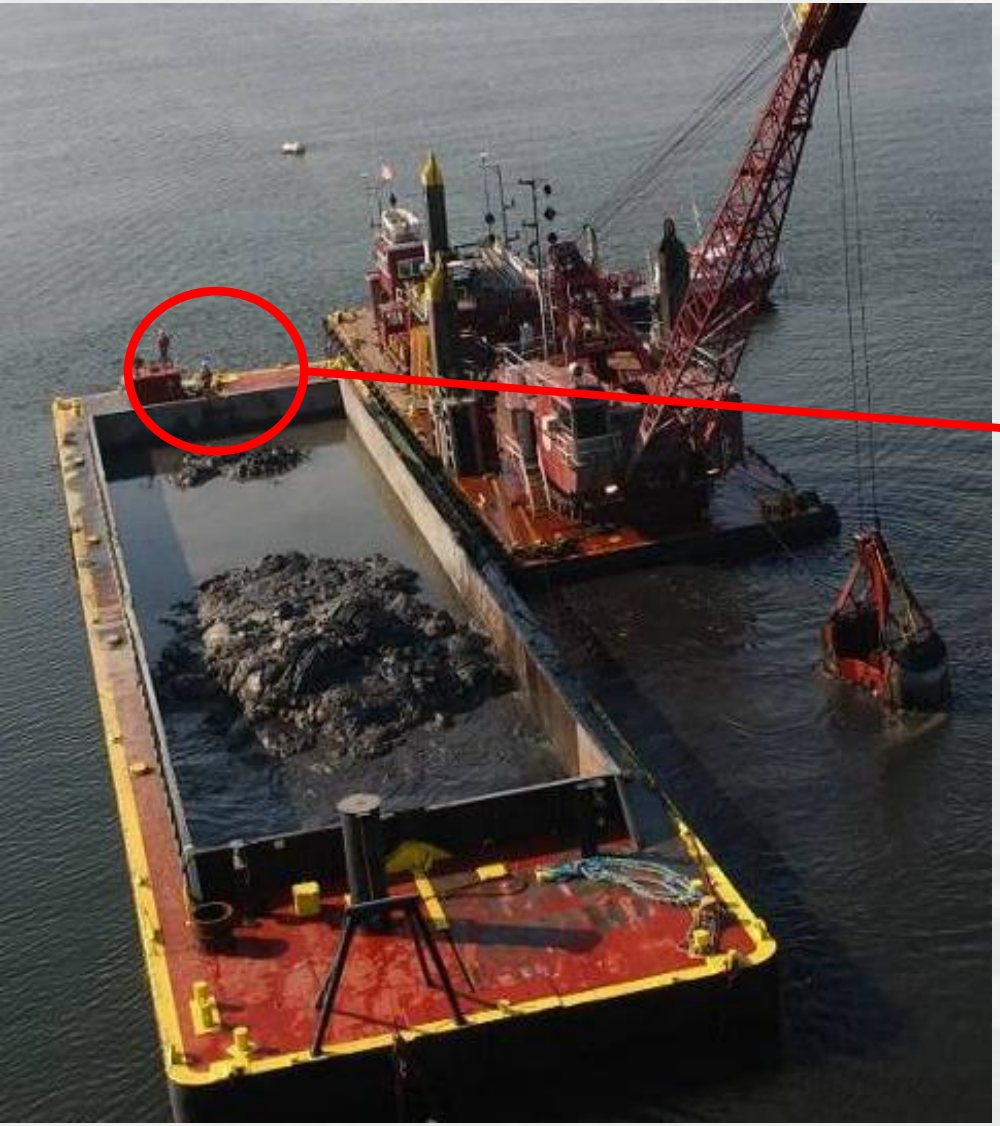
Required Testing for Dredged Material

- EPA and states require rigorous testing of dredged material
- toxic material ***IS NOT*** placed at the open water sites

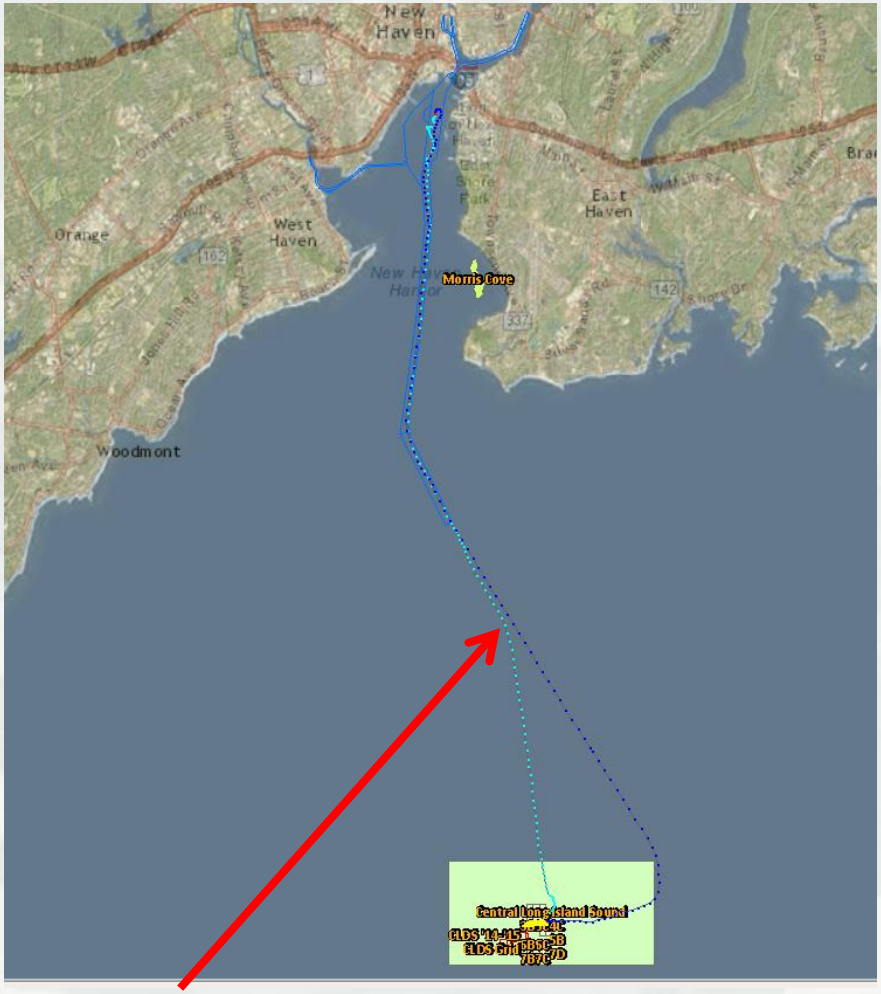


Is Dredged Material Accurately Placed?

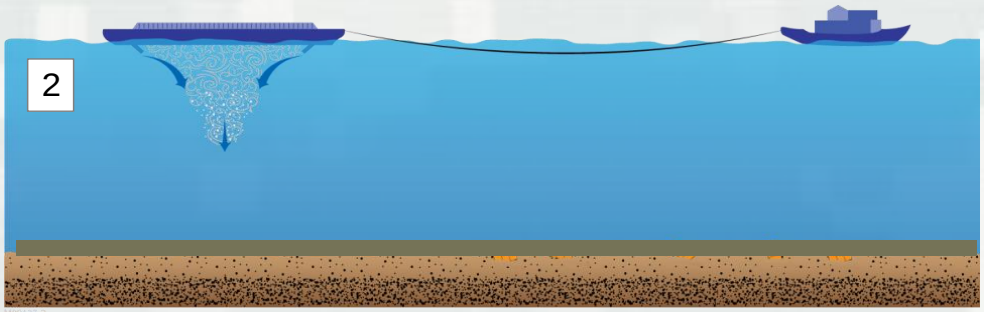


Tracking system required for all placement

Is Dredged Material Accurately Placed?



Example recorded track of scow bringing dredged material from New Haven Harbor to the Central LIS site

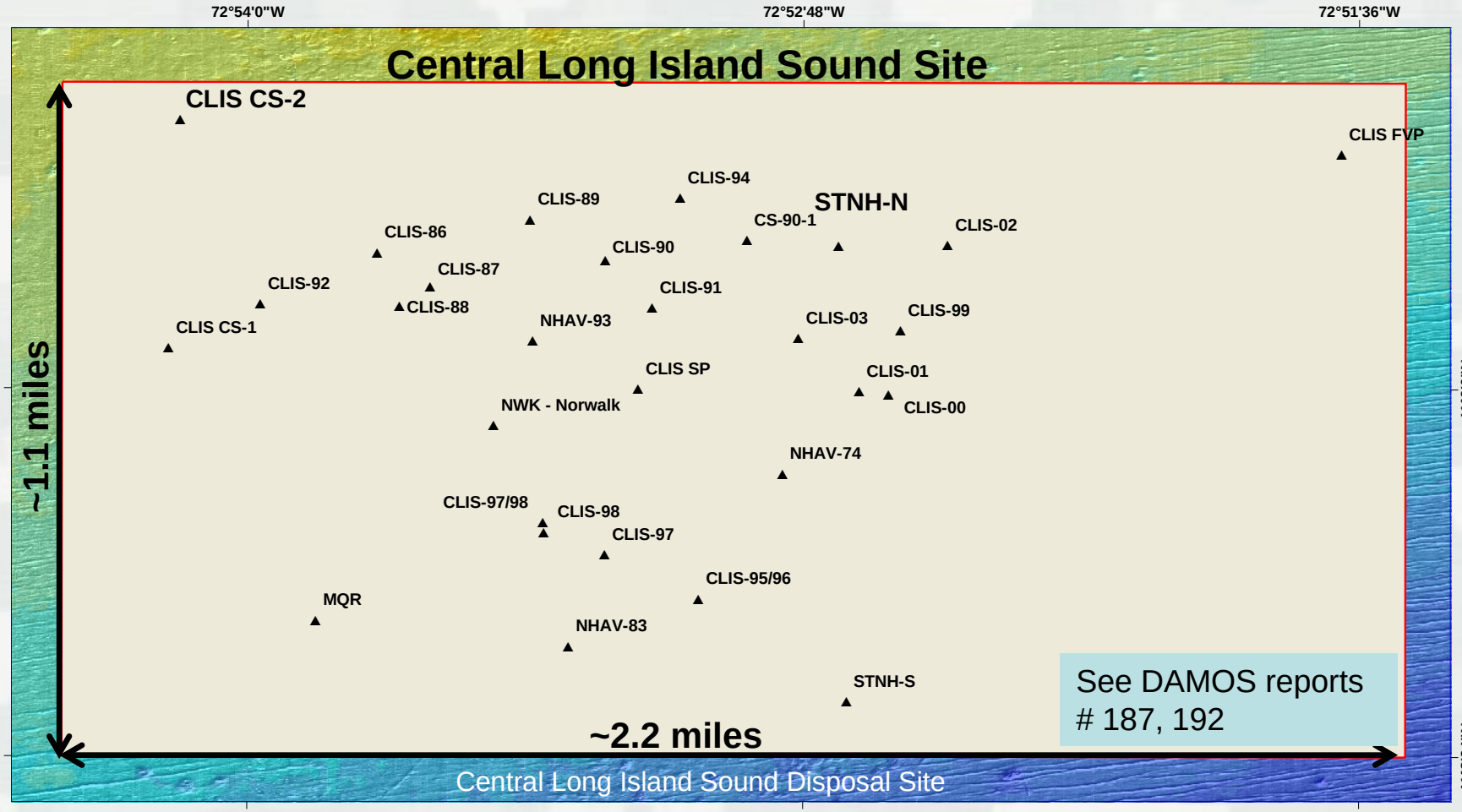


Barge releases material adjacent to target capping area

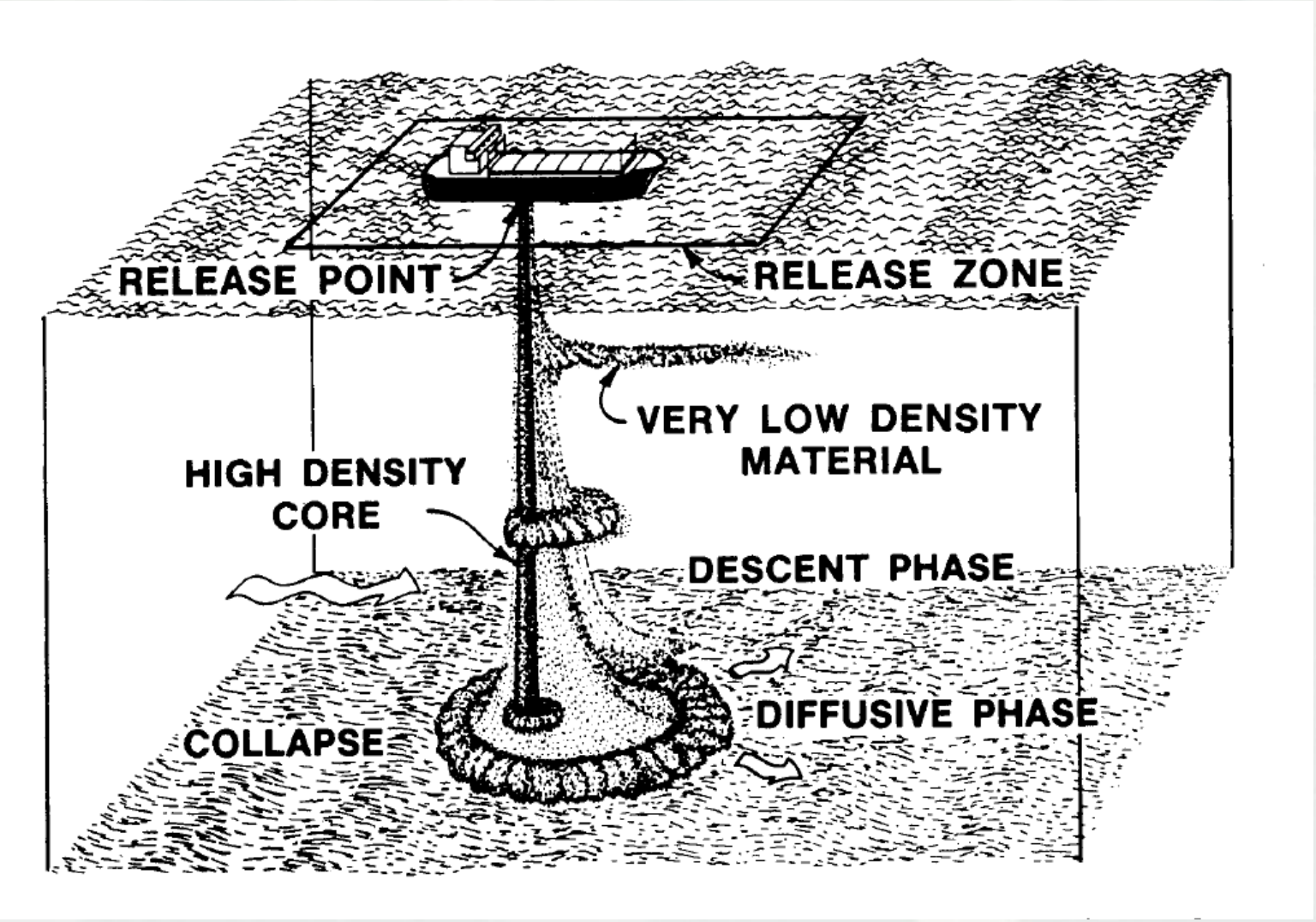
- GPS allows for tracking the scow over full trip
- hull and draft sensors allow for tracking release of material from the scow

Does Dredged Material Remain Stable on the Seafloor?

- decades long records at multiple sites with passage of hurricanes and nor'easters



What About Impacts to Water Quality?



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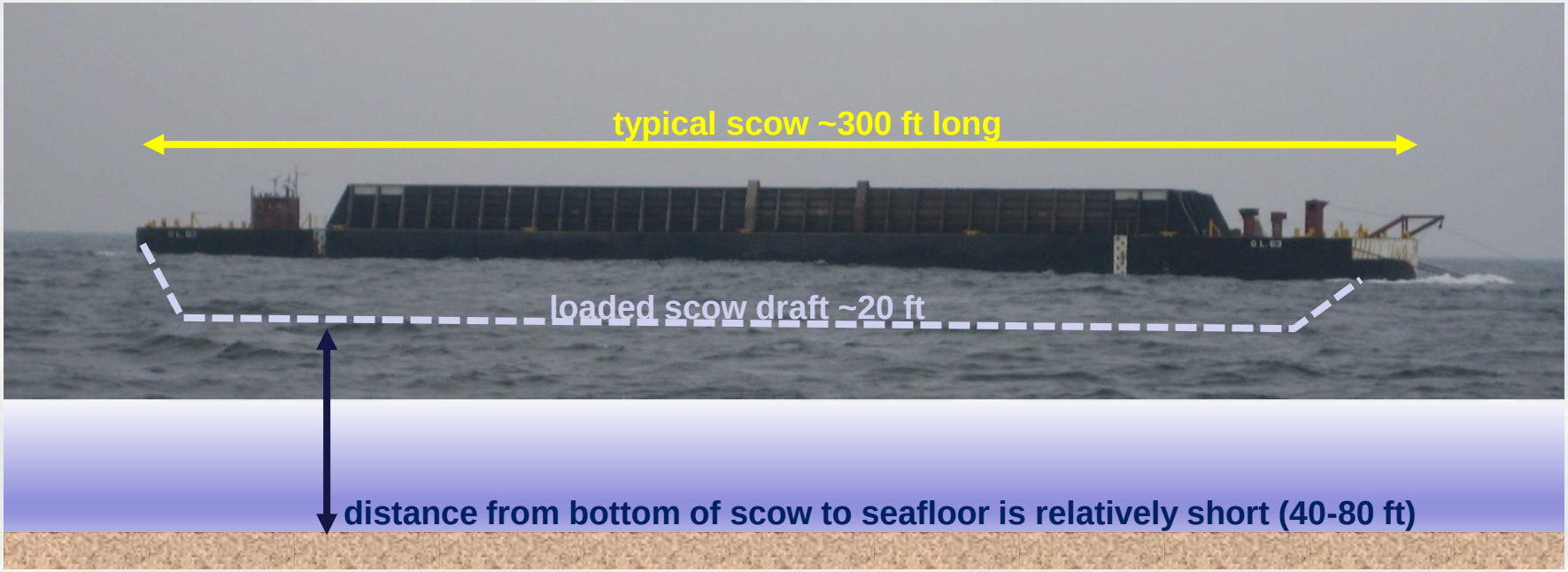
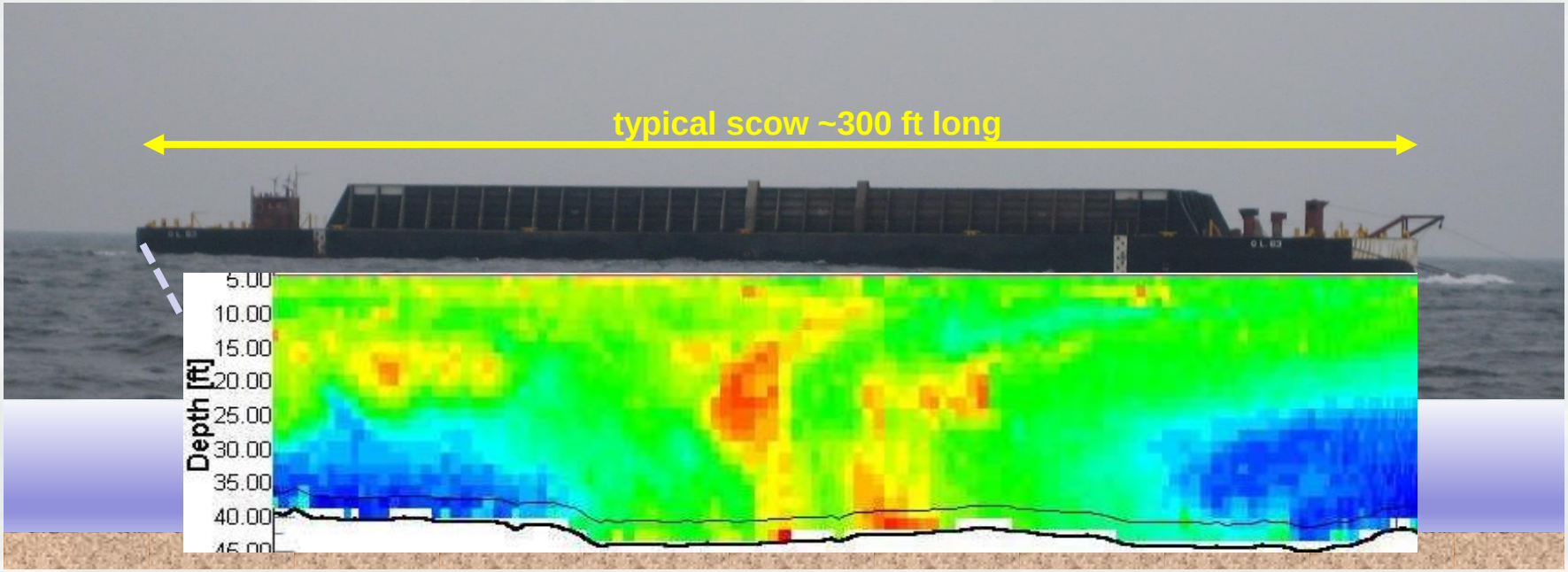


Given the relatively shallow depths of the Central and Western Long Island Sound Sites, the released dredged material reaches the seafloor quickly with minimal release to the water column

What About Impacts to Water Quality?

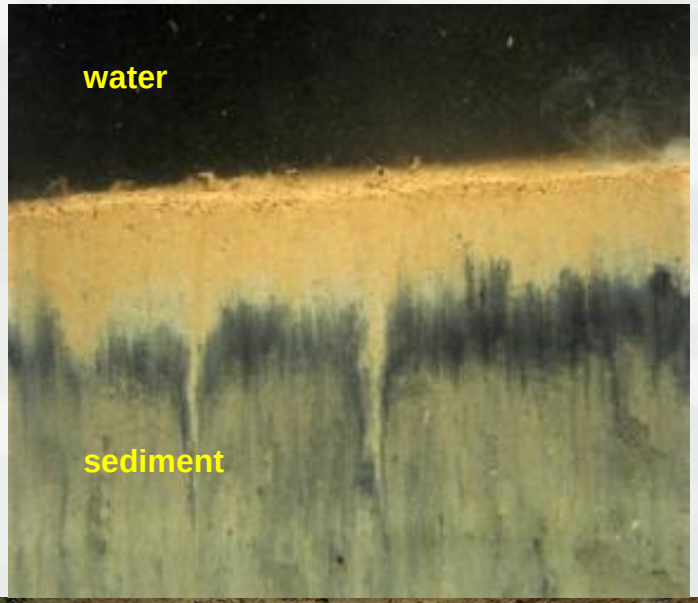


Acoustic Doppler Current Profiler (ADCP) transect run immediately following the release from the scow provides a real-time map of any water column plume

Water column monitoring and sampling with laboratory analysis has demonstrated minimal, short-term impacts to water quality (see DAMOS reports #166, 167, 178)

What Are the Impacts to the Benthic Community?

- Benthic (seabottom) impacts limited to the direct footprint of the material placement

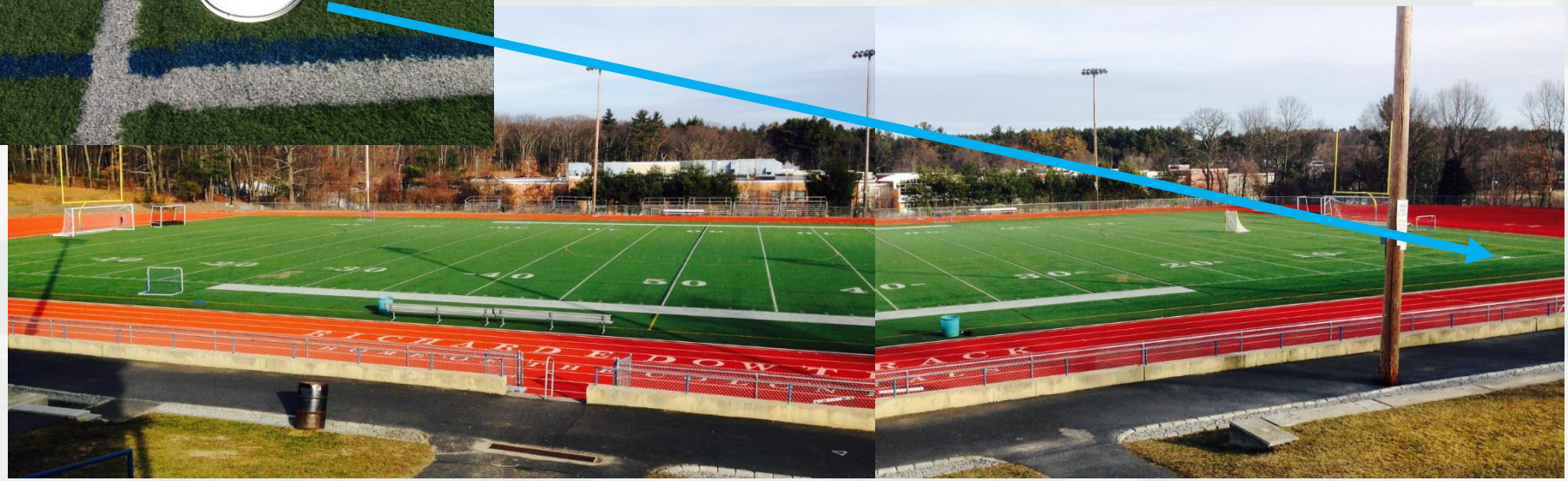


- Tracking this recovery is a primary objective of the DAMOS Program (see reports #188, 191, 192, 193 for recent examples)

What Are the Impacts to the Benthic Community?

What Are the Impacts to the Benthic Community?

- Dredged material placement affects only a very, very small portion of the seafloor of Long Island Sound on an annual basis
- Monitoring has shown that the areas recover within 1 to 2 years



Sediment Transport and Deposition is a Normal Process

Discharge of sediment-laden Connecticut River into Long Island Sound following passage of Hurricane-Tropical Storm Irene

What About Alternatives to Open Water Placement?

- New England Regional Dredge Team meets quarterly
- Beneficial use of dredged material is a standard agenda item

Information

USACE Disposal Area Monitoring System (DAMOS) reports

http://www.nae.usace.army.mil/Missions/DisposalAreaMonitoringSystem(DAMOS).aspx

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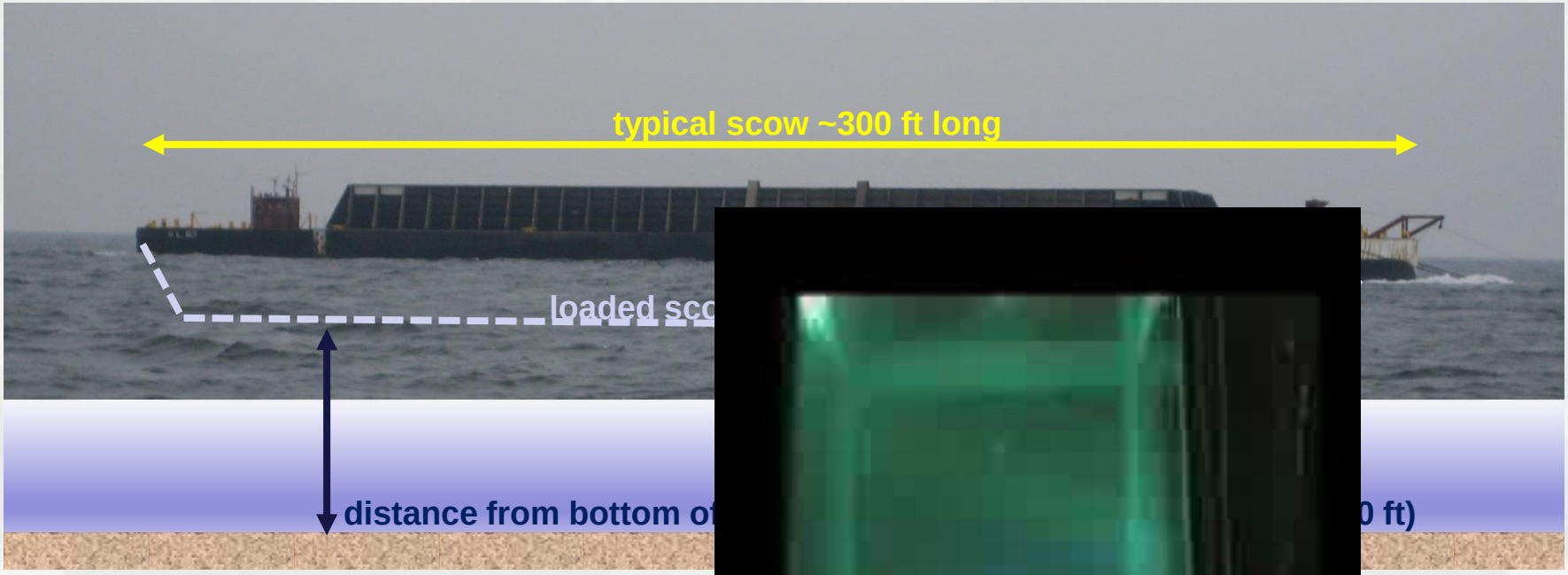

Laboratory studies support field observations of limited loss of material to the water column

MIT laboratory simulation of release of material from a scow using scaled fluorescent beads in a ~10 ft tank (Ruggaber 2000)