

Dataset Originator: *Frank O. Nitsche, Timothy C. Kenna, Cecilia McHugh*

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Dataset Title: *LIS phase 4B sediment grab location and field description data*

Online Linkage: *<https://www.marine-geo.org/collections/#!/collection/LIS>*

Abstract: Location and field description results of sediment grab samples recovered as part of the Long Island Sound mapping project Phase 4B. Sediment grab samples have been taken in August and November 2023 using a modified van Veen grab sampler onboard the RV Pritchard and RV Seawolf. A photo was taken and the samples were described visually in the field. Based on the findings a preliminary lithology was determined. A sub-sample of the top two centimeter was taken and stored in a jar for later analysis. Location is based on the ship DGPS system. The data are presented as Excel spreadsheet and ESRI shapefile.

Dataset purpose: Surface sediment information and lithology is an important characterization for benthic habitats and sediment processes. These field descriptions can guide the interpretation of backscatter data until a more detailed grain size analysis is done in the lab.

Time period of content: *2023-08-14 to 2023-11-18*

Dataset Status: complete

Update Frequency: *none planned*

Theme Keywords: *Long Island Sound, sediment grab, grain size*

Access Constraints: *none*

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Data are provided with the express understanding that they will not be sold to third parties or included in commercial databases.

Users are strongly encouraged to contact the original investigators responsible for data made available on this site. Where appropriate, researchers are also encouraged to consider collaboration and/or co-authorship with original investigators.

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Dataset Credit: Long Island Sound Mapping Project, Timothy C. Kenna, Frank O. Nitsche, Cecilia McHugh

Data Quality Considerations: These are final processed data

Attribute accuracy: The attribute accuracy has not been determined, but standard practices have been followed.

Completeness: The dataset is complete.

Positional accuracy: Locations are based on DGPS using the ship GPS antenna for most cores resulting +/- 5 m accuracy.

Attributes:

Grab_Name: Full text describing the Name of the grab sample. A combination of cruise_id and grab number.

Grab_Num: Grab number. Number of grab sample without cruise_id for short name display

Latitude: Geographic latitude of the sample location.

Longitude: Geographic longitude of the sample location.

depth_m: Water depth in meter from which the sample was collected.

sample_date: Date when the sample was taken (ISO format)

time: Local time (EDT) when the sample was taken.

Project: Name of the project for which the sample was collected.

Survey_ID: Name of the sampling cruise. In this case it is LIS2302 or LIS2303.

Ship: Name of the vessel used for data collection.

Device: Device used for taken the sediment sample.

oxidized_surface: presence or absents of an oxidized top (yes/no)

stiffness: estimated stiffness of the sediment (very soft, soft, stiff, very stiff)

color: color of the sediment

mud: estimate of amount of mud (clay and silt) in the sample (absent, rare, common, abundant)

sand: estimate of amount of sand in the sample (absent, rare, common, abundant)

gravel: estimate of amount of gravel in the sample (absent, rare, common, abundant)

pebbles: estimate of amount of pebbles in the sample (absent, rare, common, abundant)

leaves: estimate of amount of leaves in the sample (absent, rare, common, abundant)

wood: estimate of amount of wood or wood pieces in the sample (absent, rare, common, abundant)

shells: estimate of amount of shells or shell fragments in the sample (absent, rare, common, abundant)

oysters: estimate of amount of oyster shells in the sample (absent, rare, common, abundant)

mussels: estimate of amount of mussels in the sample (absent, rare, common, abundant)

living_veg: estimate of amount of living vegetation in the sample (absent, rare, common, abundant)

anthropogenic: estimate of amount of mud anthropogenic materials (brick, coal, plastics etc.) in the sample (absent, rare, common, abundant)

H₂S_smell: presence or absents of H₂S smell (yes/no)

field_lithology: field estimate of a lithology description of the sediment (sand, muddy sand, sandy mud, etc.)

field_comment: any additional field observations

comment: additional comments made when digitizing field logs and preparing the data

Metadata reference: *Frank Nitsche, Lamont-Doherty Earth Observatory of Columbia University, fnitsche@ldeo.columbia.edu*