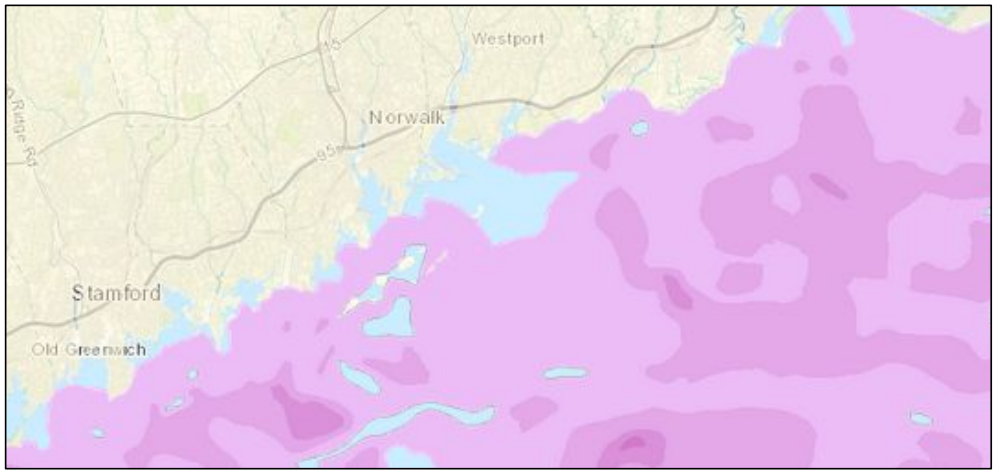
Long Island Sound Post Glacial Deposit Sediment Thickness Contour

New York Geographic Information Gateway

Source: USGS, University of Connecticut



Legend:

- 0
- 0-5
- 5-10; >5
- 10-15; >10
- 15-20; >15
- 20-25; >20
- 25-30; >25
- 30-35; >30
- 35-40
- >40

LONG ISLAND SOUND BLUE PLAN
Sustainable Ecosystems - Compatible Uses

Long Island Sound Post Glacial Deposit Sediment Thickness Contour

Blue Plan Sector(s): Ecological Characterization > Habitats > Physical > Geology/Sediments/Topography

Summary Description: This GIS layer contains an interpretive layer represented by contour lines of the thickness of postglacial sediments in Long Island Sound. The purpose is to disseminate the digital version of a regional map showing the thickness of the postglacial sediments in Long Island Sound

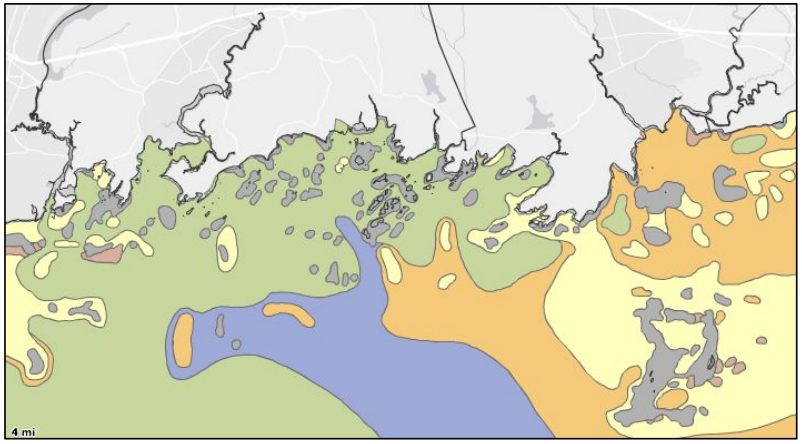
Full Description: Go to:
http://opdgig.dos.ny.gov/geoportal/catalog/search/resource/detailsnoheader.page?uuid={6AAB0EFE-8BF2-4B85-84DC-F3408EF8B986}

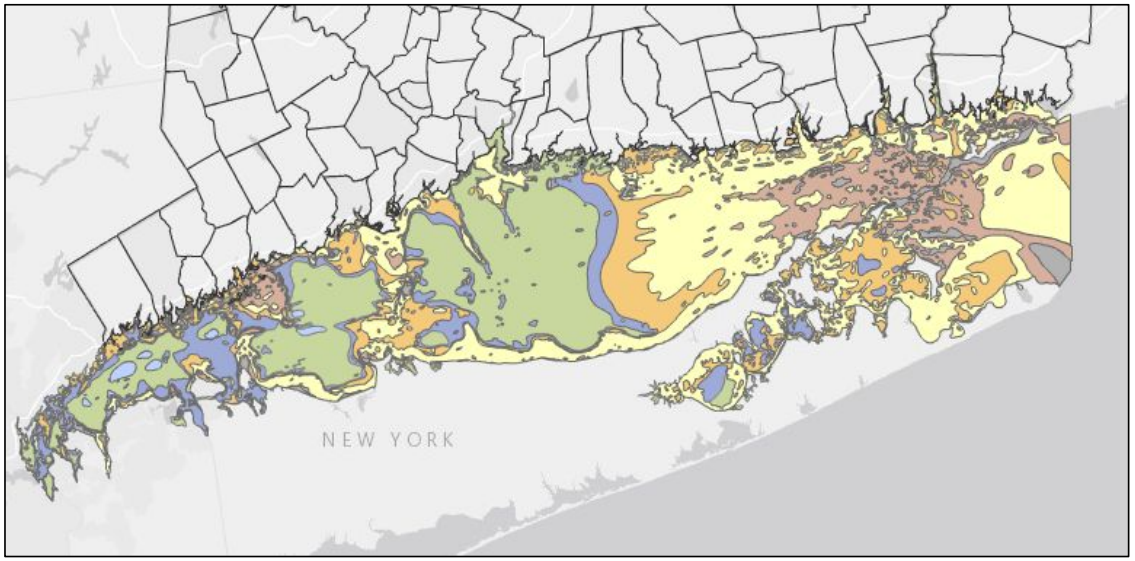
Access Instructions: Go to: http://opdgig.dos.ny.gov/#/map and search "Long Island Sound Post Glacial Deposit Sediment Thickness Contour" in the search data window

LIS Surficial Sediment

Connecticut Aquaculture Mapping Atlas

Source: USGS





LONG ISLAND SOUND BLUE PLAN
Sustainable Ecosystems - Compatible Uses

LIS Surficial Sediment

Blue Plan Sector(s): Ecological Characterization > Habitats > Physical > Geology/Sediments/Topography

Summary Description: This GIS layer contains an computer generated model of the distribution of surficial sediments in Long Island Sound. *Purpose:* The purpose is to disseminate a digital version of a regional map showing the distribution of surficial sediments in Long Island Sound. Grain size is the most basic attribute of sediment texture, and texture controls many benthic ecological and chemical processes.

Full Description: Go to:
https://pubs.usgs.gov/of/2000/of00-304/lisound/data/chap04/listex.htm

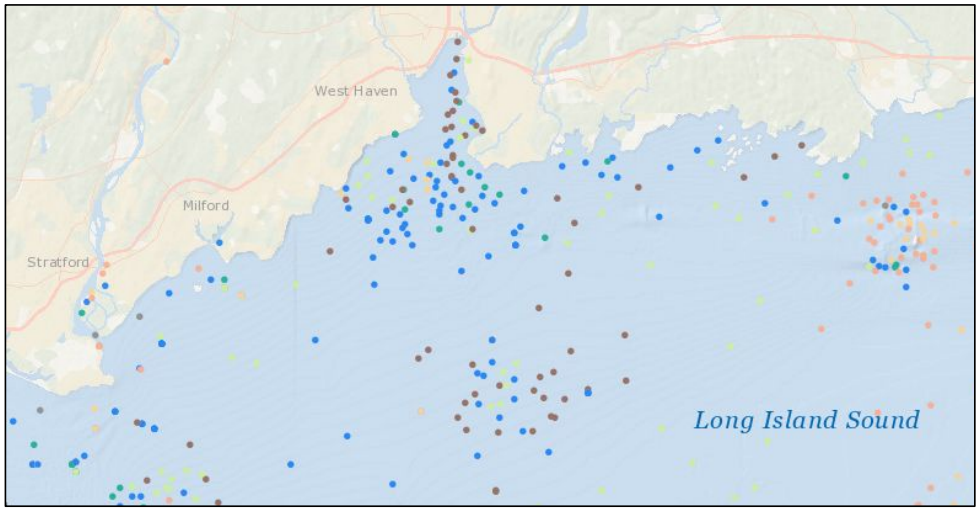
Access Instructions: Go to: http://clear3.uconn.edu/aquaculture/

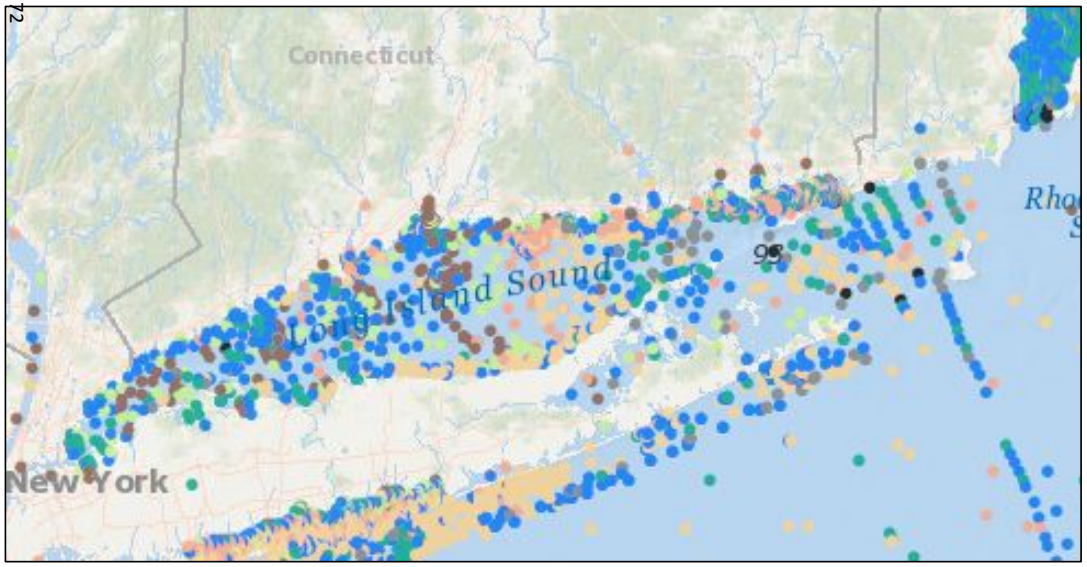
and then turn on the layer "LIS Surficial Sediment" in the Data Layer Selection window

usSEABED Atlantic Coast Offshore Surficial Sediment

Northeast Ocean Data Portal (NEODP)

Source: U.S. Geological Survey Costal and Marine Geology Program, University of Colorado





LEGEND

usSEABED Atlantic Coast Offshore Surficial Sediment

- Mud
- Sandy mud
- Muddy sand
- Sand
- Slighly gravelly
- Gravelly
- Gravel mixes
- Gravel

LONG ISLAND SOUND BLUE PLAN
Sustainable Ecosystems - Compatible Uses

usSEABED Atlantic Coast Offshore Surficial Sediment

Blue Plan Sector(s): Ecological Characterization > Habitats > Physical > Geology/Sediments/Topography

Summary Description: This data layer is a point coverage of known sediment samplings, inspections and probings from the usSEABED data collection and integrated using the software system dbSEABED. This data layer represents the extracted (EXT) output of the dbSEABED mining software. It contains data items which were simply extracted from the data resources through data mining. The EXT data is usually based on instrumental analyses (probe or laboratory) but may apply to just a subsample of the sediment (eg. no large shells). Substrate classifiers from the Coastal and Marine Ecological Classification Standard (CMECS) have been joined to the original USGS attribute table using the "FOLK CODE" field. These additional joined fields are CMECS Substrate Subgroup and CMECS Substrate Group. All of the original USGS attributes have been retained. The legend for this map is classified using CMECS Substrate Group categories.

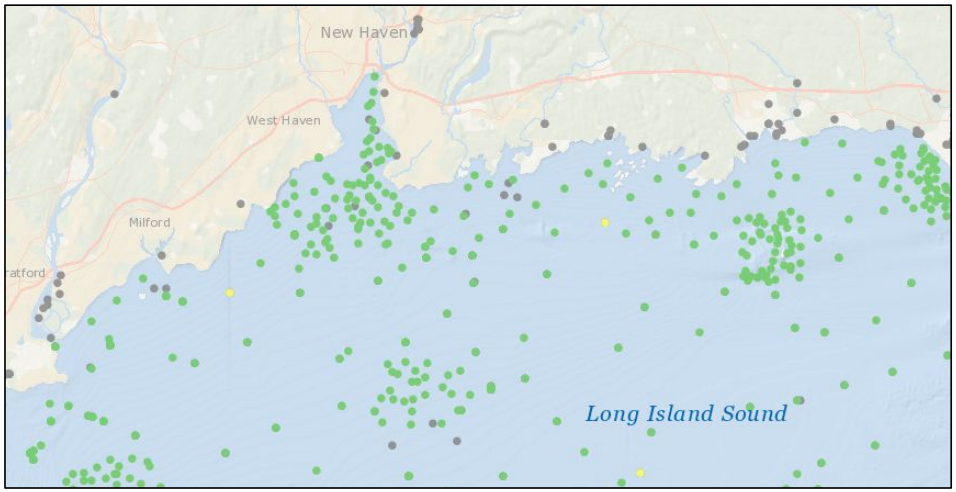
Full Description: Go to: https://pubs.usgs.gov/ds/2005/118/data/atl_extmeta.htm

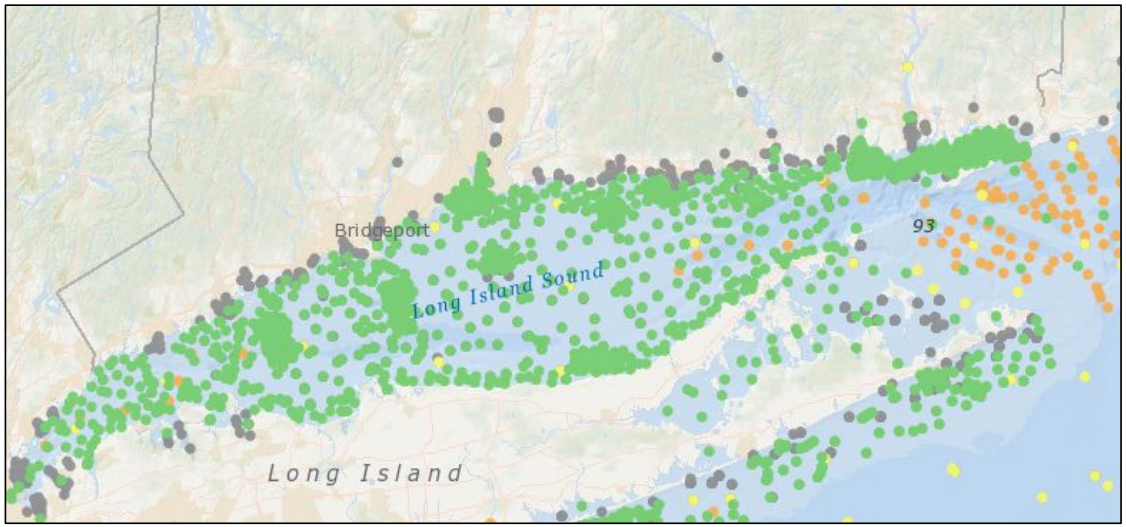
Access Instructions: Go to: http://www.northeastoceandata.org/data-explorer/

And search " usSEABED Atlantic Coast Offshore Surficial Sediment" in the layers window

usSEABED Data Quality

Northeast Ocean Data Portal (NEODP)





Source: U.S. Geological Survey (USGS),
Ford, K.H. & Voss, S. (2010). Seafloor Sediment Composition in Massachusetts Determined Using Point Data (Massachusetts Division of Marine Fisheries Technical Report TR 45). New Bedford: Massachusetts Division of Marine Fisheries.
Sampson, D. & Huntley, E. (2015, April). Creating a comprehensive seafloor sediment map in Massachusetts. Presentation at Coastal Geotools, Charleston, SC

LONG ISLAND SOUND BLUE PLAN
Sustainable Ecosystems - Compatible Uses

usSEABED Data Quality

Blue Plan Sector(s): Ecological Characterization > Habitats > Physical > Geology/Sediments/Topography

Summary Description: This dataset is intended to be a companion layer to the U.S. Geological Survey (USGS) Data Series usSEABED Atlantic Coast Offshore Surficial Sediment extracted data for the entire U.S. Atlantic Coast. The usSEABED Extracted Data for the Entire U.S. Atlantic Coast depicts the point locations of known sediment samplings, inspections and probings from the usSEABED data collection which were integrated using the software system dbSEABED. These point locations were extracted from the database through data mining. The resulting dataset contains information on samples from 58 individual datasets collected by the USGS and other research projects, and includes data processed by the USGS sediment laboratory, in addition to datasets compiled from gray literature or unpublished sources.

Full Description: Go to:
http://www.northeastoceandata.org/files/metadata/Themes/Habitat/usSEABEDDataQuality.pdf

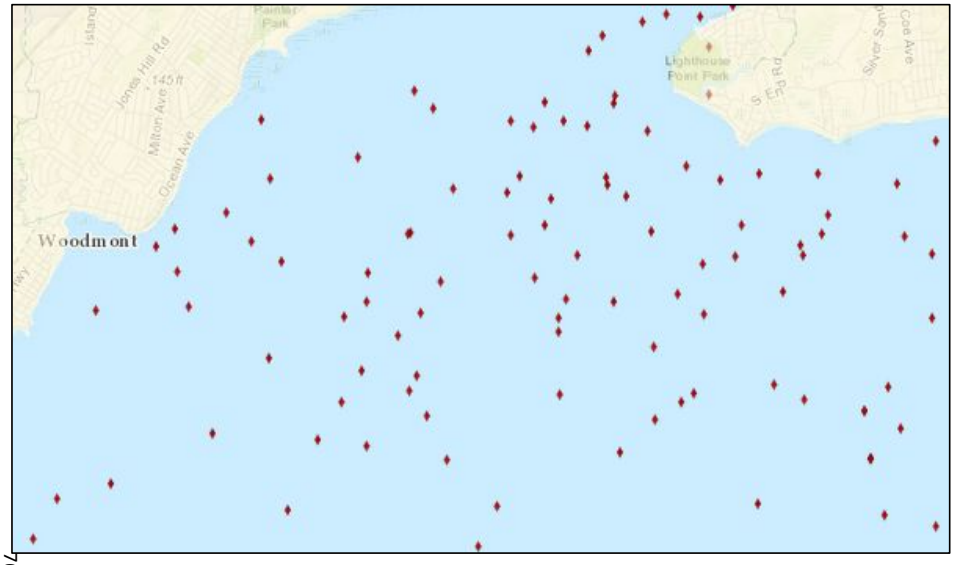
Access Instructions: Go to: http://www.northeastoceandata.org/data-explorer/

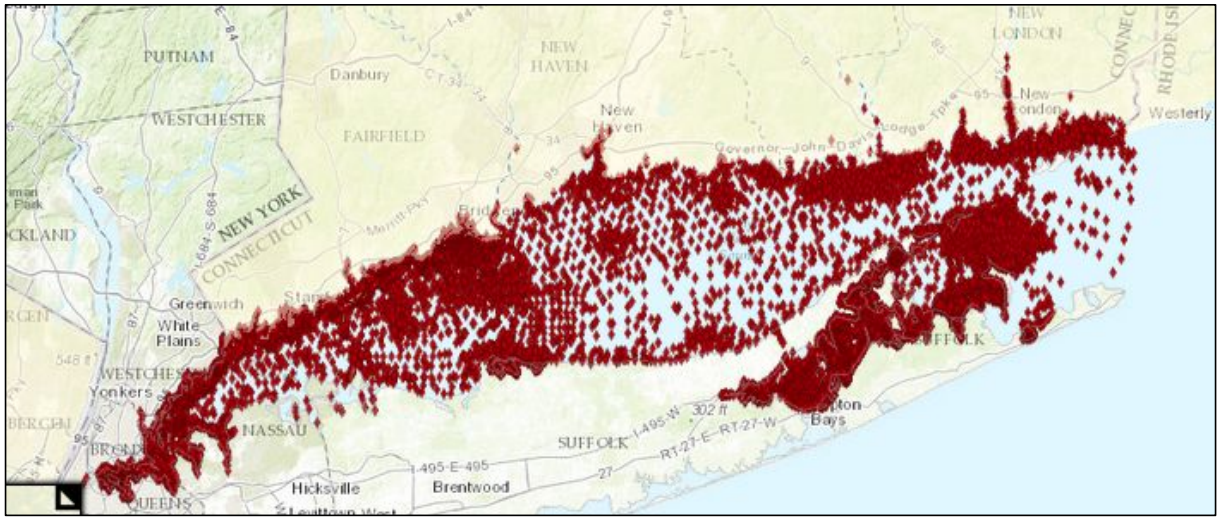
And search " usSEABED Data Quality" in the layers window

Long Island Sound Surficial Sediments

New York Geographic Information Gateway

Source: USGS, NYOPD, Jacqueline Mickiewicz, Rosemary Malley, Kevin O'Brien, State of Connecticut, Department of Environmental Protection, Research





Legend:

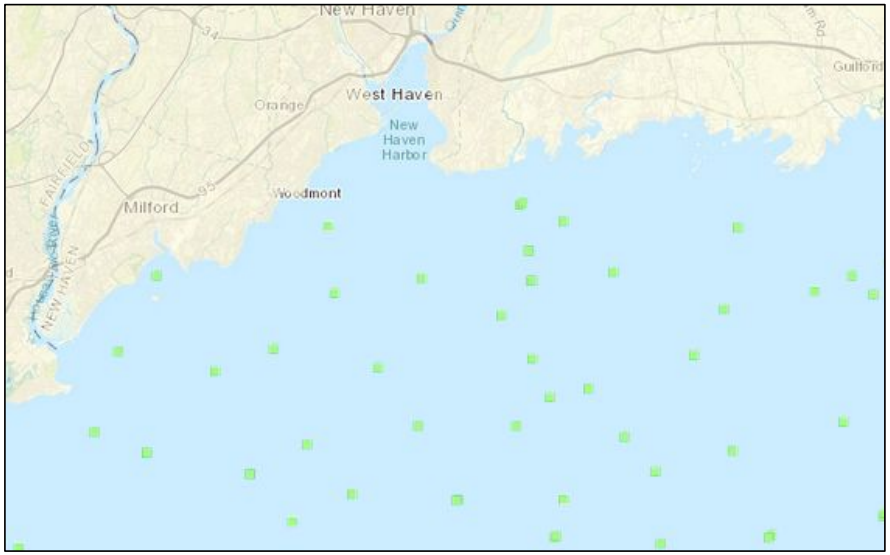
Long Island Sound Surficial Sediments

Blue Plan Sector(s): Ecological Characterization > Habitats > Physical > Geology/Sediments/Topography

Summary Description: Many scientific questions and policy issues related to sediments in Long Island Sound require data of historical, regional and interdisciplinary scope. Existent data is often geographically clustered and its references are widely dispersed and not always accessible. Acquisition of new data is expensive and may duplicate previous efforts if a full interpretation of existent data has not occurred. Consequently, the body of existing data needs to be utilized to its maximum so that it can serve as a foundation, baseline, and starting point for further work. An accessible, documented, and simple-to-use compilation of existing data on sediment properties is essential for environmental managers, policy-makers, scientific researchers, and interested members of the public. To this end, we have compiled, edited, and integrated all of the available data on sediment texture and bottom descriptions throughout the Sound in order to produce a regional dataset which will be available to a wide variety of current and potential users. The significant feature of this textural dataset is that it comprehensively contains original data from many heterogeneous sources. *Purpose:* This ArcView shapefile contains the locations of sediment samples collected and analyzed by a number of organizations, and compiled by the U.S. Geological Survey, Woods Hole Science Center. Distribution of this dataset allows the user to visualize the textural information in a Geographic Information System.

Full Description: Go to:
http://opdgig.dos.ny.gov/geoportal/catalog/search/resource/detailsnoheader.page?uuid={3384EB6E-13B5-4B32-9DE5-00EF1562571C}

Access Instructions: Go to: http://opdgig.dos.ny.gov/#/map and search “Long Island Sound Surficial Sediments” in the search data window



Long Island Sound Sample Locations With Metal Composition

New York Geographic Information Gateway

Source: USGS, University of Connecticut, Jacqueline Mickiewicz, Rosemary Malley, Kevin O'Brien, State of Connecticut, Department of Environmental Protection

Legend:

LONG ISLAND SOUND BLUE PLAN

Sustainable Ecosystems - Compatible Uses

Long Island Sound Sample Locations with Metal Composition

Blue Plan Sector(s): Ecological Characterization > Habitats > Physical > Geology/Sediments/Topography

Summary Description: This GIS layer contains a point overlay showing the location of surficial samples used in the analysis of metal distributions in LIS. Attribute information containing the chemical analysis values are also included in the data layer. The purpose of this datalayer is to disseminate a digital version of the map showing the locations of surficial samples used in the analysis of metal distributions in LIS.

Full Description: Go to:
http://opdgig.dos.ny.gov/geoportal/catalog/search/resource/detailsnoheader.page?uuid={E42B997E-465C-4C05-8FEB-C00A8C1DDCD8}

Access Instructions: Go to: http://opdgig.dos.ny.gov/#/map and search "Long Island Sound Sample Locations with Metal Composition" in the search data window

Long Island Sound USGS Benthic Foraminiferal Samples

New York Geographic Information Gateway

Source: USGS, Wesleyan University, State of Connecticut, Department of Environmental Protection, Research

Legend:

▲

LONG ISLAND SOUND BLUE PLAN
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Long Island Sound USGS Benthic Foraminiferal Samples

Blue Plan Sector(s): Ecological Characterization > Habitats > Physical > Geology/Sediments/Topography

Summary Description: This GIS layer contains a point overlay showing the the population of benthic foraminiferain samples collected during the time period of 1996 - 1997 by the USGS. *Purpose:* The purpose of this layer is to disseminate a digital version of the location of benthic foraminiferal samples and population data collected and analyzed by the USGS during the time period of 1996 - 1997.

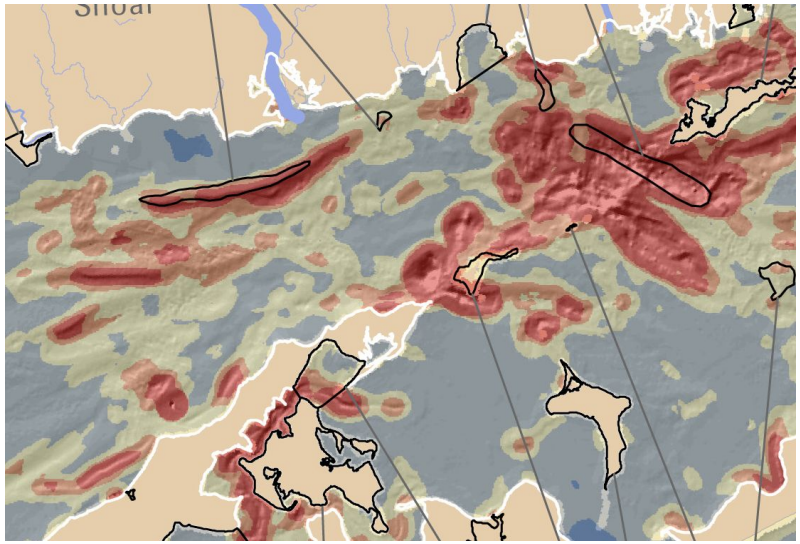
Full Description: Go to:
http://opdgig.dos.ny.gov/geoportal/catalog/search/resource/detailsnoheader.page?uuid={27B6EBF1-19A3-4AC5-A2EA-FBAC835F8C13}

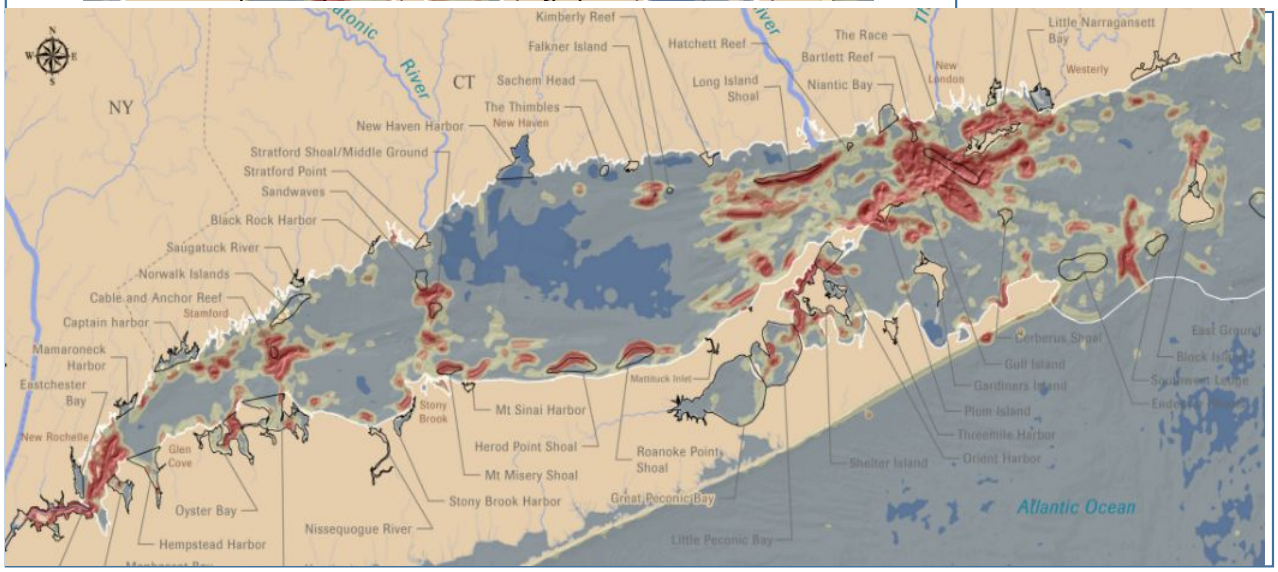
Access Instructions: Go to: http://opdgig.dos.ny.gov/#/map and search "Long Island Sound USGS Benthic Foraminiferal Samples" in the search data window

LISEA – Bathymetric Complexity

Conservation Gateway

Source: The Nature Conservancy Long Island Sound Ecological Assessment





Bathymetric Complexity

Weighted Standard Deviation of Slope Within 1km

Complexity Index

Less Complex — More Complex

LONG ISLAND SOUND BLUE PLAN

Sustainable Ecosystems - Compatible Uses

Bathymetric Complexity

Blue Plan Sector(s): Habitats/Physical/bathymetry

Summary Description: Seafloor complexity uses the physical complexity of the seafloor as a predictor or proxy for marine life. The greater the complexity, the greater is the prediction of relative marine life significance (e.g. diversity, persistence and/or abundance). Physical and biological data are used both to delineate and to model seafloor complexity. The method for generating bathymetric complexity involved creating a raster (grid) dataset representing the relative complexity across the entire study area using a focal statistic neighborhood analysis. The standard deviation of slope within 500 m and within 1,000 meters of each raster cell was calculated. These grids were then added to create a surface that represents the topographic variability with some weighting for proximity.

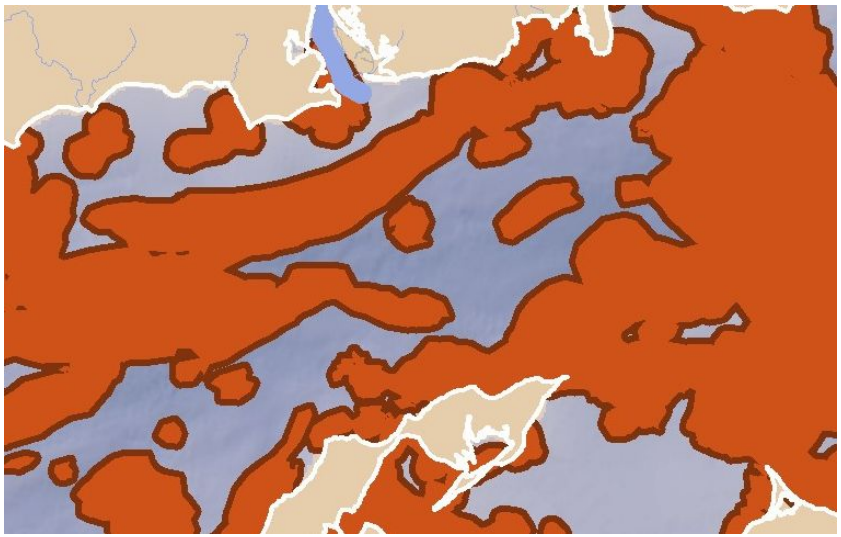
Full Description: metadata contained with downloadable GIS data or via reports at project URL below (layer = bathymetric_complexity)

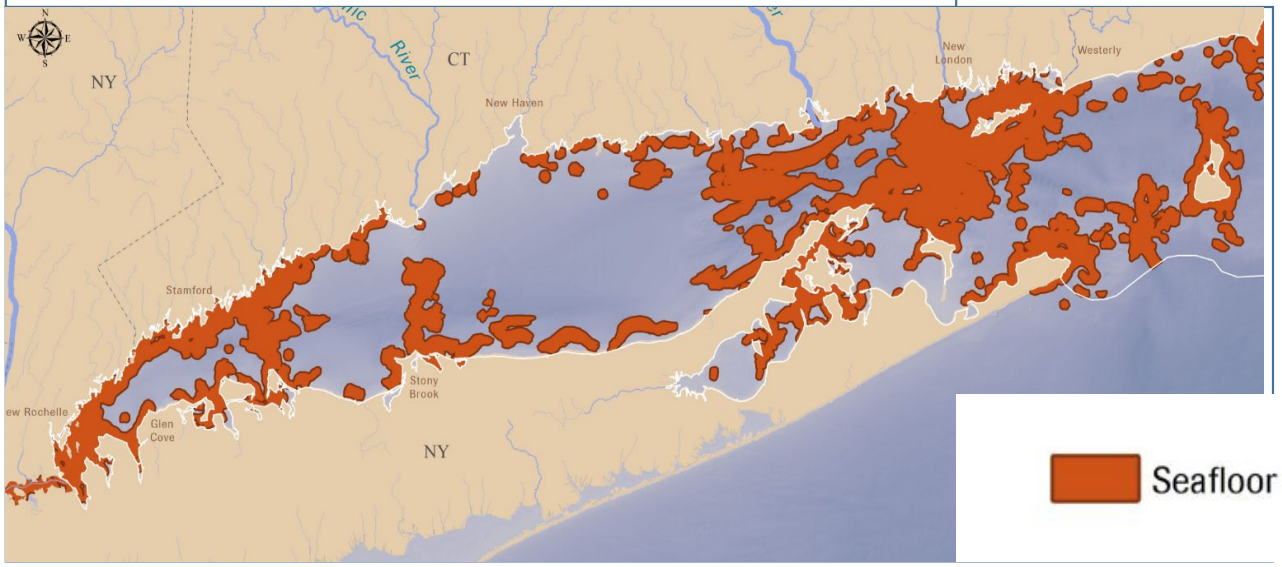
Access Instructions: Not currently available via map portal; images can be accessed at https://www.conservationgateway.org/ConservationByGeography/NorthAmerica/UnitedStates/edc/reportsdata/marine/namera/lis/Pages/default.aspx

LISEA – Seafloor Complexity

Conservation Gateway

Source: The Nature Conservancy Long Island Sound Ecological Assessment





LONG ISLAND SOUND BLUE PLAN
Sustainable Ecosystems - Compatible Uses

LISEA – Seafloor Complexity

Blue Plan Sector(s): Habitats/Ecological/Seafloor Complexity

Summary Description: Seafloor complexity uses the physical complexity of the seafloor as a predictor or proxy for marine life. The greater the complexity, the greater is the prediction of relative marine life significance (e.g. diversity, persistence and/or abundance). Physical and biological data are used both to delineate and to model seafloor complexity. The method for generating bathymetric complexity involved creating a raster (grid) dataset representing the relative complexity across the entire study area using a focal statistic neighborhood analysis. The standard deviation of slope within 500 m and within 1,000 meters of each raster cell was calculated. These grids were then added to create a surface that represents the topographic variability with some weighting for proximity.

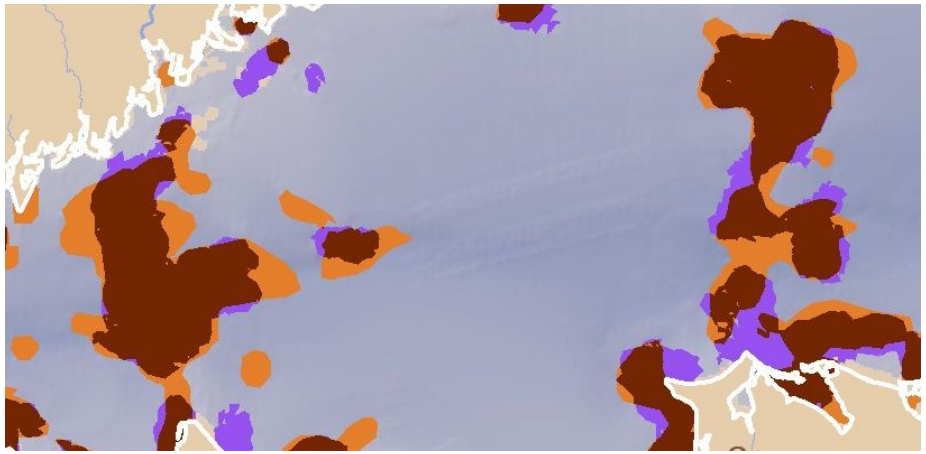
Full Description: metadata contained with downloadable GIS data or via reports at project URL below (layers = bathymetric complexity)

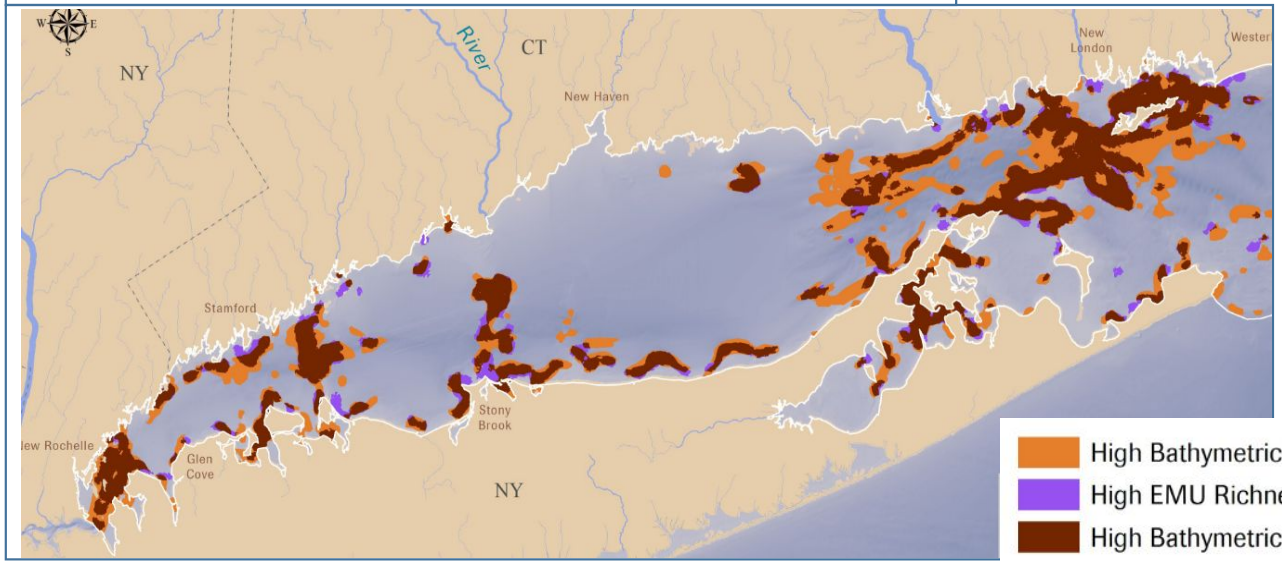
Access Instructions: Not currently available via map portal; images can be accessed at https://www.conservationgateway.org/ConservationByGeography/NorthAmerica/UnitedStates/edc/reportsdata/marine/namera/lis/Pages/default.aspx

LISEA – Seafloor Complexity Components

Conservation Gateway

Source: The Nature Conservancy Long Island Sound Ecological Assessment





LONG ISLAND SOUND BLUE PLAN
Sustainable Ecosystems - Compatible Uses

LISEA – Seafloor Complexity Components

LONG ISLAND SOUND BLUE PLAN
Sustainable Ecosystems - Compatible Uses

Blue Plan Sector(s): Habitats/Ecological/Seafloor Complexity

Summary Description: The EMU variety is a measure of the local variation on EMU type. It is measure of seafloor complexity used to highlight places of diverse seafloor to be included in the LISEA seafloor portfolio. The EMU variety was calculated by using a focal statistic (moving window) measure of the variety of unique EMU types within 1,000 and 500 meters. These values were combined to create a metric describing the local variation of EMU type.

Seafloor complexity uses the physical complexity of the seafloor as a predictor or proxy for marine life. The greater the complexity, the greater is the prediction of relative marine life significance (e.g. diversity, persistence and/or abundance). Physical and biological data are used both to delineate and to model seafloor complexity. The method for generating bathymetric complexity involved creating a raster (grid) dataset representing the relative complexity across the entire study area using a focal statistic neighborhood analysis. The standard deviation of slope within 500 m and within 1,000 meters of each raster cell was calculated. These grids were then added to create a surface that represents the topographic variability with some weighting for proximity.

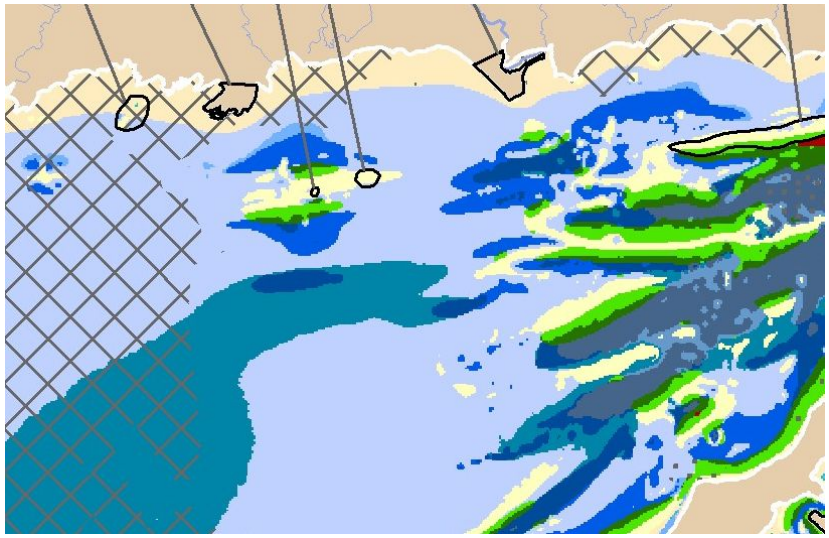
Full Description: metadata contained with downloadable GIS data or via reports at project URL below (layers = EMU variety, bathymetric complexity)

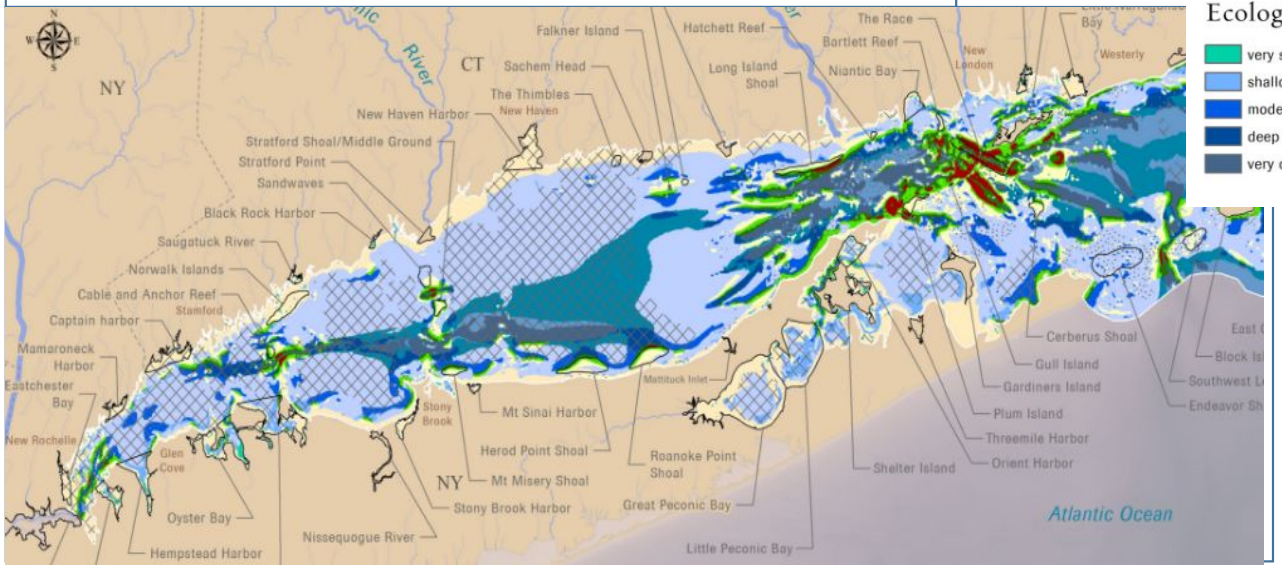
Access Instructions: Not currently available via map portal; images can be accessed at https://www.conservationgateway.org/ConservationByGeography/NorthAmerica/UnitedStates/edc/reportsdata/marine/namera/lis/Pages/default.aspx

LISEA – Ecological Marine Units

Conservation Gateway

Source: The Nature Conservancy Long Island Sound Ecological Assessment





Ecological Marine Units

very shallow depression	very shallow flat	low slope
shallow depression	high flat	side slope
moderate depression	shallow flat	steep
deep depression	moderate flat	Silt
very deep depression	deep flat	Gravel
	very deep flat	Sand (areas not identified as silt or gravel)

LONG ISLAND SOUND BLUE PLAN
Sustainable Ecosystems - Compatible Uses

LISEA – Ecological Marine Units

Blue Plan Sector(s): Habitats/Ecological/Ecological Marine Units

Summary Description: To characterize the benthic environments of Long Island Sound and understand how the benthic community distributions are related to the physical structure of the sea floor, a spatially comprehensive data layer for each of three components was developed: bathymetry, sediment grain size and topographic or seabed forms. These components were chosen because of their well-documented correlation with the distribution and abundance of benthic organisms. This data product was created as part of the Long Island Sound Ecological Assessment (LISEA). Ecological Marine Units (EMUs) are the three-way combination of physical variables - depth, sediment grain size, and seabed forms. The breaks in bathymetry and substrate grain size are based on the ecological thresholds revealed by the benthic organism relationships. EMUs were derived from sediment and depth data sources. Sediment points were interpolated with kriging in ArcGIS to create a continuous surface which was then classified based on bethic organism preferences. Depth was classified by organism preferences. Depth was also used to calculate seabed form (a combination of seabed position and slope).

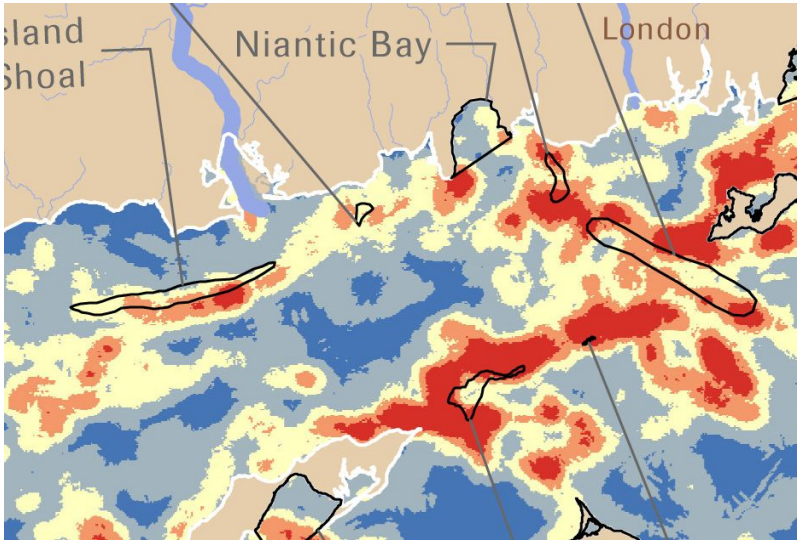
Full Description: metadata contained with downloadable GIS data or via reports at project URL below (layers = EMU, EMU_sediment_polygons)

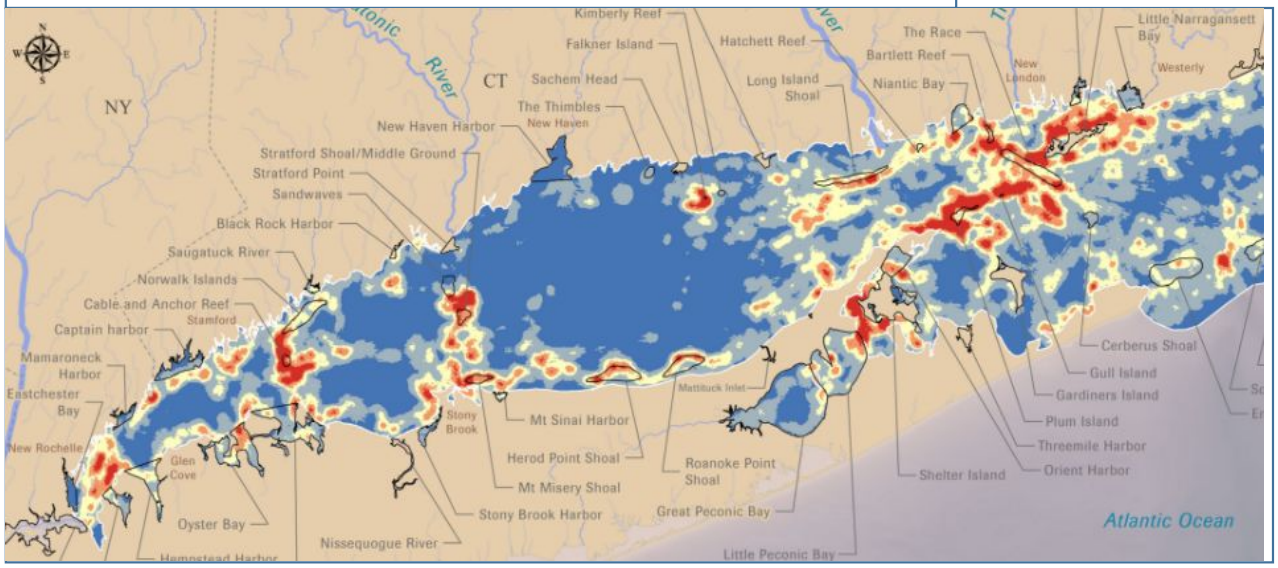
Access Instructions: Not currently available via map portal; images can be accessed at https://www.conservationgateway.org/ConservationByGeography/NorthAmerica/UnitedStates/edc/reportsdata/marine/namera/lis/Pages/default.aspx

LISEA – Ecological Marine Unit Richness

Conservation Gateway

Source: The Nature Conservancy Long Island Sound Ecological Assessment





LONG ISLAND SOUND BLUE PLAN
Sustainable Ecosystems - Compatible Uses

LISEA – Ecological Marine Unit Richness

Blue Plan Sector(s): Habitats/Ecological/Ecological Marine Units

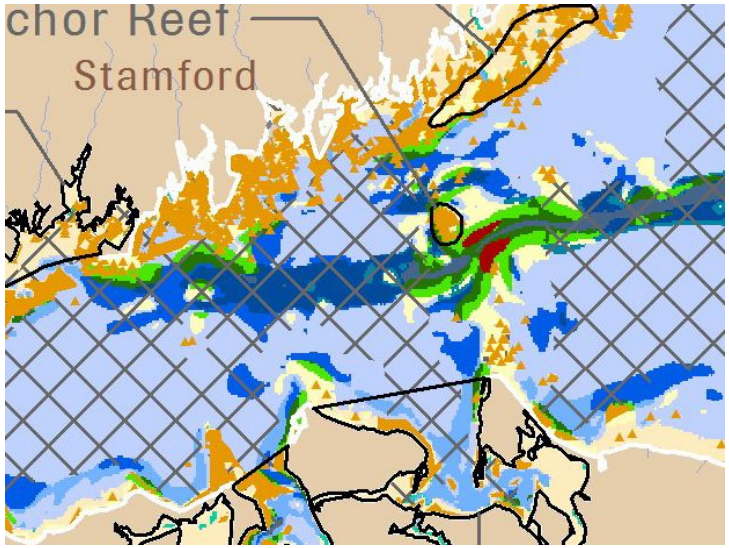
Summary Description: The EMU variety is a measure of the local variation on EMU type. It is measure of seafloor complexity used to highlight places of diverse seafloor to be included in the LISEA seafloor portfolio. The EMU variety was calculated by using a focal statistic (moving window) measure of the variety of unique EMU types within 1,000 and 500 meters. These values were combined to create a metric describing the local variation of EMU type.

Full Description: metadata contained with downloadable GIS data or via reports at project URL below (layers = EMU variety)

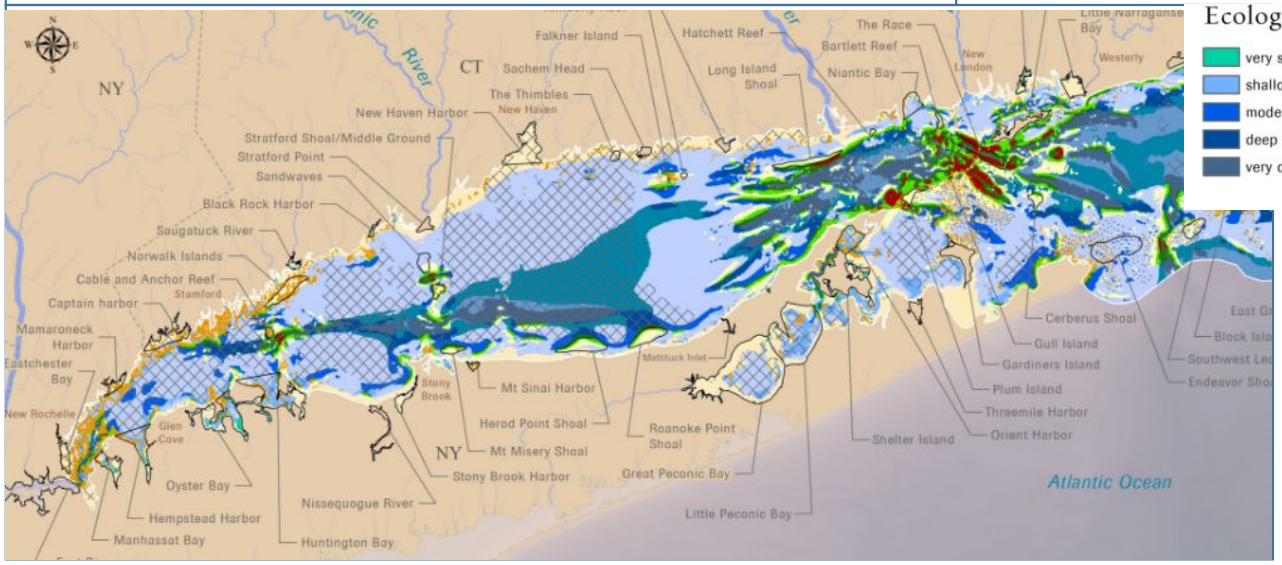
Access Instructions: Not currently available via map portal; images can be accessed at https://www.conservationgateway.org/ConservationByGeography/NorthAmerica/UnitedStates/edc/reportsdata/marine/namera/lis/Pages/default.aspx

LISEA – Ecological Marine Units w/ Hard Bottom

Conservation Gateway



Source: The Nature Conservancy Long Island Sound Ecological Assessment



Ecological Marine Units

- very shallow depression
- shallow depression
- moderate depression
- deep depression
- very deep depression
- very shallow flat
- high flat
- shallow flat
- moderate flat
- deep flat
- very deep flat
- low slope
- side slope
- steep
- Silt
- Gravel
- Sand (areas not identified as silt or gravel)

Hard Bottom

- Known Hard Bottom Locations
- Conservative Hard Bottom Model

LONG ISLAND SOUND BLUE PLAN
Sustainable Ecosystems - Compatible Uses

LISEA – Ecological Marine Units w/ Hard Bottom

Blue Plan Sector(s): Habitats/Ecological/Ecological Marine Units

Summary Description: To characterize the benthic environments of Long Island Sound and understand how the benthic community distributions are related to the physical structure of the sea floor, a spatially comprehensive data layer for each of three components was developed: bathymetry, sediment grain size and topographic or seabed forms. These components were chosen because of their well-documented correlation with the distribution and abundance of benthic organisms. This data product was created as part of the Long Island Sound Ecological Assessment (LISEA). Ecological Marine Units (EMUs) are the three-way combination of physical variables - depth, sediment grain size, and seabed forms. The breaks in bathymetry and substrate grain size are based on the ecological thresholds revealed by the benthic organism relationships. EMUs were derived from sediment and depth data sources. Sediment points were interpolated with kriging in ArcGIS to create a continuous surface which was then classified based on bethic organism preferences. Depth was classified by organism preferences. Depth was also used to calculate seabed form (a combination of seabed position and slope).

As part of the LISEA project we complied a map of hard bottom locations (rock outcrop, bedrock, etc.). Because hard bottom patches can be small and there are likely many that aren't mapped, we made an effort to create a predictive model to identify the likely occurrence of additional hard bottom habitat based on a number of available datasets. The hard bottom model is defined as an area with depth less than 9.624 meters, structural complexity greater than 0.257, LPI greater than 40.769, and sediment grain size less than 0.1157 mm. This model captures 94% known hard bottom versus 6% random locations.

Full Description: metadata contained with downloadable GIS data or via reports at project URL below (layers = EMU, EMU_sediment_polygons, hard_bottom_model_conservative)

Access Instructions: Not currently available via map portal; images can be accessed at https://www.conservationgateway.org/ConservationByGeography/NorthAmerica/UnitedStates/edc/reportsdata/marine/namera/lis/Pages/default.aspx

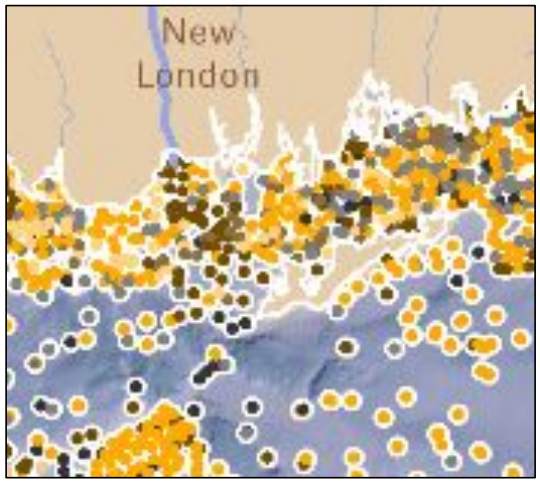


Figure 5.5 Sediment Samples

TNC-LISEA

Source: The Nature Conservancy (TNC)

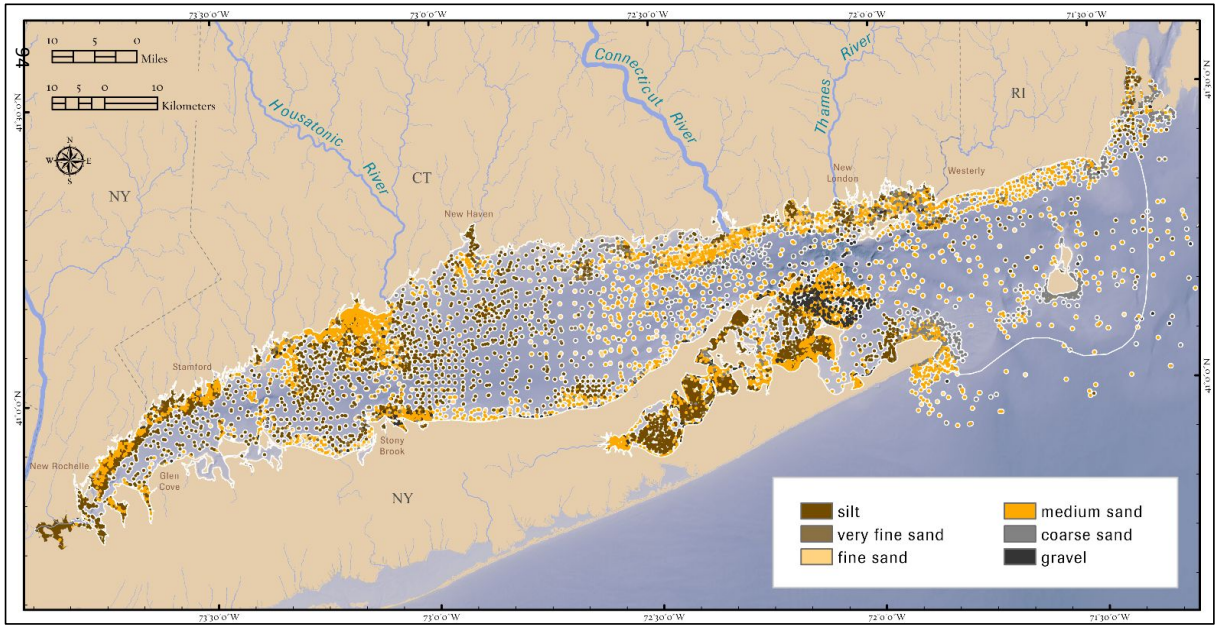


Figure 5.5 Sediment Samples

Blue Plan Sector(s): Ecological Characterization > Habitats > Physical > Geology/Sediments/Topography

Summary Description: To characterize the benthic environments of Long Island Sound and understand how the benthic community distributions are related to the physical structure of the sea floor, a spatially comprehensive data layer for each of three components was developed: bathymetry, sediment grain size and topographic or seabed forms. These components were chosen because of their well-documented correlation with the distribution and abundance of benthic organisms.

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Full Description: Go to GDB in ArcCatalog for metadata

Access Instructions: Go to: https://www.conservationgateway.org/ConservationByGeography/NorthAmerica/UnitedStates/edc/reportsdata/marine/namera/lis/Pages/default.aspx

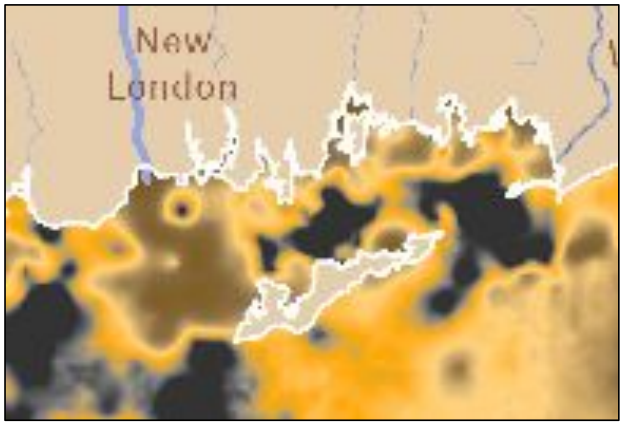

Figure 5.6 Interpolated Sediment

TNC-LISEA

Source: The Nature Conservancy (TNC)

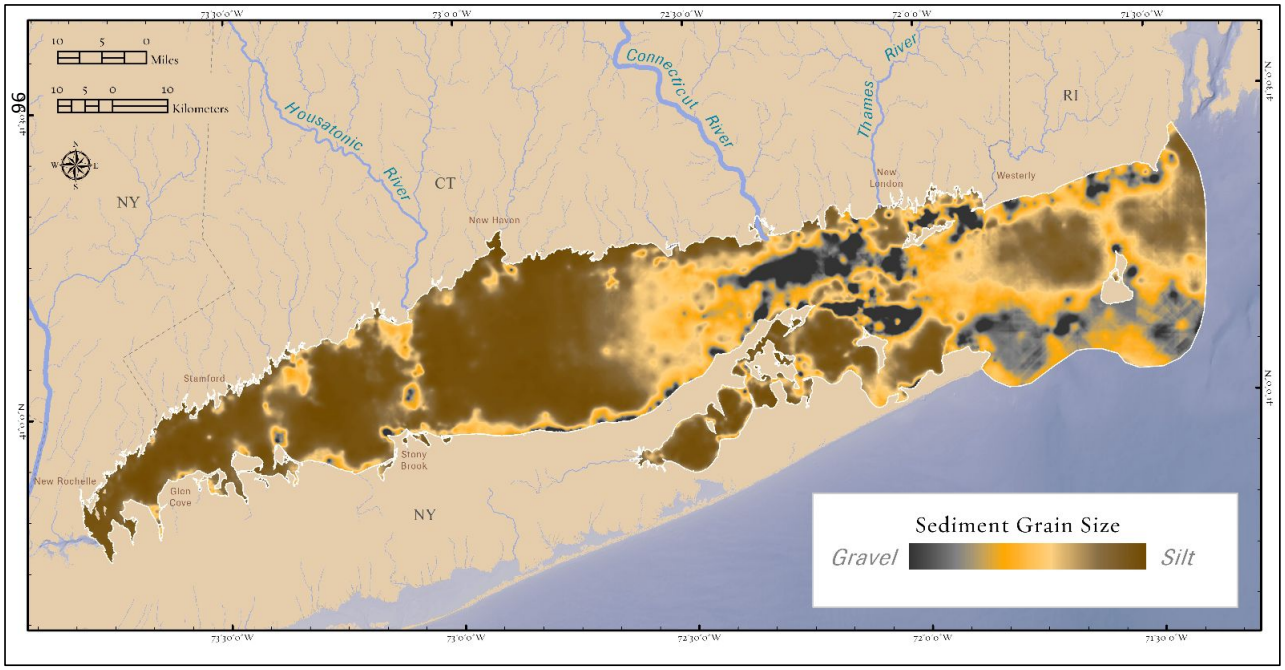

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Figure 5.6 Interpolated Sediment

Blue Plan Sector(s): Ecological Characterization > Habitats > Physical > Geology/Sediments/Topography

Summary Description: To characterize the benthic environments of Long Island Sound and understand how the benthic community distributions are related to the physical structure of the sea floor, a spatially comprehensive data layer for each of three components was developed: bathymetry, sediment grain size and topographic or seabed forms. These components were chosen because of their well-documented correlation with the distribution and abundance of benthic organisms.

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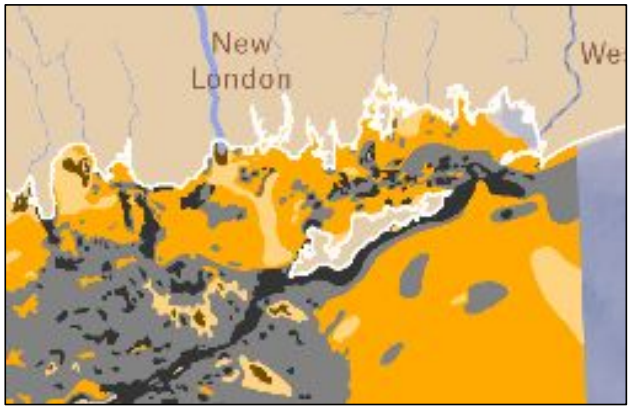

Figure 5.7 USGS Sediment

TNC-LISEA

Source: The Nature Conservancy (TNC), USGS

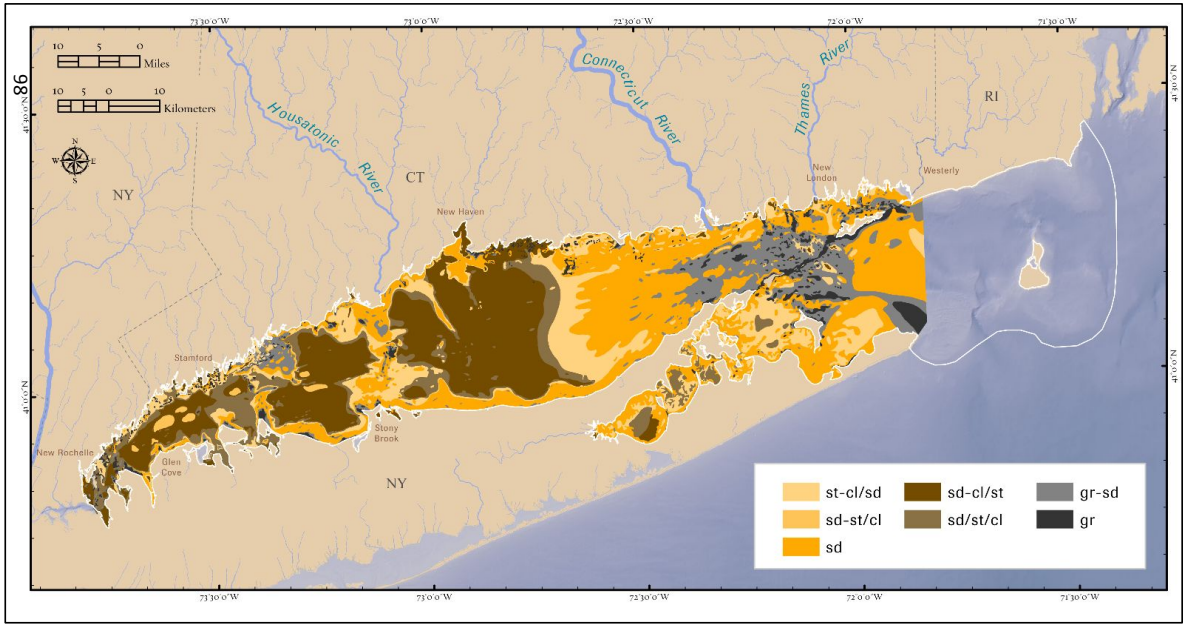

Figure 5.7 USGS Sediment

Blue Plan Sector(s): Ecological Characterization > Habitats > Physical > Geology/Sediments/Topography

Summary Description: To characterize the benthic environments of Long Island Sound and understand how the benthic community distributions are related to the physical structure of the sea floor, a spatially comprehensive data layer for each of three components was developed: bathymetry, sediment grain size and topographic or seabed forms. These components were chosen because of their well-documented correlation with the distribution and abundance of benthic organisms.

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Access Instructions: Go to: https://www.conservationgateway.org/ConservationByGeography/NorthAmerica/UnitedStates/edc/reportsdata/marine/namera/lis/Pages/default.aspx

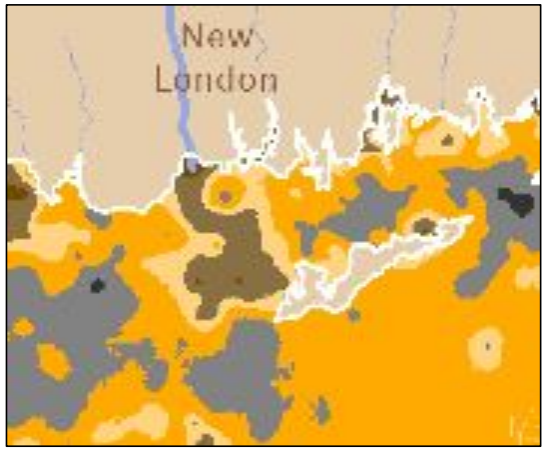

Figure 5.9 Sediment Thresholds

TNC-LISEA

Source: The Nature Conservancy (TNC)

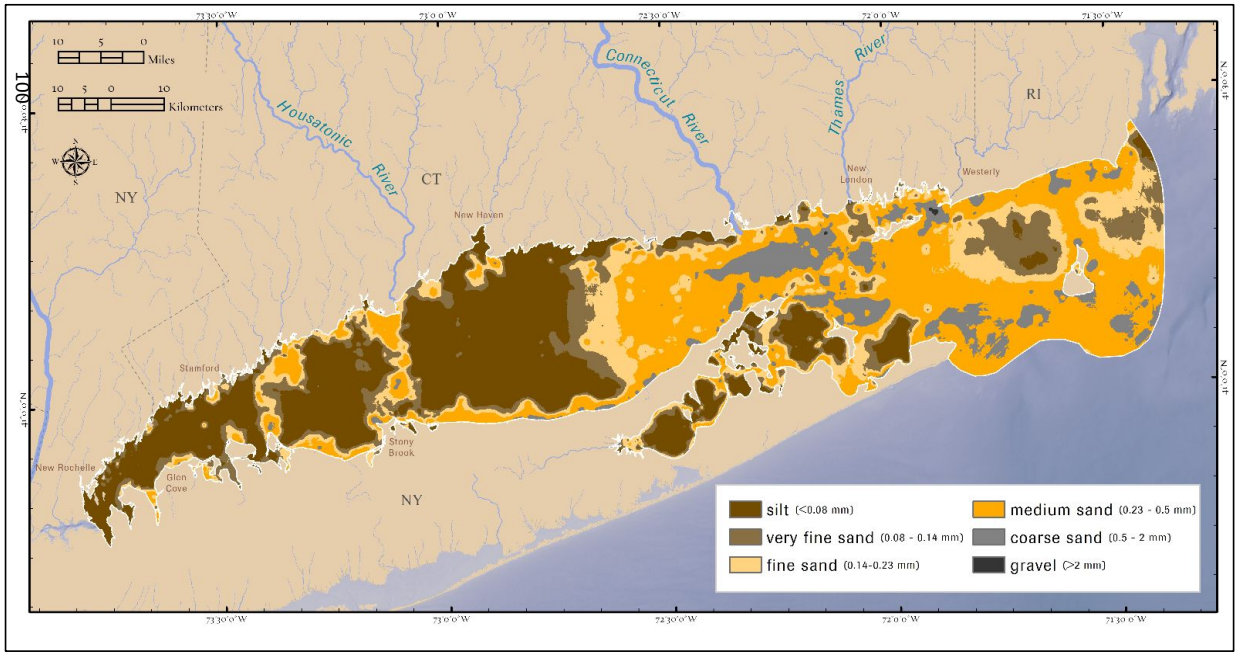

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Figure 5.9 Sediment Thresholds

Blue Plan Sector(s): Ecological Characterization > Habitats > Physical > Geology/Sediments/Topography

Summary Description: To characterize the benthic environments of Long Island Sound and understand how the benthic community distributions are related to the physical structure of the sea floor, a spatially comprehensive data layer for each of three components was developed: bathymetry, sediment grain size and topographic or seabed forms. These components were chosen because of their well-documented correlation with the distribution and abundance of benthic organisms.

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Access Instructions: Go to: https://www.conservationgateway.org/ConservationByGeography/NorthAmerica/UnitedStates/edc/reportsdata/marine/namera/lis/Pages/default.aspx

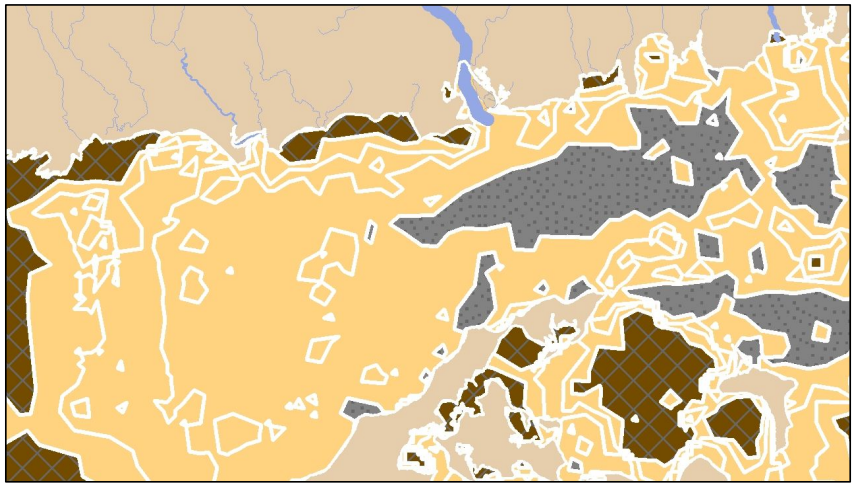

Figure 5.10 Sediment Thresholds simplified

TNC-LISEA

Source: The Nature Conservancy (TNC)

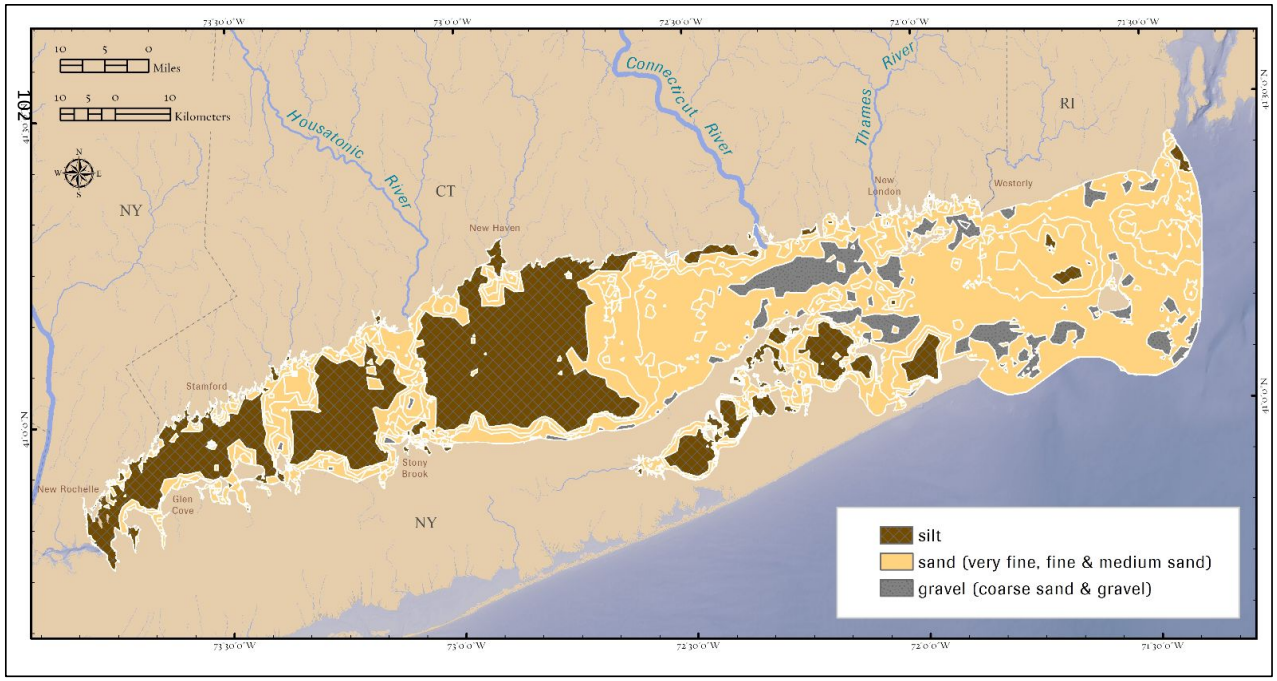

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Figure 5.10 Sediment Thresholds simplified

Blue Plan Sector(s): Ecological Characterization > Habitats > Physical > Geology/Sediments/Topography

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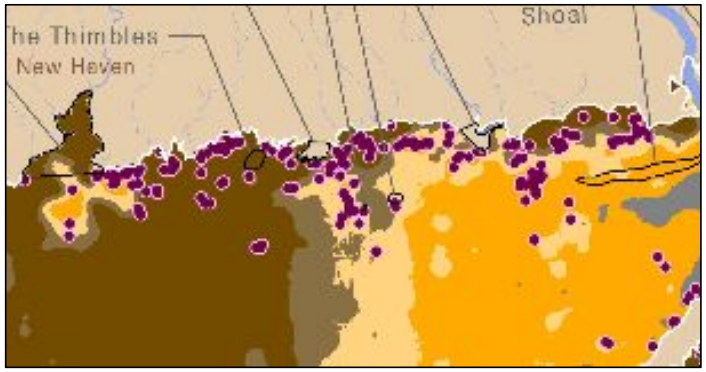
Access Instructions: Go to: https://www.conservationgateway.org/ConservationByGeography/NorthAmerica/UnitedStates/edc/reportsdata/marine/namera/lis/Pages/default.aspx



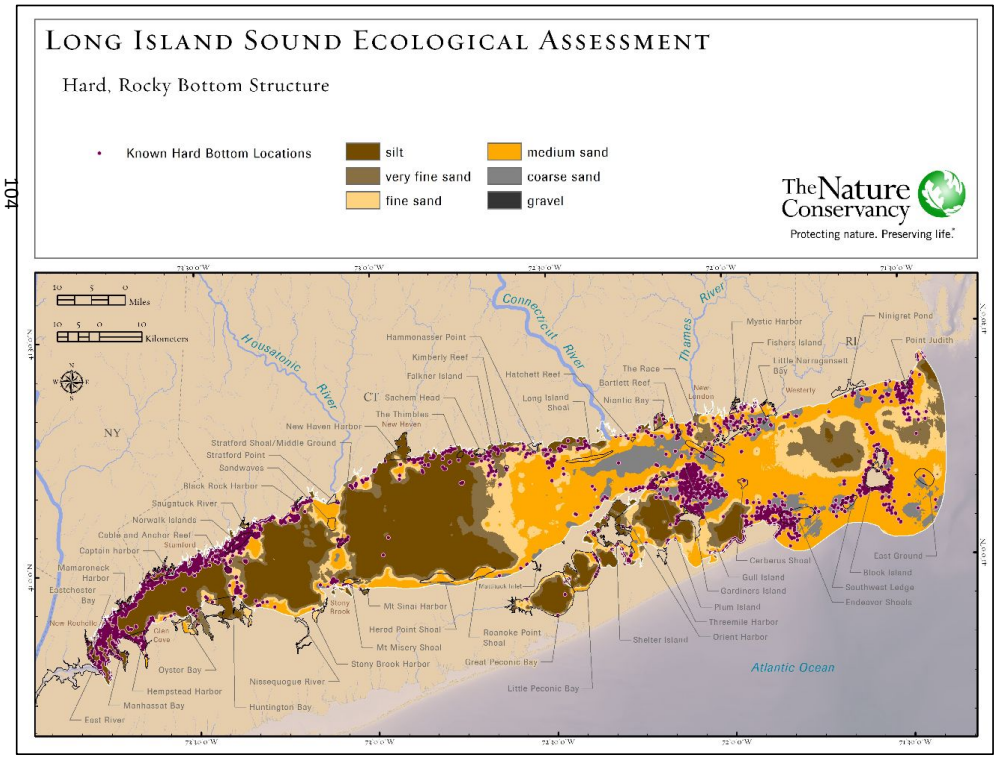


Figure 5.11 Hard Bottom Locations and Soft Sediment

TNC-LISEA

Source: The Nature Conservancy (TNC)

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Figure 5.11 Hard Bottom Locations and Soft Sediment

Blue Plan Sector(s): Ecological Characterization > Habitats > Physical > Geology/Sediments/Topography

Summary Description: As part of the LISEA project we complied a map of hard bottom locations (rock outcrop, bedrock, etc.). Because hard bottom patches can be small and there are likely many that aren't mapped, we made an effort to create a predictive model to identify the likely occurrence of additional hard bottom habitat based on a number of available datasets.

The hard bottom model is defined as an area with depth less than 9.624 meters, structural complexity greater than 0.257, LPI greater than 40.769, and sediment grain size less than 0.1157 mm. This model captures 94% known hard bottom versus 6% random locations.

Full Description: Go to GDB in ArcCatalog for metadata

Access Instructions: Go to: https://www.conservationgateway.org/ConservationByGeography/NorthAmerica/UnitedStates/edc/reportsdata/marine/namera/lis/Pages/default.aspx

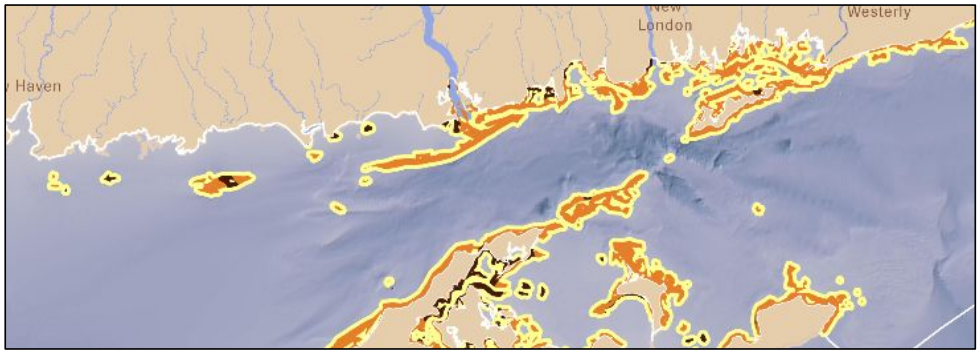

Figure 5.12 Hard Bottom Models

TNC-LISEA

Source: The Nature Conservancy (TNC)

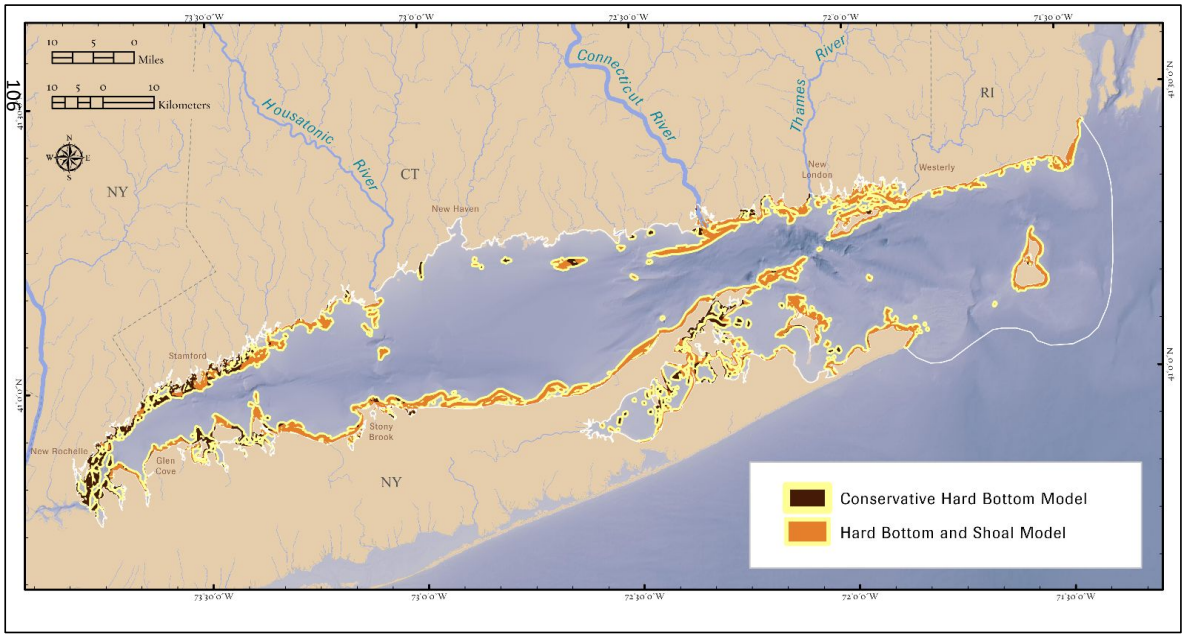

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Figure 5.12 Hard Bottom Models

Blue Plan Sector(s): Ecological Characterization > Habitats > Physical > Geology/Sediments/Topography

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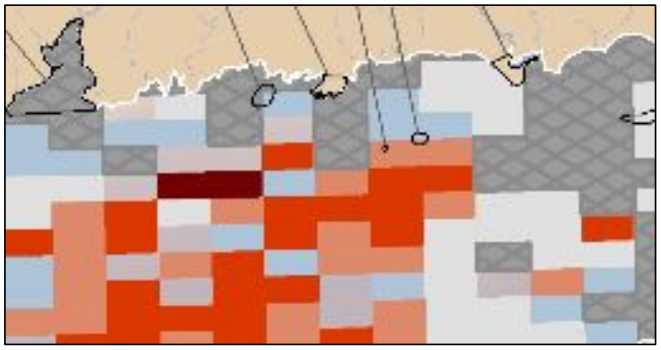
Access Instructions: Go to: https://www.conservationgateway.org/ConservationByGeography/NorthAmerica/UnitedStates/edc/reportsdata/marine/namera/lis/Pages/default.aspx



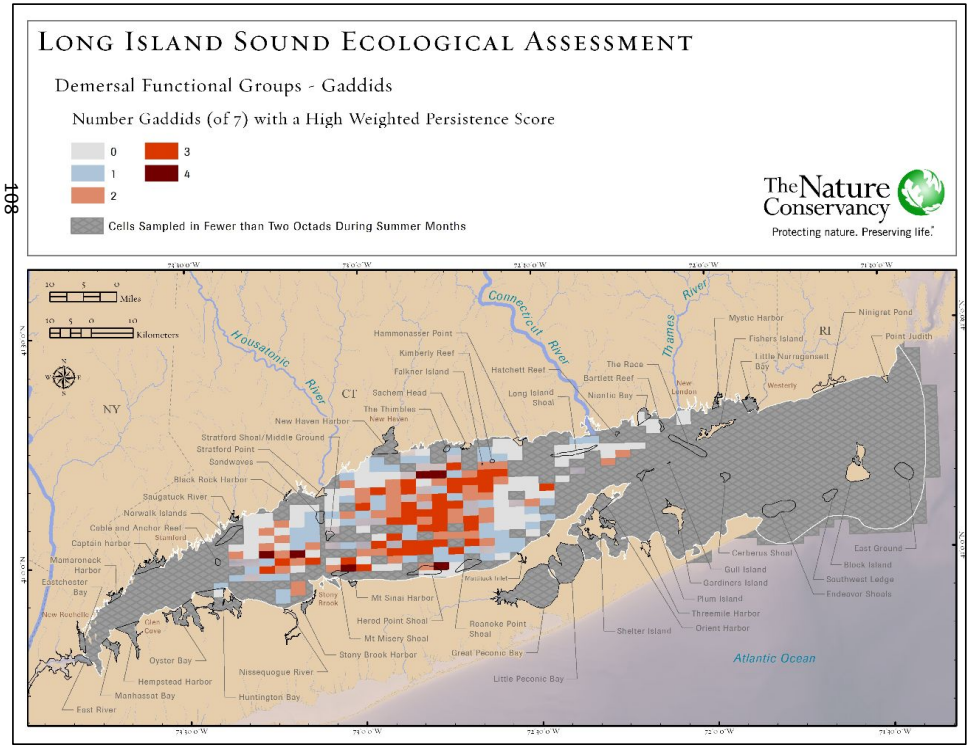


Figure 5.13 Final Hard Bottom

TNC-LISEA

Source: The Nature Conservancy (TNC)

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Figure 5.13 Final Hard Bottom

Blue Plan Sector(s): Ecological Characterization > Habitats > Physical > Geology/Sediments/Topography

Summary Description: As part of the LISEA project we complied a map of hard bottom locations (rock outcrop, bedrock, etc.). Because hard bottom patches can be small and there are likely many that aren't mapped, we made an effort to create a predictive model to identify the likely occurrence of additional hard bottom habitat based on a number of available datasets.

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Access Instructions: Go to: https://www.conservationgateway.org/ConservationByGeography/NorthAmerica/UnitedStates/edc/reportsdata/marine/namera/lis/Pages/default.aspx

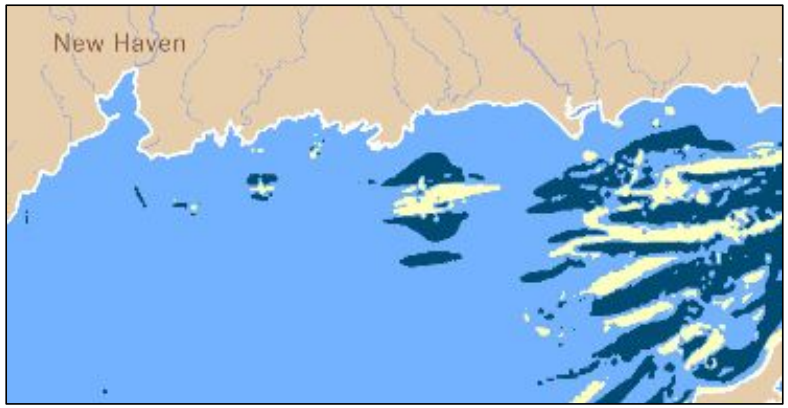

Figure 5.15 LPI

TNC-LISEA

Source: The Nature Conservancy (TNC)

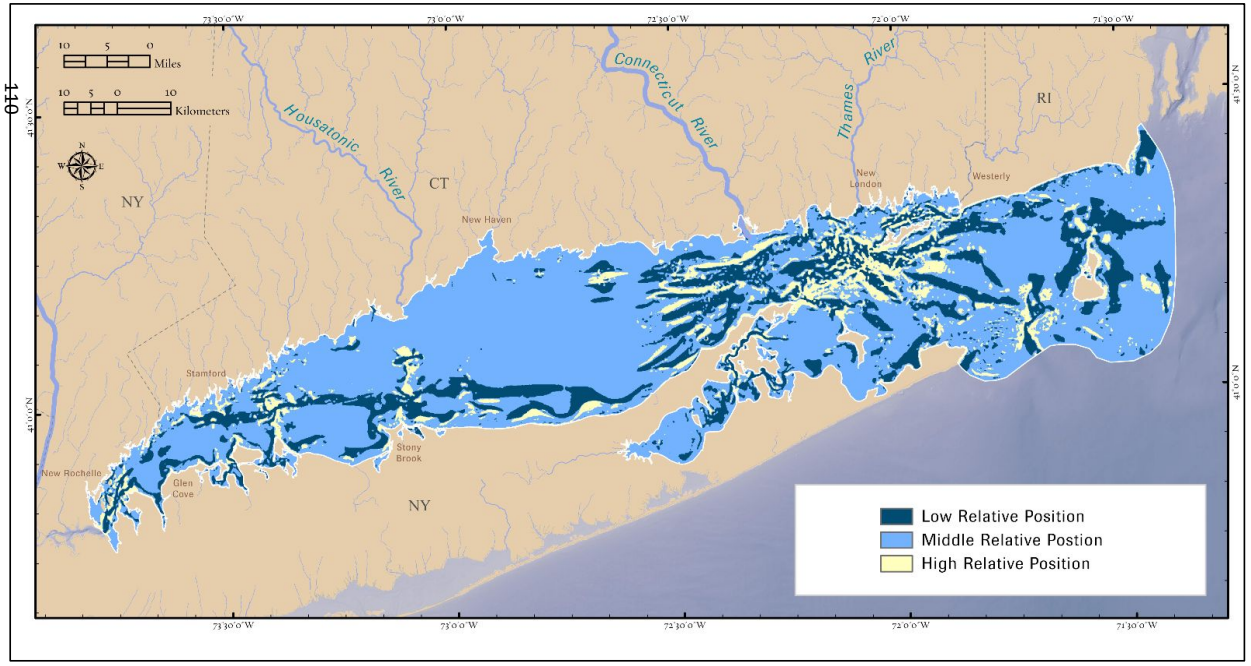

Figure 5.15 LPI

Blue Plan Sector(s): Ecological Characterization > Habitats > Physical > Geology/Sediments/Topography

Summary Description: To characterize the benthic environments of Long Island Sound and understand how the benthic community distributions are related to the physical structure of the sea floor, a spatially comprehensive data layer for each of three components was developed: bathymetry, sediment grain size and topographic or seabed forms. These components were chosen because of their well-documented correlation with the distribution and abundance of benthic organisms.

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Full Description: Go to GDB in ArcCatalog for metadata

Access Instructions: Go to: https://www.conservationgateway.org/ConservationByGeography/NorthAmerica/UnitedStates/edc/reportsdata/marine/namera/lis/Pages/default.aspx

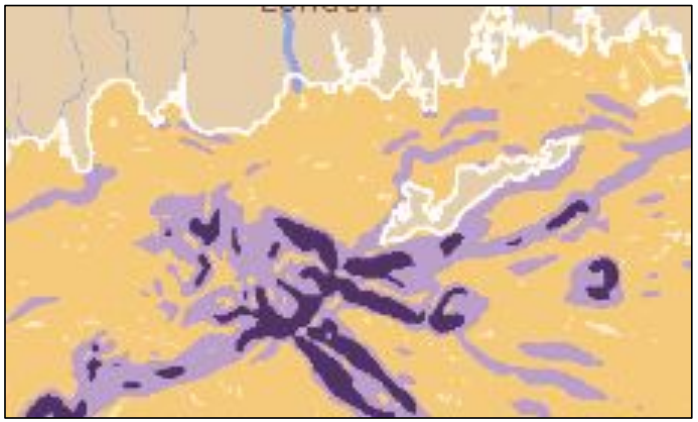

Figure 5.16 Slope

TNC-LISEA

Source: The Nature Conservancy (TNC)

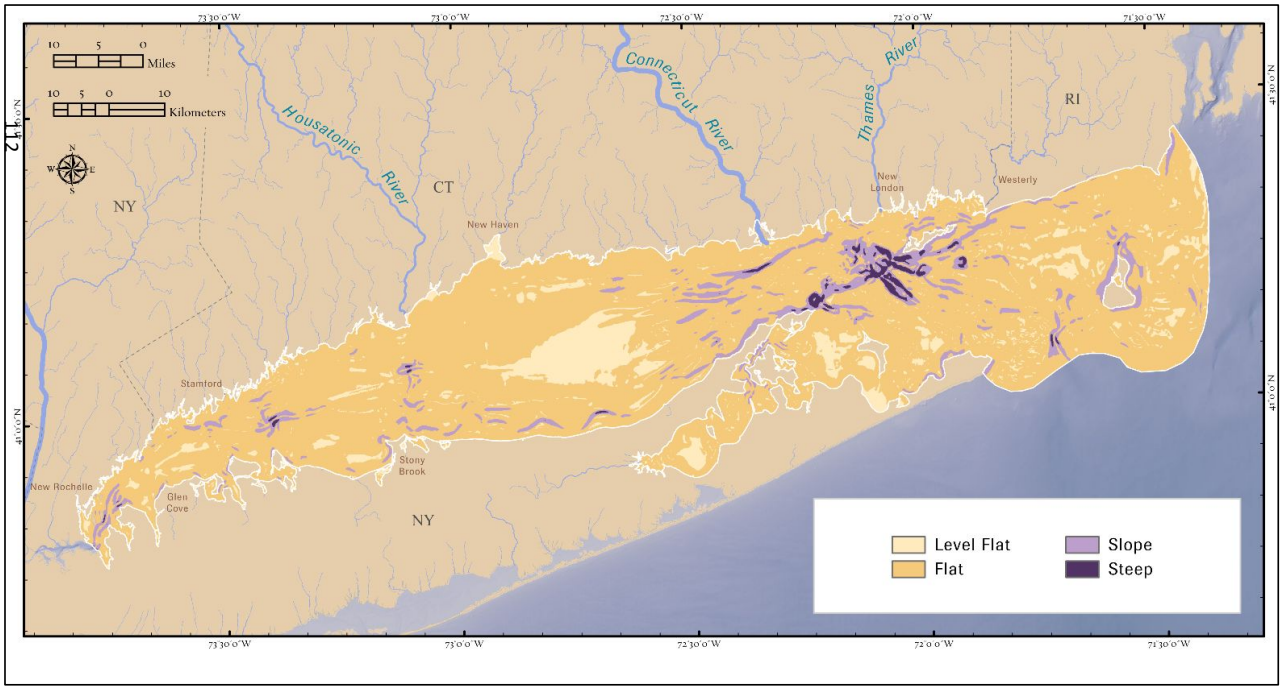

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Figure 5.16 Slope

Blue Plan Sector(s): Ecological Characterization > Habitats > Physical > Geology/Sediments/Topography

Summary Description: To characterize the benthic environments of Long Island Sound and understand how the benthic community distributions are related to the physical structure of the sea floor, a spatially comprehensive data layer for each of three components was developed: bathymetry, sediment grain size and topographic or seabed forms. These components were chosen because of their well-documented correlation with the distribution and abundance of benthic organisms.

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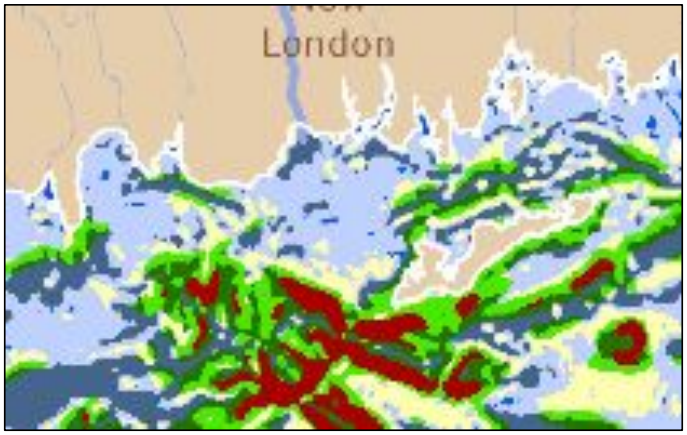

Figure 5.18 Seabed Form

TNC-LISEA

Source: The Nature Conservancy (TNC)

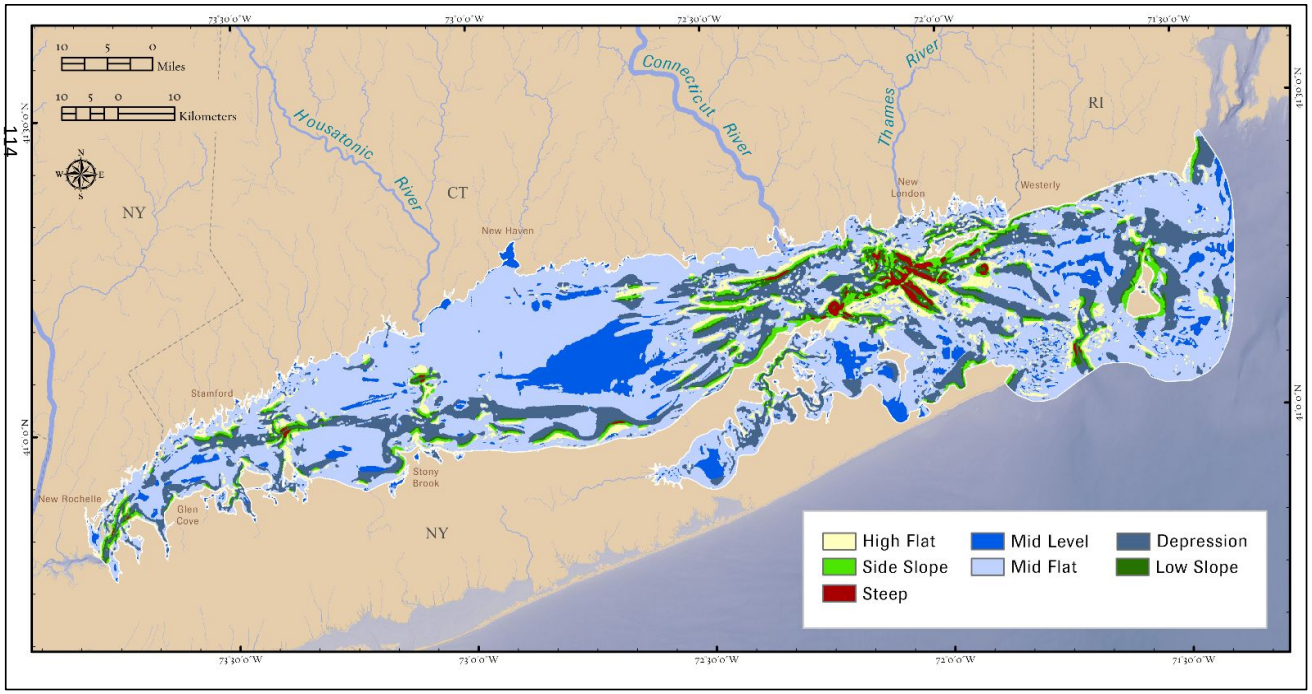

Figure 5.18 Seabed Form

Blue Plan Sector(s): Ecological Characterization > Habitats > Physical > Geology/Sediments/Topography

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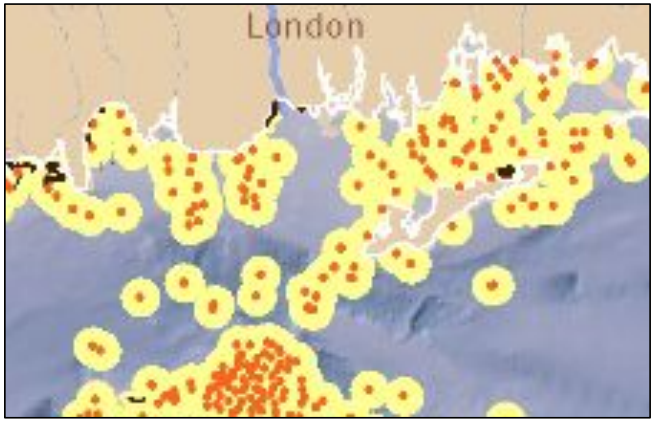

Figure 7.6 Hard Bottom Component

TNC-LISEA

Source: The Nature Conservancy (TNC)

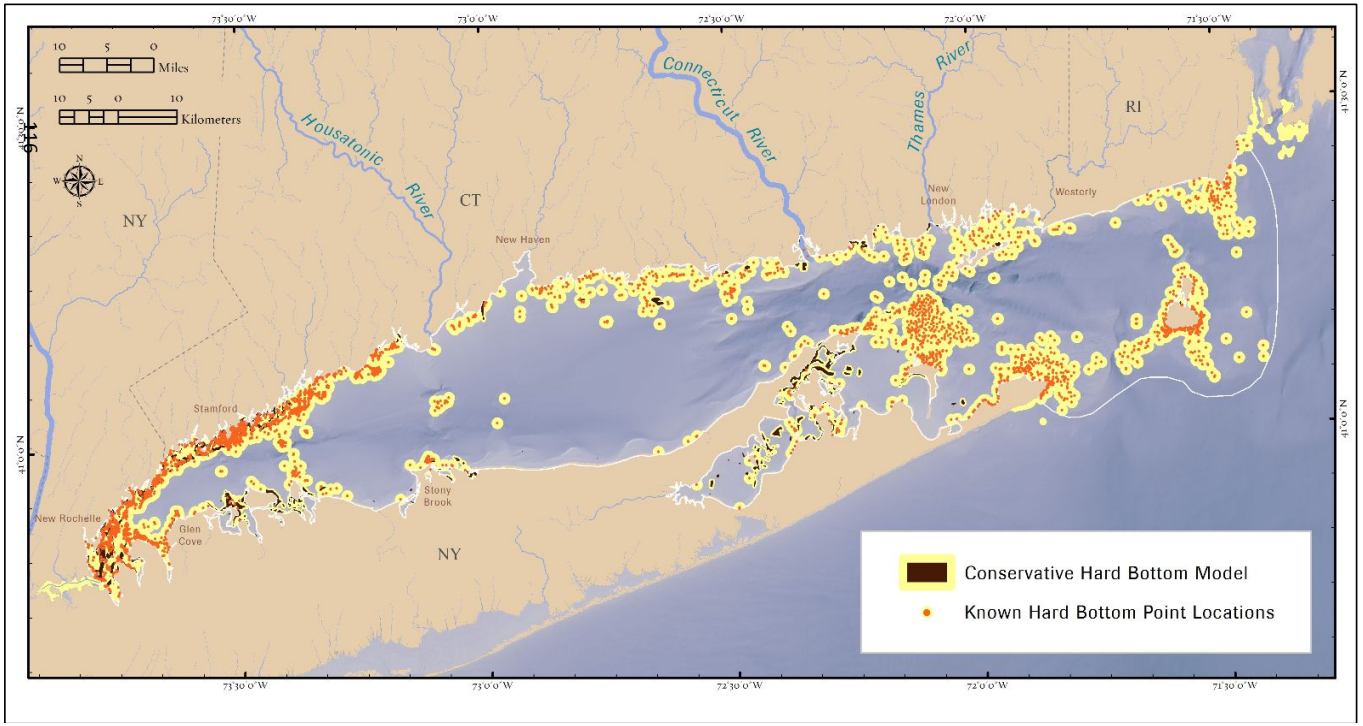

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Figure 7.6 Hard Bottom Component

Blue Plan Sector(s): Ecological Characterization > Habitats > Physical > Geology/Sediments/Topography

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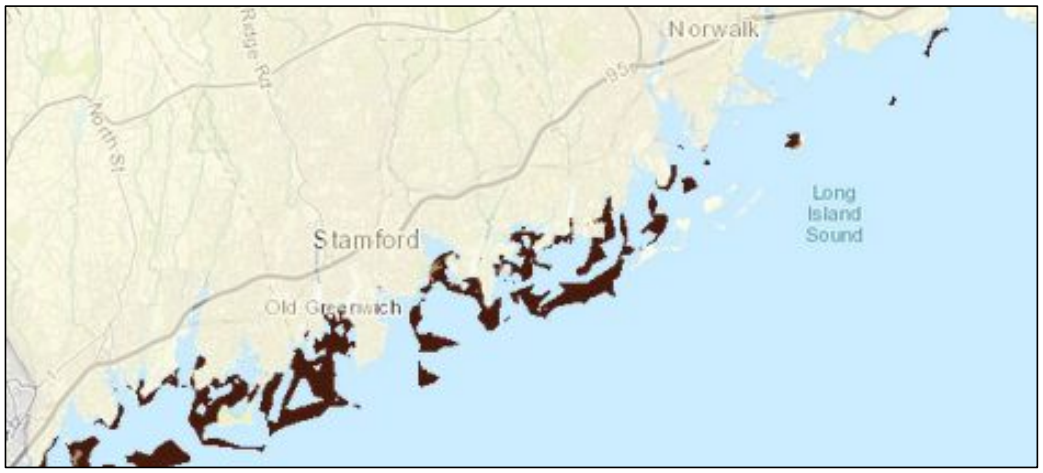
Full Description: Go to GDB in ArcCatalog for metadata

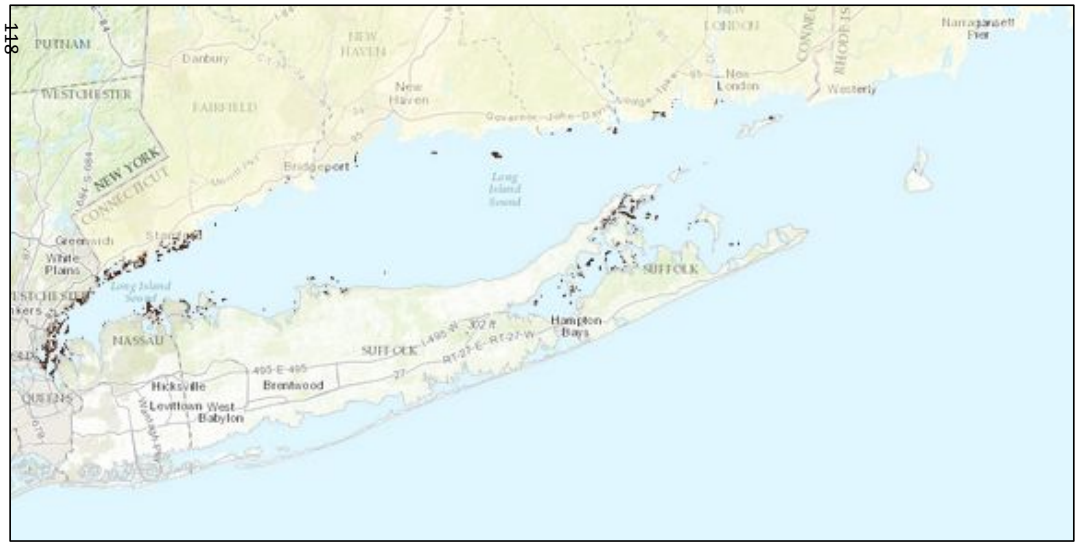
Access Instructions: Go to: https://www.conservationgateway.org/ConservationByGeography/NorthAmerica/UnitedStates/edc/reportsdata/marine/namera/lis/Pages/default.aspx

Long Island Sound Hard Bottom Locations

New York Geographic Information Gateway

Source: NYOPD, The Nature Conservancy (TNC)





Legend:

Long Island Sound Hard Bottom Locations

Blue Plan Sector(s): Ecological Characterization > Habitats > Physical > Geology/Sediments/Topography

Summary Description: The hard bottom model is defined as an area with depth less than 9.624 meters, structural complexity greater than 0.257, LPI greater than 40.769, and sediment grain size less than 0.1157 mm. This model captures 94% known hard bottom versus 6% random locations. As part of the LISEA project we complied a map of hard bottom locations (rock outcrop, bedrock, etc.). Because hard bottom patches can be small and there are likely many that aren't mapped, we made an effort to create a predictive model to identify the likely occurrence of additional hard bottom habitat based on a number of available datasets.

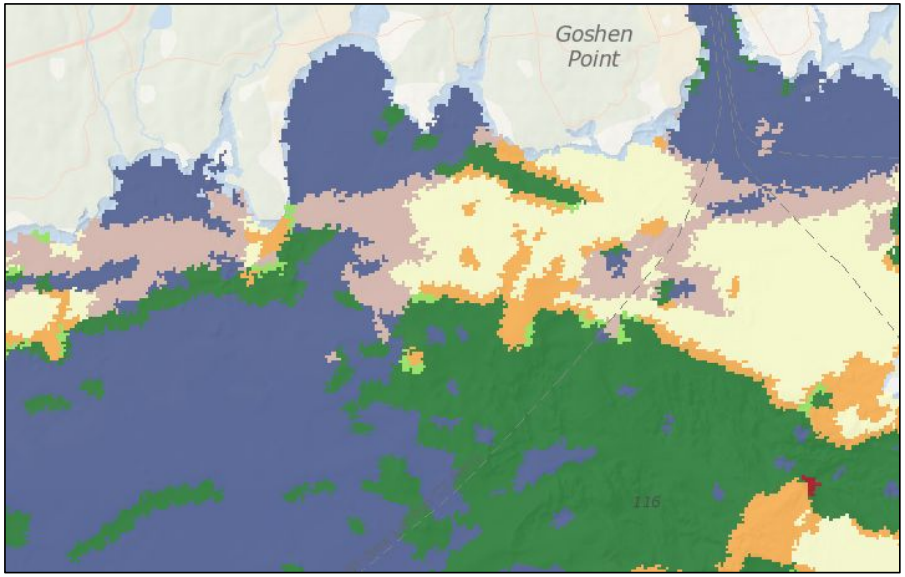
Full Description: Go to:
http://opdgig.dos.ny.gov/geoportal/catalog/search/resource/detailsnoheader.page?uuid={D1188F55-47F6-43A3-AEF9-A0401274CF00}

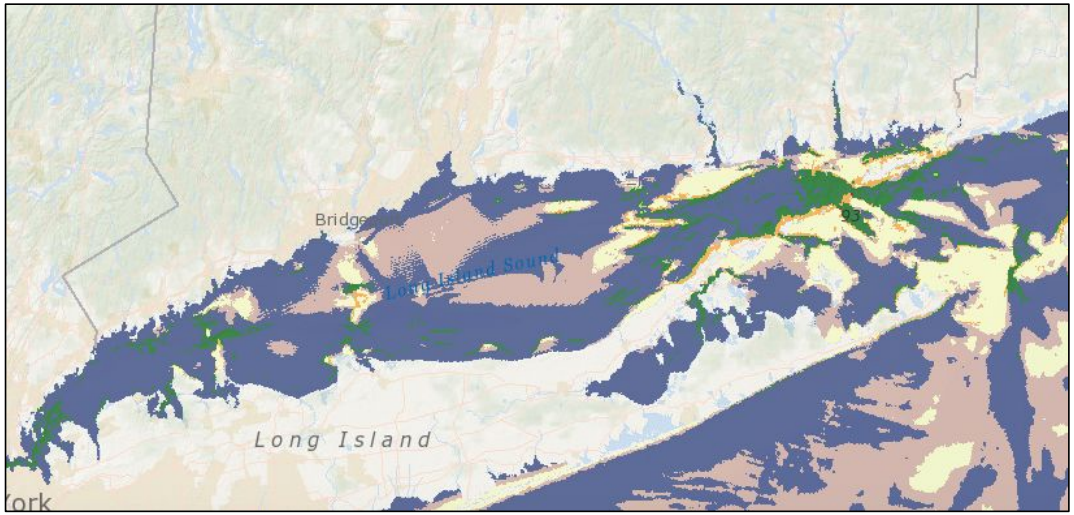
Access Instructions: Go to: http://opdgig.dos.ny.gov/#/map and search "Long Island Sound Hard Bottom Locations" in the search data window

Seabed Topographic Forms

Northeast Ocean Data Portal (NEODP)

Source:
Anderson, M. G., Greene, J., Morse, D., Shumway, D. and Clark, M (2010) Benthic Habitats of the Northwest Atlantic in Greene, J.K., M.G. Anderson, J. Odell, and N. Steinberg, eds. The Northwest Atlantic Marine Ecoregional Assessment: Species, Habitats and Ecosystems. Phase One. The Nature Conservancy, Eastern U.S. Division, Boston, MA.





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Seabed Topographic Forms

Blue Plan Sector(s): Ecological Characterization > Habitats > Physical > Geology/Sediments/Topography

Summary Description: This map layer shows seabed topography as measured by a combination of seabed position and slope. Seabed position describes the topography of the area surrounding a particular location, and slope is the steepness of the seafloor at that location.

Full Description: Go to:
http://easterndivision.s3.amazonaws.com/Marine/MooreGrant/SeabedForms.pdf

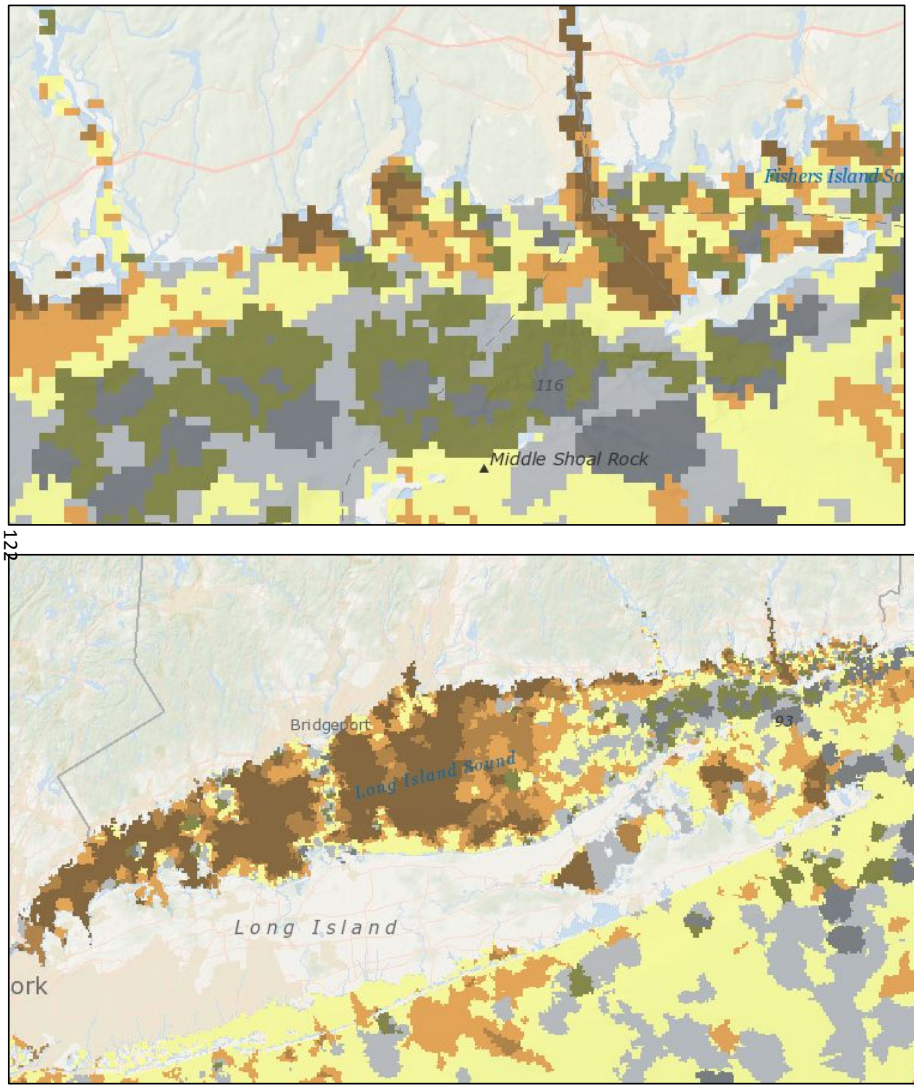
Access Instructions: Go to: http://www.northeastoceandata.org/data-explorer/

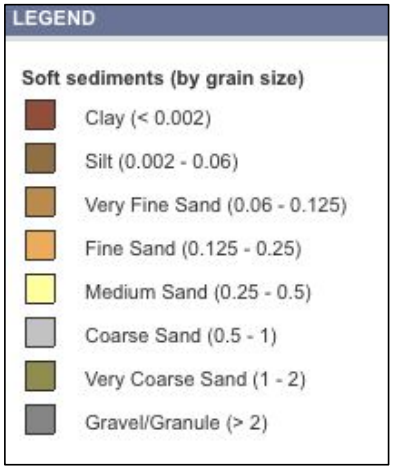
And search " seabed topographic forms" in the layers window

Soft Sediments by Grain Size (mm)

Northeast Ocean Data Portal (NEODP)

Source:
Anderson, M. G., Greene, J., Morse, D., Shumway, D. and Clark, M (2010) Benthic Habitats of the Northwest Atlantic in Greene, J.K., M.G. Anderson, J. Odell, and N. Steinberg, eds. The Northwest Atlantic Marine Ecoregional Assessment: Species, Habitats and Ecosystems. Phase One. The Nature Conservancy, Eastern U.S. Division, Boston, MA.





LONG ISLAND SOUND BLUE PLAN
Sustainable Ecosystems - Compatible Uses

Soft Sediments by Grain Size

Blue Plan Sector(s): Ecological Characterization > Habitats > Physical > Geology/Sediments/Topography

Summary Description: This layer classifies soft-sediments based on their grain size. Source data include USGS usSeabed: Atlantic coast offshore surficial sediment data (Data series 118, version 1.0) and the USGS East Coast Sediment Texture Database (2005), Woods Hole Coastal and Marine Science Center. Point-based data were interpolated using krigging tools to create this layer. Resulting values were classified based on grain-size according to the Wentworth (1922) scale. This classification process resulted in the following classes: clay (< 0.002 mmm), silt (0.024 – 0.06), very fine sand (0.06 – 0.125 mm), fine sand (0.125 – 0.25 mm), medium sand (0.25 – 0.5 mm), coarse sand (0.5 – 1.0 mm), very coarse sand (1 – 2 mm), and Gravel/granule (> 2 mm). Finally, point data was interpolated using kriging to create the resulting raster layer. The spatial resolution of this layer is 500 meters.

Full Description: Go to:
http://easterndivision.s3.amazonaws.com/Marine/MooreGrant/SoftSediment.pdf

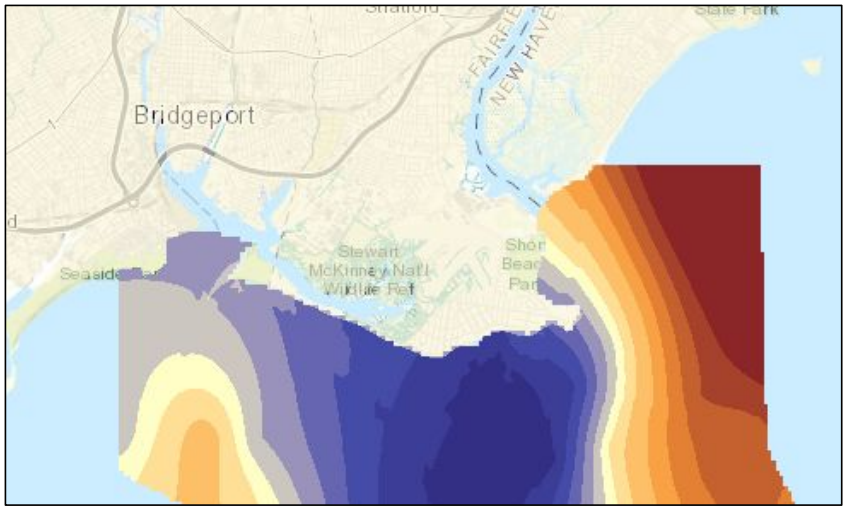
Access Instructions: Go to: http://www.northeastoceandata.org/data-explorer/

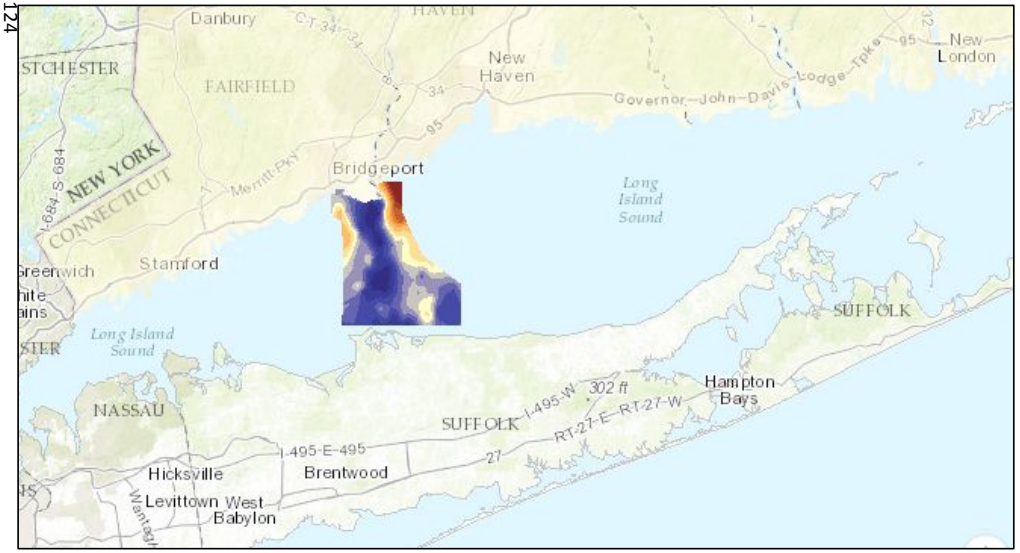
And search “soft sediments by grain size” in the layers window

Long Island Sound Carbon Concentration

New York Geographic Information Gateway

Source: NYOPD, Dr. Cecilia McHugh and students (Queens College NY), Dr. Tim Kenna (Lamont Doherty Earth Observatory of Columbia University)





Legend:

- 0.31 - 0.31
- 0.32 - 0.5
- 0.51 - 0.75
- 0.76 - 1
- 1.01 - 1.25
- 1.26 - 1.5
- 1.51 - 1.72
- 1.73 - 1.92
- 1.93 - 2.17
- 2.18 - 2.49
- 2.5 - 2.75
- 2.76 - 3
- 3.01 - 3.25
- 3.26 - 3.5
- >3.5

LONG ISLAND SOUND BLUE PLAN
Sustainable Ecosystems - Compatible Uses

Long Island Sound Carbon Concentration

Blue Plan Sector(s): Ecological Characterization > Habitats > Physical > Geology/Sediments/Topography

Summary Description: Displays the interpolated results of sediment percent Carbon concentration from surficial grab samples as of Summer 2013 and Fall 2012 within the project pilot area. This file contains the results of Carbon concentration anlayses based on surficial VanVeen grab samples collected during Summer of 2013 and Fall 2012 in the central Long Island Sound Pilot Area. Results were interpolated from sample points based Kringing algorithms.

Full Description: Go to:
http://opdgig.dos.ny.gov/geoportal/catalog/search/resource/detailsnoheader.page?uuid={EC9F3EE7-23D0-4324-B343-778B496E3357}

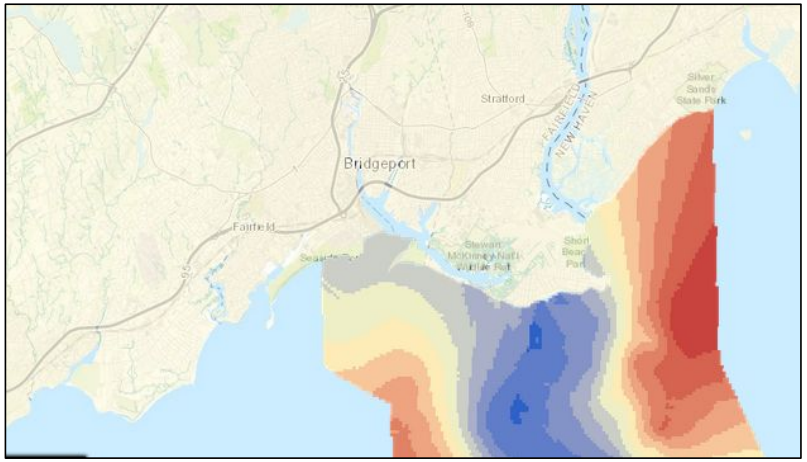
Access Instructions: Go to: http://opdgig.dos.ny.gov/#/map

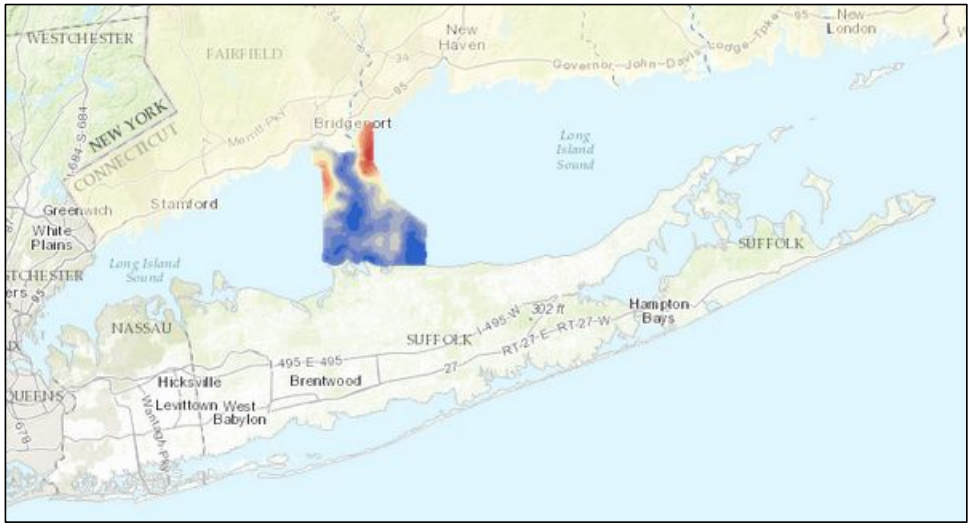
And search "Long Island Sound Carbon Concentration" in the search data window

Long Island Sound Copper Concentration

New York Geographic Information Gateway

Source: NYOPD, Dr. Cecilia McHugh and students (Queens College NY), Dr. Tim Kenna (Lamont Doherty Earth Observatory of Columbia University)





Legend:

- 6 - 10
- 11 - 20
- 21 - 30
- 31 - 40
- 41 - 50
- 51 - 60
- 61 - 70
- 71 - 80
- 81 - 90
- 91 - 100
- 101 - 110
- 111 - 120

LONG ISLAND SOUND BLUE PLAN
Sustainable Ecosystems - Compatible Uses

Long Island Sound Copper Concentration

Blue Plan Sector(s): Ecological Characterization > Habitats > Physical > Geology/Sediments/Topography

Summary Description:Displays the interpolated results of sediment heavy metal concentration (Copper) from surficial grab samples as of Summer 2013 and Fall 2012 within the project pilot area. This file contains the results of heavy metal concentration anlayses (Copper) based on surficial VanVeen grab samples collected during Summer of 2013 and Fall 2012 in the central Long Island Sound Pilot Area. Results were interpolated from smaple points based Kringing algorithms.

Full Description: Go to:
http://opdgig.dos.ny.gov/geoportal/catalog/search/resource/detailsnoheader.page?uuid={AF27D5AB-A742-4125-BCF4-B6B41668799B}

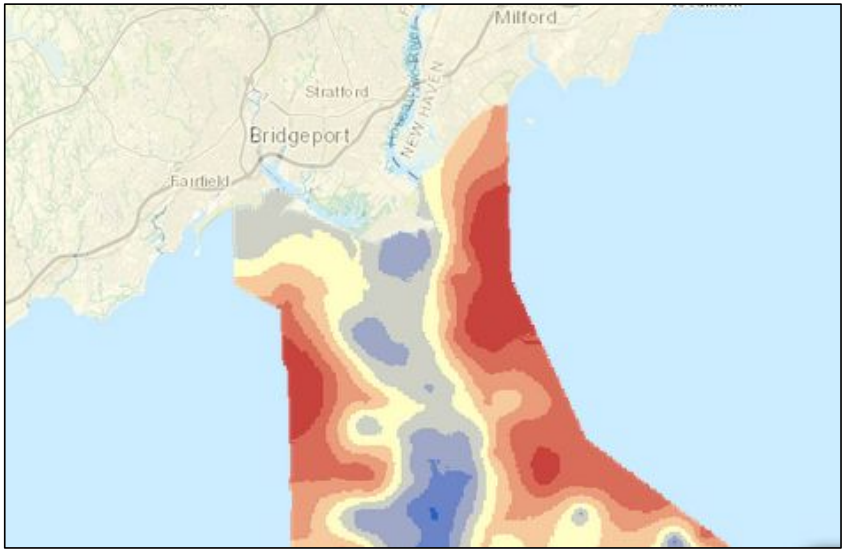
Access Instructions: Go to: http://opdgig.dos.ny.gov/#/map

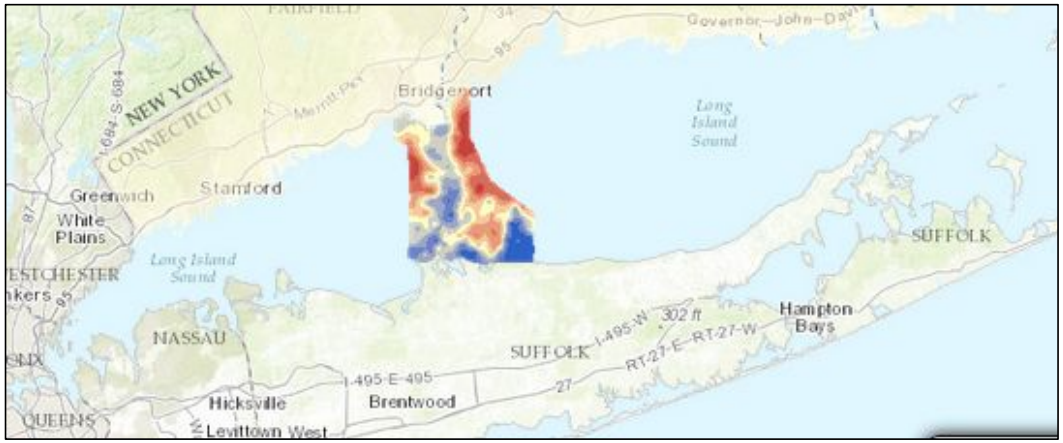
And search “Long Island Sound CopperConcentration” in the search data window

Long Island Sound Lead Concentration

New York Geographic Information Gateway

Source: NYOPD, Dr. Cecilia McHugh and students (Queens College NY), Dr. Tim Kenna (Lamont Doherty Earth Observatory of Columbia University)





Legend:
- 0 - 10
- 11 - 15
- 16 - 20
- 21 - 25
- 26 - 30
- 31 - 35
- 36 - 40
- 41 - 45
- 46 - 50

LONG ISLAND SOUND BLUE PLAN
Sustainable Ecosystems - Compatible Uses

Long Island Sound Lead Concentration

Blue Plan Sector(s): Ecological Characterization > Habitats > Physical > Geology/Sediments/Topography

Summary Description: Displays the interpolated results of sediment heavy metal concentration (Lead) from surficial grab samples as of Summer 2013 and Fall 2012 within the project pilot area. This file contains the results of heavy metal concentration anlayses (Lead) based on surficial VanVeen grab samples collected during Summer of 2013 and Fall 2012 in the central Long Island Sound Pilot Area. Results were interpolated from smaple points based Kringing algorithms.

Full Description: Go to:
http://opdgig.dos.ny.gov/geoportal/catalog/search/resource/detailsnoheader.page?uuid={CDC400FE-4431-42E4-AD8A-BFA5A6B2D3A9}

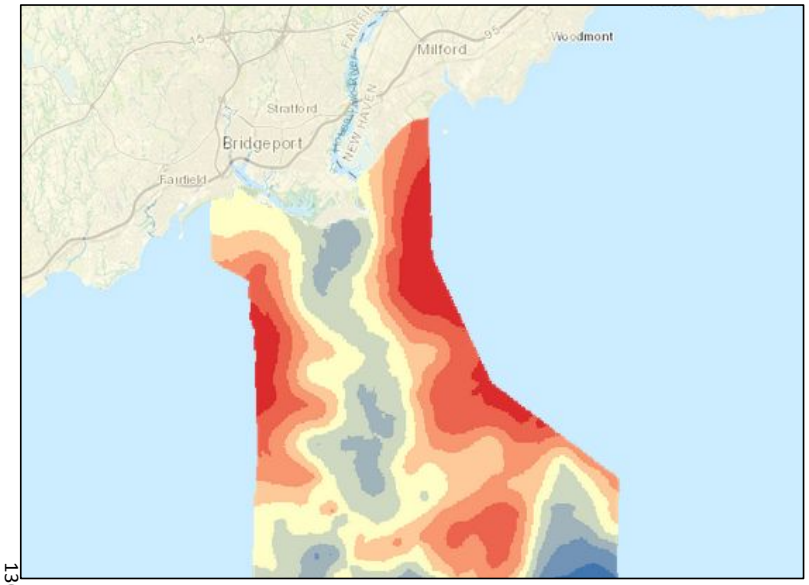
Access Instructions: Go to: http://opdgig.dos.ny.gov/#/map

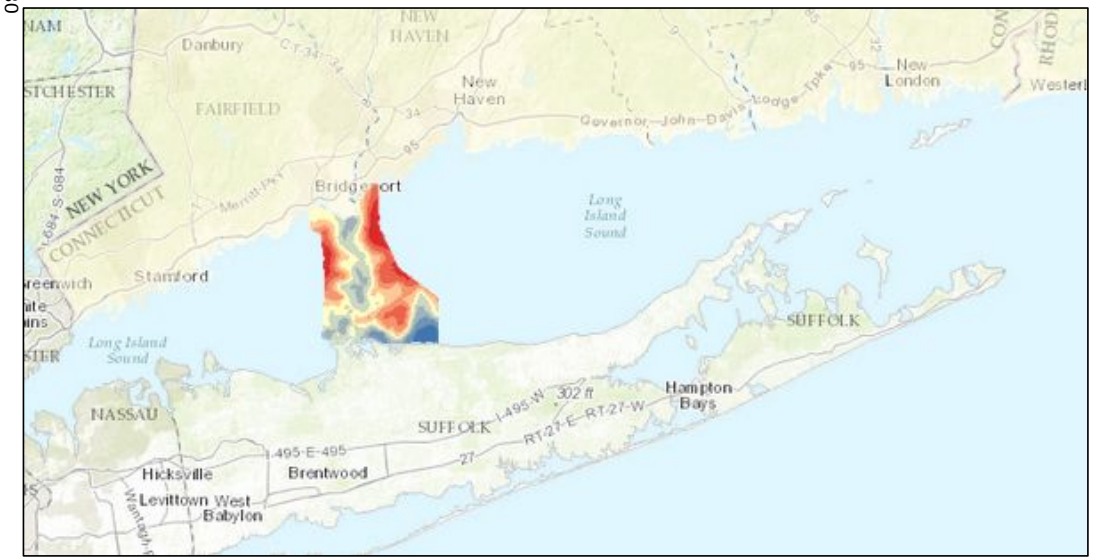
And search "Long Island Sound Lead Concentration" in the search data window

Long Island Sound Zinc Concentrations

New York Geographic Information Gateway

Source: NYOPD, Dr. Cecilia McHugh and students (Queens College NY), Dr. Tim Kenna (Lamont Doherty Earth Observatory of Columbia University)





Legend:

- <20
- 21 - 40
- 41 - 60
- 61 - 80
- 81 - 100
- 101 - 120
- 121 - 140
- 141 - 160
- 161 - 188

LONG ISLAND SOUND BLUE PLAN
Sustainable Ecosystems - Compatible Uses

Long Island Sound Zinc Concentration

Blue Plan Sector(s): Ecological Characterization > Habitats > Physical > Geology/Sediments/Topography

Summary Description: Displays the interpolated results of sediment heavy metal concentration (Zinc) from surficial grab samples as of Summer 2013 and Fall 2012 within the project pilot area. This file contains the results of heavy metal concentration anlayses (Zinc) based on surficial VanVeen grab samples collected during Summer of 2013 and Fall 2012 in the central Long Island Sound Pilot Area. Results were interpolated from smaple points based Kringing algorithms.

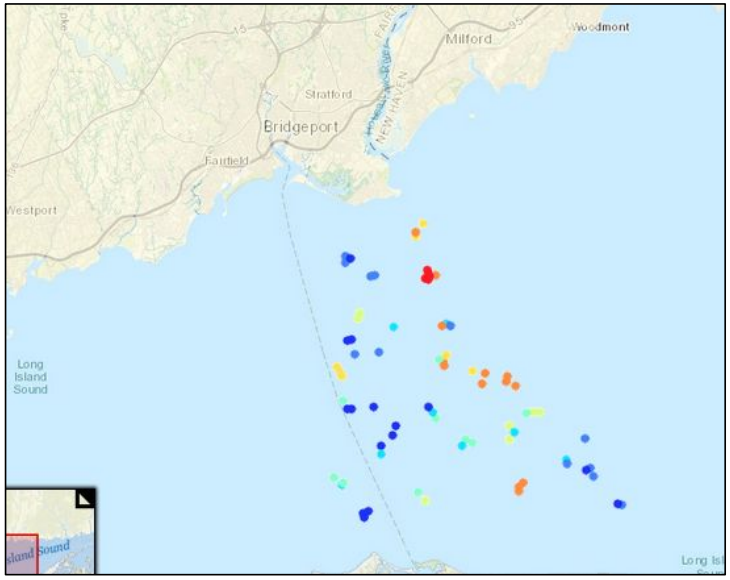
Full Description: Go to:
http://opdgig.dos.ny.gov/geoportal/catalog/search/resource/detailsnoheader.page?uuid={D9262122-F9A9-422F-A6B4-787C2B8FB437}

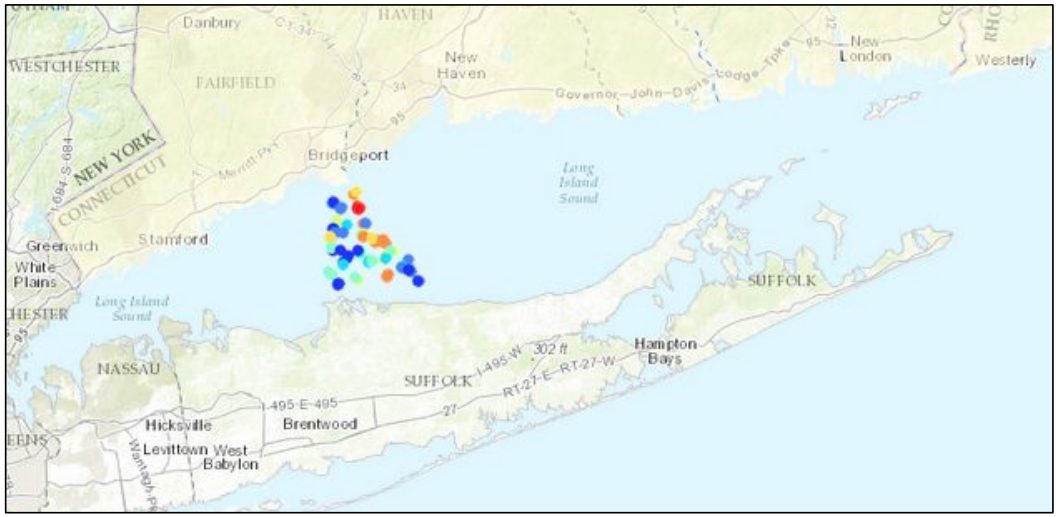
Access Instructions: Go to: http://opdgig.dos.ny.gov/#/map and search "Long Island Sound Zinc Concentrations" in the search data window

Long Island Sound Mapping and Research Collaborative – Sediment % Carbon 2012

New York Geographic Information Gateway

Source: Long Island Sound Mapping and Research Collaborative (LISMaRC), NOAA, Lamont Doherty Earth Observatory of Columbia University





Legend:

- 0.07 - 0.20
- 0.21 - 0.36
- 0.37 - 0.69
- 0.70 - 0.96
- 0.97 - 1.35
- 1.36 - 1.71
- 1.72 - 1.97
- 1.98 - 2.21

LONG ISLAND SOUND BLUE PLAN
Sustainable Ecosystems - Compatible Uses

Long Island Sound Mapping and Research Collaborative – Sediment % Carbon 2012

Blue Plan Sector(s): Ecological Characterization > Habitats > Physical > Geology/Sediments/Topography

Summary Description: The purpose of his data set is to release the locations, identifiers, and organic carbon, hydrogen, and nitrogen analyses of surficial sediments collected at 17 stations in central Long Island Sound in Geographic, WGS84. These data can be used to provide information on environmental and ecological processes. A benthic mapping survey cruise was conducted from the Research Vessel Connecticut from May 21-24, 2013 as part of the Long Island Sound Mapping and Research Collaborative (LISMaRC) contribution to the larger Long Island Sound Mapping effort. In addition to LISMaRC, other participants in this larger mapping effort include NOAA and another collaborative led by Lamont Doherty Earth Observatory at Columbia University. The bottom imaging and related products collected, developed and provided by our NOAA partners (backscatter, depth, PCA, rugosity) provided a solid framework for setting the benthic sampling design to collect samples in the variety of bottom habitats evident in the sea floor data. The initial impressions based on qualitative observations of the grain-size samples taken bear out the general sediment type predictions in the sample blocks, although in some cases the sedimentology was more complex than anticipated. The video and still data provided what we feel will be critical information on small and meso-scale patchiness in habitat features which are known to be important determinants of infaunal and epifaunal community structure and diversity. Thus it appears that each of the sets of data (from NOAA, LISMaRC and LDEO) when compiled, analyzed and considered together will provide for a detailed and valuable assessment of the sea floor environment and ecology of the pilot area in Long Island Sound. Also, the logistics of the integrated approach among the partners at this point appear well coordinated and should prove an effective model as the project progresses into other sections of Long Island Sound. For more information on the ground-truth surveys see:
http://woodshole.er.usgs.gov/operations/ia/public_ds_info.php?fa=2013-009-FA

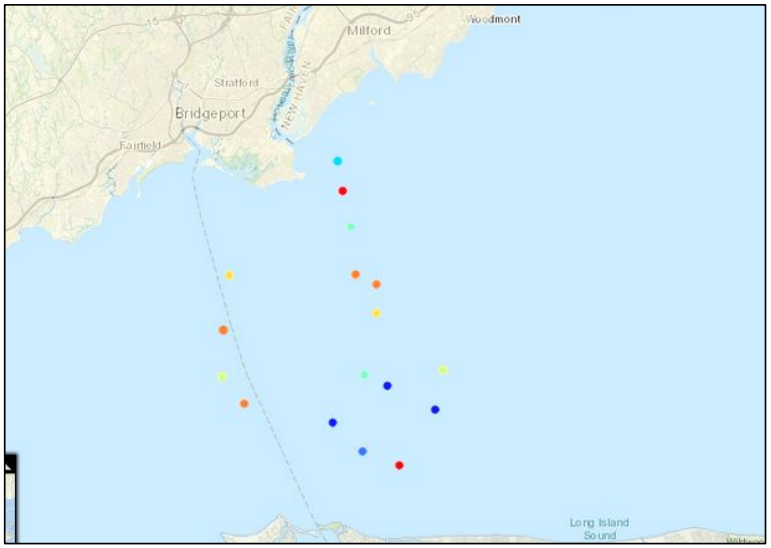
Full Description: Go to:
http://opdgig.dos.ny.gov/geoportal/catalog/search/resource/detailsnoheader.page?uuid={61FEEB37-E098-4754-B983-E5282B73CAC4}

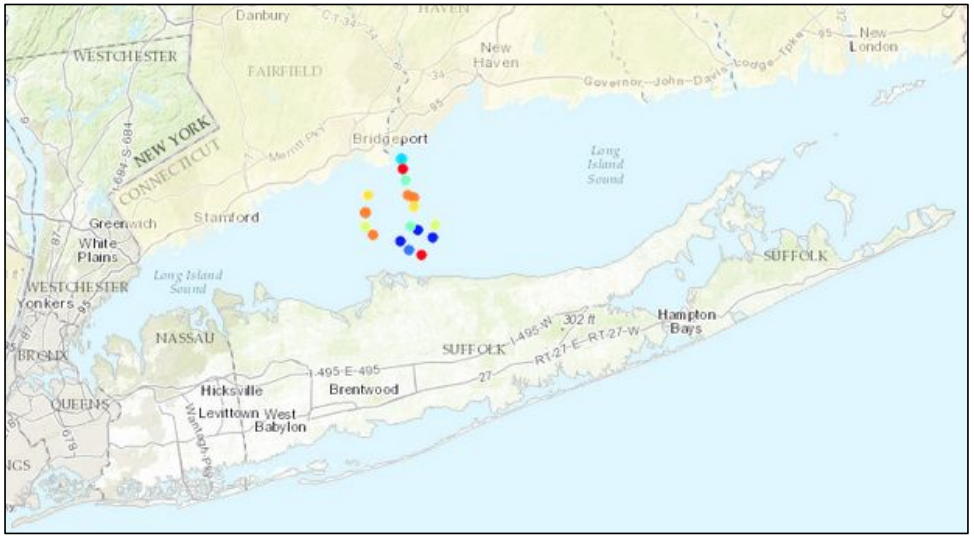
Access Instructions: Go to: http://opdgig.dos.ny.gov/#/map and search "Long Island Sound Mapping and Research Collaborative – Sediment % Carbon 2012" in the search data window

Long Island Sound Mapping and Research Collaborative – Sediment % Carbon 2013

New York Geographic Information Gateway

Source: Long Island Sound Mapping and Research Collaborative (LISMaRC), NOAA, Lamont Doherty Earth Observatory of Columbia University





Legend:

- 0.78 - 0.92
- 0.93 - 1.18
- 1.19 - 1.23
- 1.24 - 1.44
- 1.45 - 1.59
- 1.60 - 1.66
- 1.67 - 1.70
- 1.71 - 2.09

LONG ISLAND SOUND BLUE PLAN
Sustainable Ecosystems - Compatible Uses

Long Island Sound Mapping and Research Collaborative – Sediment % Carbon 2013

Blue Plan Sector(s): Ecological Characterization > Habitats > Physical > Geology/Sediments/Topography

Summary Description: The purpose of his data set is to release the locations, identifiers, and organic carbon, hydrogen, and nitrogen analyses of surficial sediments collected at 17 stations in central Long Island Sound in Geographic, WGS84. These data can be used to provide information on environmental and ecological processes. A benthic mapping survey cruise was conducted from the Research Vessel Connecticut from May 21-24, 2013 as part of the Long Island Sound Mapping and Research Collaborative (LISMaRC) contribution to the larger Long Island Sound Mapping effort. In addition to LISMaRC, other participants in this larger mapping effort include NOAA and another collaborative led by Lamont Doherty Earth Observatory at Columbia University. The bottom imaging and related products collected, developed and provided by our NOAA partners (backscatter, depth, PCA, rugosity) provided a solid framework for setting the benthic sampling design to collect samples in the variety of bottom habitats evident in the sea floor data. The initial impressions based on qualitative observations of the grain-size samples taken bear out the general sediment type predictions in the sample blocks, although in some cases the sedimentology was more complex than anticipated. The video and still data provided what we feel will be critical information on small and meso-scale patchiness in habitat features which are known to be important determinants of infaunal and epifaunal community structure and diversity. Thus it appears that each of the sets of data (from NOAA, LISMaRC and LDEO) when compiled, analyzed and considered together will provide for a detailed and valuable assessment of the sea floor environment and ecology of the pilot area in Long Island Sound. Also, the logistics of the integrated approach among the partners at this point appear well coordinated and should prove an effective model as the project progresses into other sections of Long Island Sound. For more information on the ground-truth surveys see: http://woodshole.er.usgs.gov/operations/ia/public_ds_info.php?fa=2013-009-FA

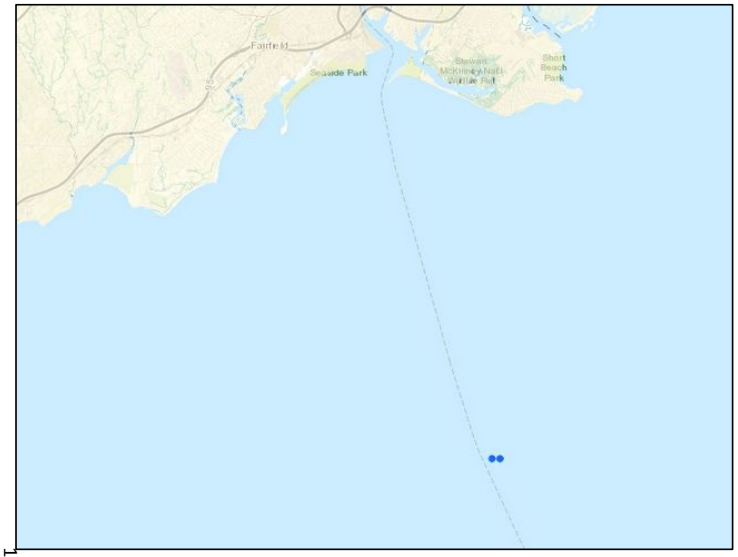
Full Description: Go to:
http://opdgig.dos.ny.gov/geoportal/catalog/search/resource/detailsnoheader.page?uuid={77E5C254-E988-4132-904B-8DDF1E58EE33}

Access Instructions: Go to: http://opdgig.dos.ny.gov/#/map and search "Long Island Sound Mapping and Research Collaborative – Sediment % Carbon 2013" in the search data window

Long Island Sound Mapping and Research Collaborative – Sediment % Nitrogen 2012

New York Geographic Information Gateway

Source: Long Island Sound Mapping and Research Collaborative (LISMaRC), NOAA, Lamont Doherty Earth Observatory of Columbia University



Legend:

- 0.01 - 0.08
- 0.09 - 0.11
- 0.12 - 0.15
- 0.16 - 0.19
- 0.20 - 0.22
- 0.23 - 0.31

LONG ISLAND SOUND BLUE PLAN
Sustainable Ecosystems - Compatible Uses

Long Island Sound Mapping and Research Collaborative – Sediment % Nitrogen 2012

Blue Plan Sector(s): Ecological Characterization > Habitats > Physical > Geology/Sediments/Topography

Summary Description: The purpose of his data set is to release the locations, identifiers, and organic carbon, hydrogen, and nitrogen analyses of surficial sediments collected at 17 stations in central Long Island Sound in Geographic, WGS84. These data can be used to provide information on environmental and ecological processes. A benthic mapping survey cruise was conducted from the Research Vessel Connecticut from May 21-24, 2013 as part of the Long Island Sound Mapping and Research Collaborative (LISMaRC) contribution to the larger Long Island Sound Mapping effort. In addition to LISMaRC, other participants in this larger mapping effort include NOAA and another collaborative led by Lamont Doherty Earth Observatory at Columbia University. The bottom imaging and related products collected, developed and provided by our NOAA partners (backscatter, depth, PCA, rugosity) provided a solid framework for setting the benthic sampling design to collect samples in the variety of bottom habitats evident in the sea floor data. The initial impressions based on qualitative observations of the grain-size samples taken bear out the general sediment type predictions in the sample blocks, although in some cases the sedimentology was more complex than anticipated. The video and still data provided what we feel will be critical information on small and meso-scale patchiness in habitat features which are known to be important determinants of infaunal and epifaunal community structure and diversity. Thus it appears that each of the sets of data (from NOAA, LISMaRC and LDEO) when compiled, analyzed and considered together will provide for a detailed and valuable assessment of the sea floor environment and ecology of the pilot area in Long Island Sound. Also, the logistics of the integrated approach among the partners at this point appear well coordinated and should prove an effective model as the project progresses into other sections of Long Island Sound. For more information on the ground-truth surveys see: http://woodshole.er.usgs.gov/operations/ia/public_ds_info.php?fa=2013-009-FA

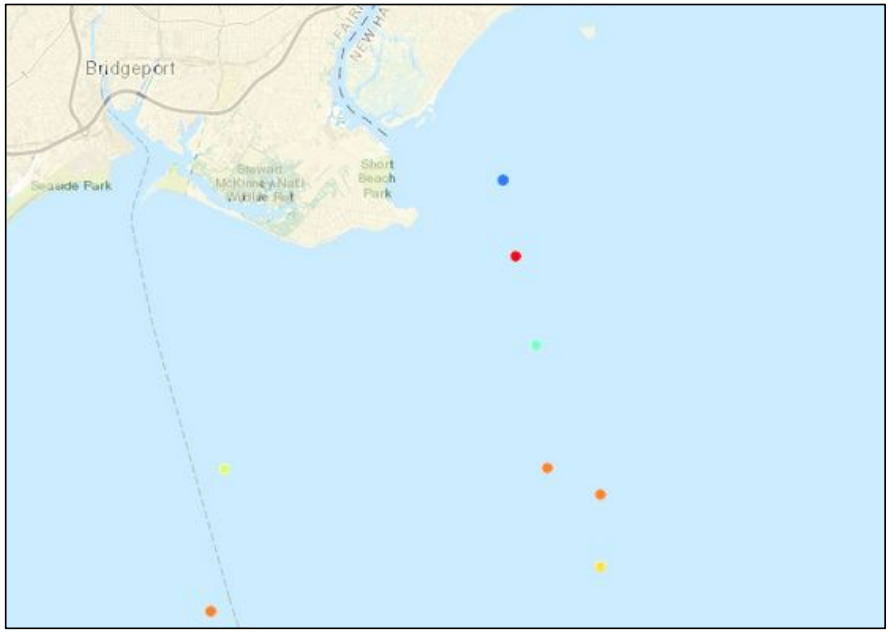
Full Description: Go to:
http://opdgig.dos.ny.gov/geoportal/catalog/search/resource/detailsnoheader.page?uuid={BB8E6A1F-A437-4F18-97DA-61ED21BCA6A1}

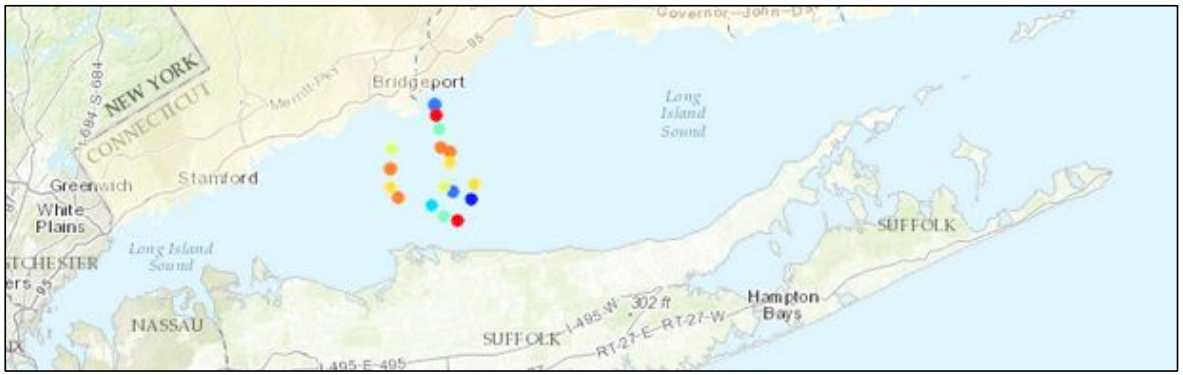
Access Instructions: Go to: http://opdgig.dos.ny.gov/#/map and search "Long Island Sound Mapping and Research Collaborative – Sediment % Nitrogen 2012" in the search data window

Long Island Sound Mapping and Research Collaborative – Sediment % Nitrogen 2013

New York Geographic Information Gateway

Source: Long Island Sound Mapping and Research Collaborative (LISMaRC), NOAA, Lamont Doherty Earth Observatory of Columbia University





Legend:

- 0.10
- 0.11 - 0.13
- 0.14
- 0.15 - 0.16
- 0.17 - 0.18
- 0.19 - 0.20
- 0.21
- 0.22 - 0.25

LONG ISLAND SOUND BLUE PLAN
Sustainable Ecosystems - Compatible Uses

Long Island Sound Mapping and Research Collaborative – Sediment % Nitrogen 2013

Blue Plan Sector(s): Ecological Characterization > Habitats > Physical > Geology/Sediments/Topography

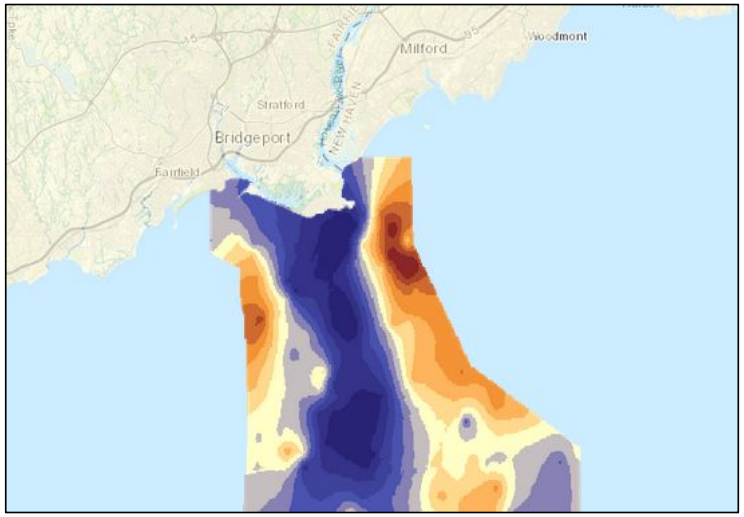
Summary Description: The purpose of his data set is to release the locations, identifiers, and organic carbon, hydrogen, and nitrogen analyses of surficial sediments collected at 17 stations in central Long Island Sound in Geographic, WGS84. These data can be used to provide information on environmental and ecological processes. *Purpose:* A benthic mapping survey cruise was conducted from the Research Vessel Connecticut from May 21-24, 2013 as part of the Long Island Sound Mapping and Research Collaborative (LISMaRC) contribution to the larger Long Island Sound Mapping effort. In addition to LISMaRC, other participants in this larger mapping effort include NOAA and another collaborative led by Lamont Doherty Earth Observatory at Columbia University. The bottom imaging and related products collected, developed and provided by our NOAA partners (backscatter, depth, PCA, rugosity) provided a solid framework for setting the benthic sampling design to collect samples in the variety of bottom habitats evident in the sea floor data. The initial impressions based on qualitative observations of the grain-size samples taken bear out the general sediment type predictions in the sample blocks, although in some cases the sedimentology was more complex than anticipated. The video and still data provided what we feel will be critical information on small and meso-scale patchiness in habitat features which are known to be important determinants of infaunal and epifaunal community structure and diversity. Thus it appears that each of the sets of data (from NOAA, LISMaRC and LDEO) when compiled, analyzed and considered together will provide for a detailed and valuable assessment of the sea floor environment and ecology of the pilot area in Long Island Sound. Also, the logistics of the integrated approach among the partners at this point appear well coordinated and should prove an effective model as the project progresses into other sections of Long Island Sound. For more information on the ground-truth surveys see: http://woodshole.er.usgs.gov/operations/ia/public_ds_info.php?fa=2013-009-FA ***Full Description: Go to:*** *http://opdgig.dos.ny.gov/geoportal/catalog/search/resource/detailsnoheader.page?uuid={48F2A9DC-7432-4969-B7BD-2D984C158185}*

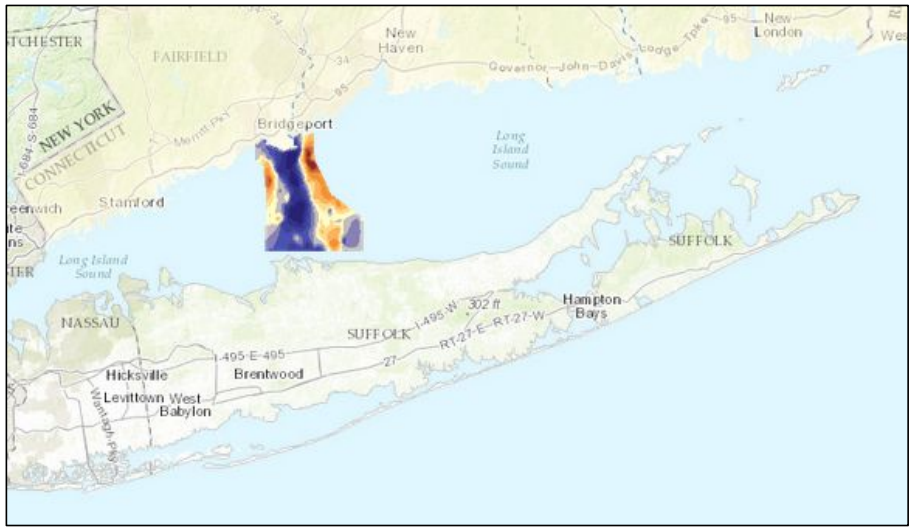
Access Instructions: Go to: http://opdgig.dos.ny.gov/#/map and search "Long Island Sound Mapping and Research Collaborative – Sediment % Nitrogen 2013" in the search data window

Long Island Sound Nitrogen Concentration

New York Geographic Information Gateway

Source: NYOPD





Legend:

- 0.01 - 0.04
- 0.05 - 0.06
- 0.07 - 0.08
- 0.09 - 0.1
- 0.11 - 0.12
- 0.13 - 0.14
- 0.15 - 0.16
- 0.17 - 0.18
- 0.19 - 0.2
- 0.21 - 0.22
- 0.23 - 0.24
- 0.25 - 0.26
- >.26

LONG ISLAND SOUND BLUE PLAN
Sustainable Ecosystems - Compatible Uses

Long Island Sound Nitrogen Concentration

Blue Plan Sector(s): Ecological Characterization > Habitats > Physical > Geology/Sediments/Topography

Summary Description: Displays the interpolated results of sediment percent Nitrogen concentration from surficial grab samples as of Summer 2013 and Fall 2012 within the project pilot area. This file contains the results of Nitrogen concentration anlayses based on surficial VanVeen grab samples collected during Summer of 2013 and 2012 in the central Long Island Sound Pilot Area. Results were interpolated from smaple points based Kringing algorithms.

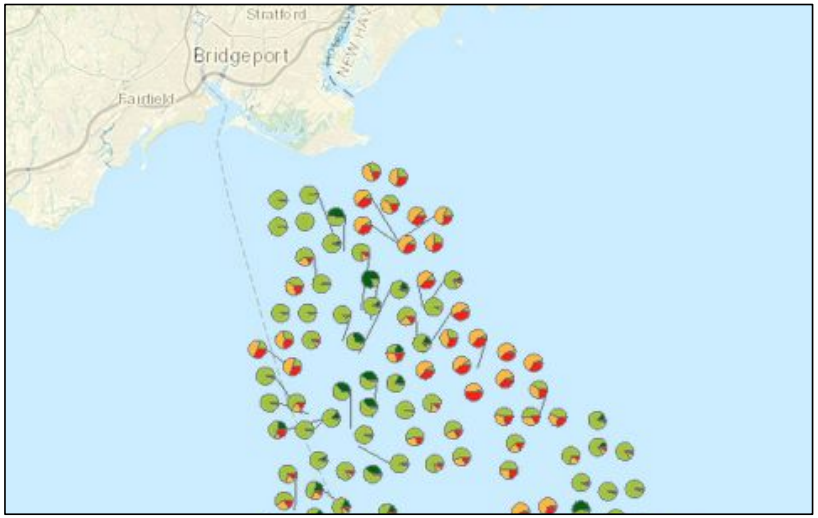
Full Description: Go to:
http://opdgig.dos.ny.gov/geoportal/catalog/search/resource/detailsnoheader.page?uuid={5E76E16A-14B0-4B95-AA79-BDED326396D7}

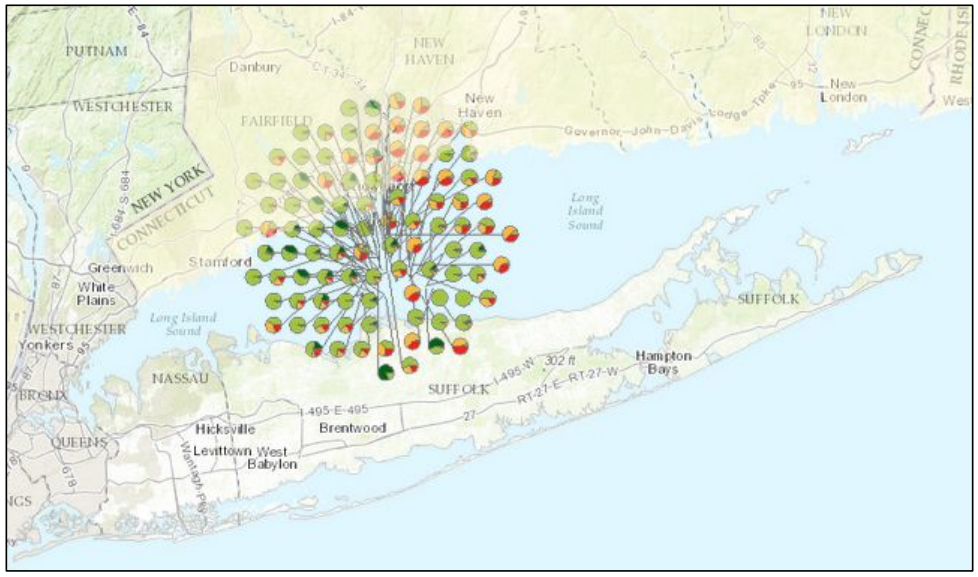
Access Instructions: Go to: http://opdgig.dos.ny.gov/#/map and search "Long Island Sound Nitrogen Concentration" in the search data window

Long Island Sound Sediment – 2012

New York Geographic Information Gateway

Source: Long Island Sound Mapping and Research Collaborative (LISMaRC), NOAA, Lamont Doherty Earth Observatory of Columbia University





Legend:

- % Gravel
- % Sand
- % Silt
- % Clay

LONG ISLAND SOUND BLUE PLAN
Sustainable Ecosystems - Compatible Uses

Long Island Sound Sediment – 2012

Blue Plan Sector(s): Ecological Characterization > Habitats > Physical > Geology/Sediments/Topography

Summary Description: The purpose of this data set is to release the locations, identifiers, grain-size data and(or) textural descriptions of surficial sediments collected at 100 stations in central Long Island Sound in Geographic, WGS84. These data can be used to provide information on surface geology and sedimentary processes. A benthic mapping survey cruise was conducted from the Research Vessel Connecticut from October 10-17, 2012 as part of the Long Island Sound Mapping and Research Collaborative (LISMaRC) contribution to the larger Long Island Sound Mapping effort. In addition to LISMaRC, other participants in this larger mapping effort include NOAA and another collaborative led by Lamont Doherty Earth Observatory at Columbia University. The bottom imaging and related products collected, developed and provided by our NOAA partners (backscatter, depth, PCA, rugosity) provided a solid framework for setting the benthic sampling design to collect samples in the variety of bottom habitats evident in the sea floor data. The initial impressions based on qualitative observations of the grain-size samples taken bear out the general sediment type predictions in the sample blocks, although in some cases the sedimentology was more complex than anticipated. The video and still data provided what we feel will be critical information on small and meso-scale patchiness in habitat features which are known to be important determinants of infaunal and epifaunal community structure and diversity. Thus it appears that each of the sets of data (from NOAA, LISMaRC and LDEO) when compiled, analyzed and considered together will provide for a detailed and valuable assessment of the sea floor environment and ecology of the pilot area in Long Island Sound. Also, the logistics of the integrated approach among the partners at this point appear well coordinated and should prove an effective model as the project progresses into other sections of Long Island Sound. For more information on the ground-truth surveys see: http://woodshole.er.usgs.gov/operations/ia/public_ds_info.php?fa=2012-028-FA

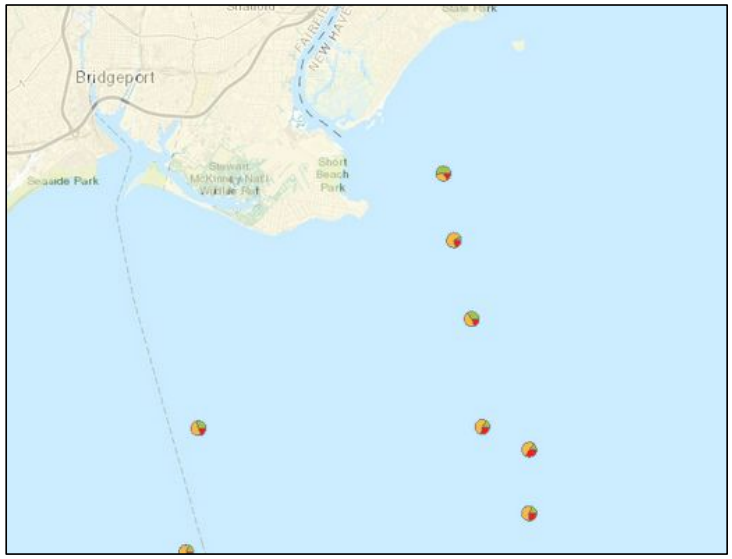
Full Description: Go to:
http://opdgig.dos.ny.gov/geoportal/catalog/search/resource/detailsnoheader.page?uuid={65792AAB-6731-4F0C-ADFE-16FBB2CF65ED}

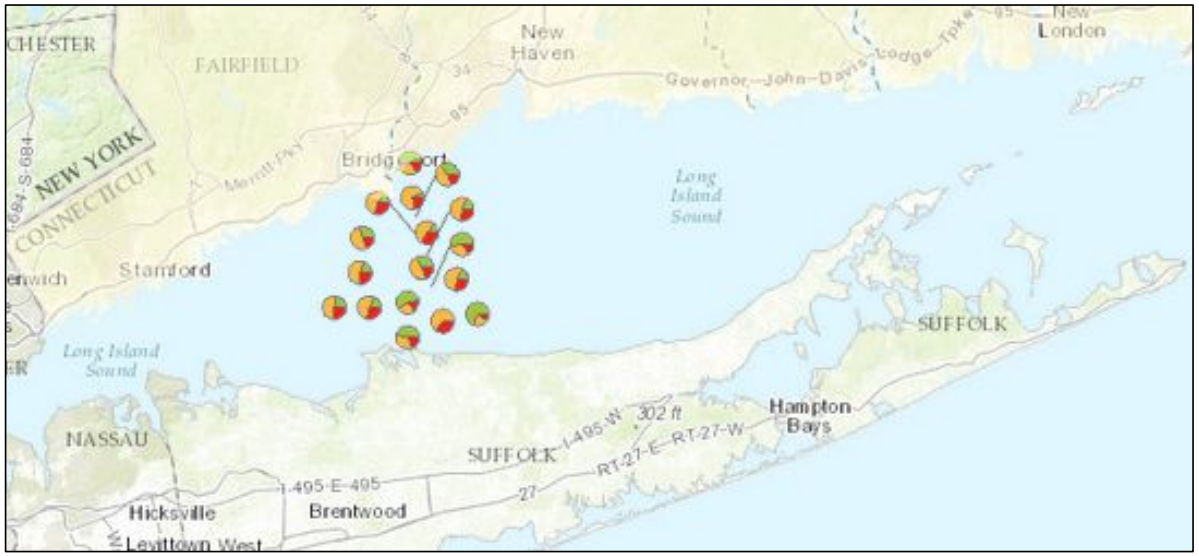
Access Instructions: Go to: http://opdgig.dos.ny.gov/#/map and search "Long Island Sound Sediment – 2012" in the search data window

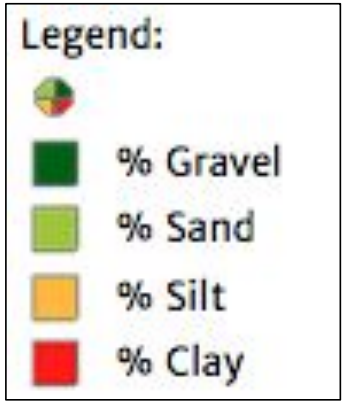
Long Island Sound Sediment – 2013

New York Geographic Information Gateway

Source: Long Island Sound Mapping and Research Collaborative (LISMaRC), NOAA, Lamont Doherty Earth Observatory of Columbia University







LONG ISLAND SOUND BLUE PLAN
Sustainable Ecosystems - Compatible Uses

Long Island Sound Sediment – 2013

Blue Plan Sector(s): Ecological Characterization > Habitats > Physical > Geology/Sediments/Topography

Summary Description: The purpose of his data set is to release the locations, identifiers, grain-size data and(or) textural descriptions of surficial sediments collected at 17 stations in central Long Island Sound in Geographic, WGS84. These data can be used to provide information on surface geology and sedimentary processes. A benthic mapping survey cruise was conducted from the Research Vessel Connecticut from May 21-24, 2013 as part of the Long Island Sound Mapping and Research Collaborative (LISMaRC) contribution to the larger Long Island Sound Mapping effort. In addition to LISMaRC, other participants in this larger mapping effort include NOAA and another collaborative led by Lamont Doherty Earth Observatory at Columbia University. The bottom imaging and related products collected, developed and provided by our NOAA partners (backscatter, depth, PCA, rugosity) provided a solid framework for setting the benthic sampling design to collect samples in the variety of bottom habitats evident in the sea floor data. The initial impressions based on qualitative observations of the grain-size samples taken bear out the general sediment type predictions in the sample blocks, although in some cases the sedimentology was more complex than anticipated. The video and still data provided what we feel will be critical information on small and meso-scale patchiness in habitat features which are known to be important determinants of infaunal and epifaunal community structure and diversity. Thus it appears that each of the sets of data (from NOAA, LISMaRC and LDEO) when compiled, analyzed and considered together will provide for a detailed and valuable assessment of the sea floor environment and ecology of the pilot area in Long Island Sound. Also, the logistics of the integrated approach among the partners at this point appear well coordinated and should prove an effective model as the project progresses into other sections of Long Island Sound. For more information on the ground-truth surveys see: http://woodshole.er.usgs.gov/operations/ia/public_ds_info.php?fa=2013-009-FA

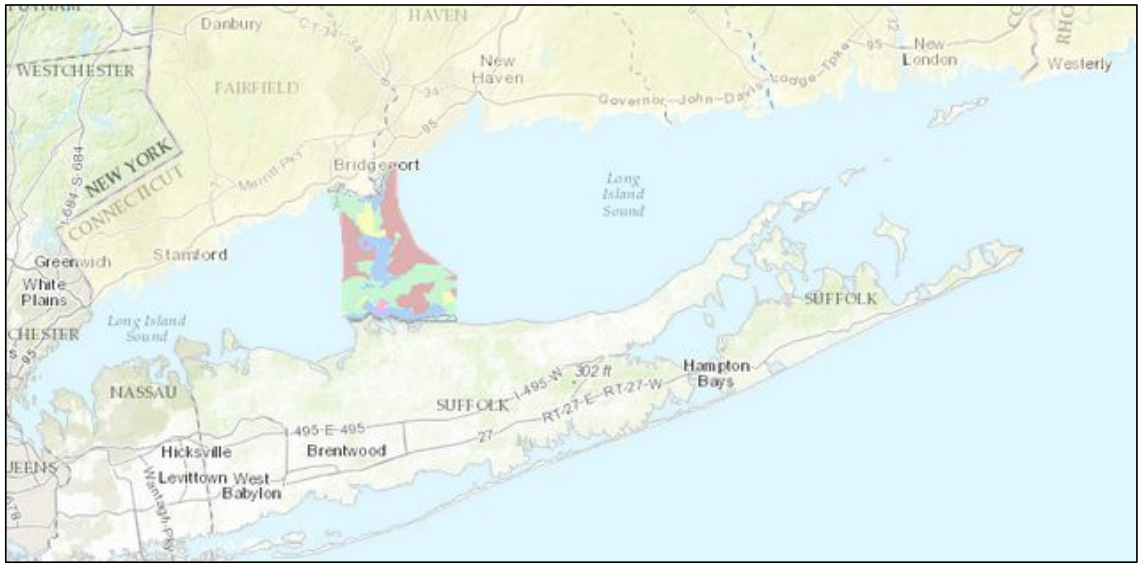
Full Description: Go to:
http://opdgig.dos.ny.gov/geoportal/catalog/search/resource/detailsnoheader.page?uuid={5E1609E4-AE7B-47C4-8AF8-477997FF9230}

Access Instructions: Go to: http://opdgig.dos.ny.gov/#/map and search "Long Island Sound Sediment – 2013" in the search data window

Long Island Sound Sedimentary Environments

New York Geographic Information Gateway

Source: NYOPD, Dr. Cecilia McHugh and students (Queens College NY), Dr. Tim Kenna (Lamont Doherty Earth Observatory of Columbia University)



Legend:

- deposition
- deposion and erosion
- dynamic – sed waves
- dynamic – reworked recent
- non-depo / erosion
- unsurveyed

LONG ISLAND SOUND BLUE PLAN
Sustainable Ecosystems - Compatible Uses

Long Island Sound Sedimentary Environments

LONG ISLAND SOUND BLUE PLAN
Sustainable Ecosystems - Compatible Uses

Blue Plan Sector(s): Ecological Characterization > Habitats > Physical > Geology/Sediments/Topography

Summary Description: Displays the results of sedimentary environment analyses from geophysical data collected as of Summer 2013 and Fall 2012 within the project pilot area. This file contains the results of assessing the sedimentary environments (erosion, deposition, dynamic) based on analyses performed on core samples and sub-bottom seismic data collected during Summer of 2013 and 2012 in the central Long Island Sound Pilot Area. Classes were delineated from sample points, seafloor bathymetry/backscatter, and sub-bottom seismic data based manual interpretation and best professional judgment.

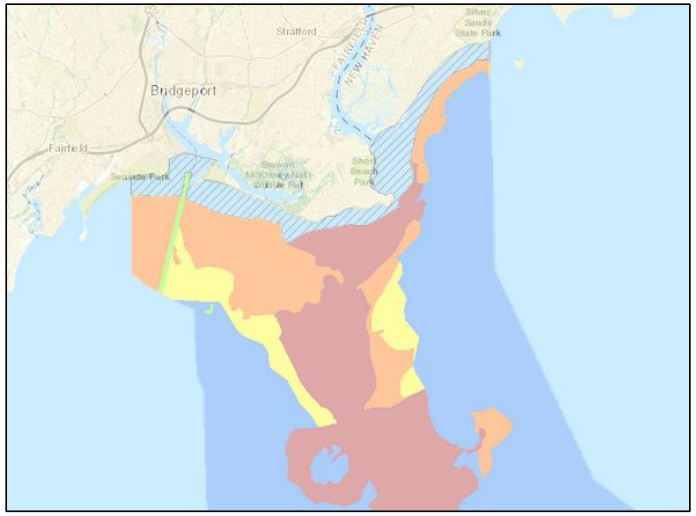
Full Description: Go to:
http://opdgig.dos.ny.gov/geoportal/catalog/search/resource/detailsnoheader.page?uuid={98DADDEC-30B8-489C-AC1A-5C8D2DDB9139}

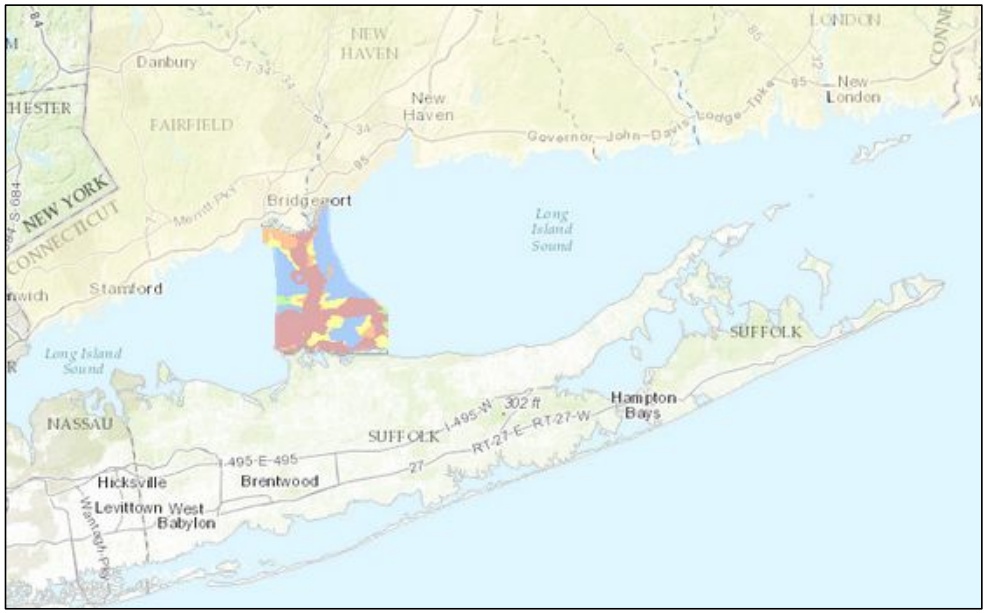
Access Instructions: Go to: http://opdgig.dos.ny.gov/#/map and search "Long Island Sound Sedimentary Environments" in the search data window

Long Island Sound Sedimentary Environments Energy

New York Geographic Information Gateway

Source: NYOPD, Dr. Cecilia McHugh and students (Queens College NY), Dr. Tim Kenna (Lamont Doherty Earth Observatory of Columbia University)





Legend:

- high energy
- moderate / high energy
- moderate energy
- low / moderate energy
- low energy
- unsurveyed

LONG ISLAND SOUND BLUE PLAN
Sustainable Ecosystems - Compatible Uses

Long Island Sound Sedimentary Environments Energy

Blue Plan Sector(s): Ecological Characterization > Habitats > Physical > Geology/Sediments/Topography

Summary Description: Displays the results of sedimentary environment analyses from geophysical data collected as of Summer 2013 and Fall 2012 within the project pilot area *Purpose:* This file contains the results of assessing the sedimentary environments (erosion, deposition, dynamic) based on analyses performed on core samples and sub-bottom seismic data collected during Summer of 2013 and 2012 in the central Long Island Sound Pilot Area. Classes were delineated from sample points, seafloor bathymetry/backscatter, and sub-bottom seismic data based manual interpretation and best professional judgment.

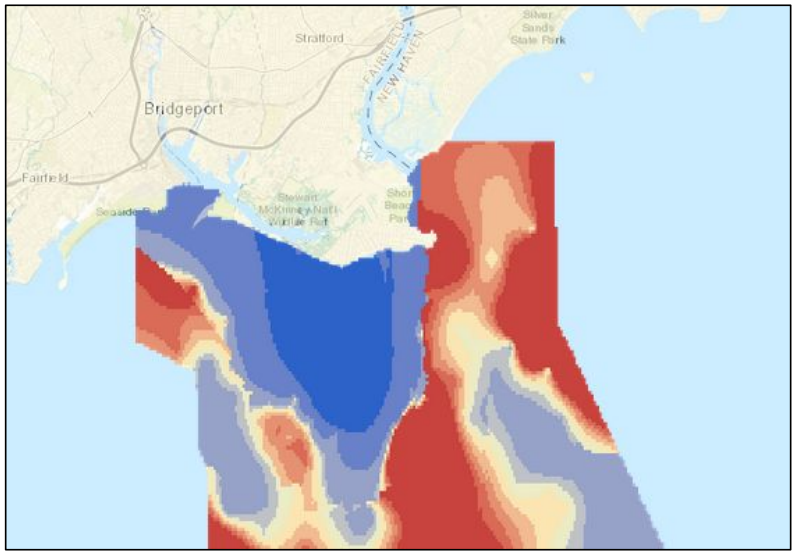
Full Description: Go to:
http://opdgig.dos.ny.gov/geoportal/catalog/search/resource/detailsnoheader.page?uuid={5CCD3C6E-BA37-41E2-BDB6-622A4A1EDB3C}

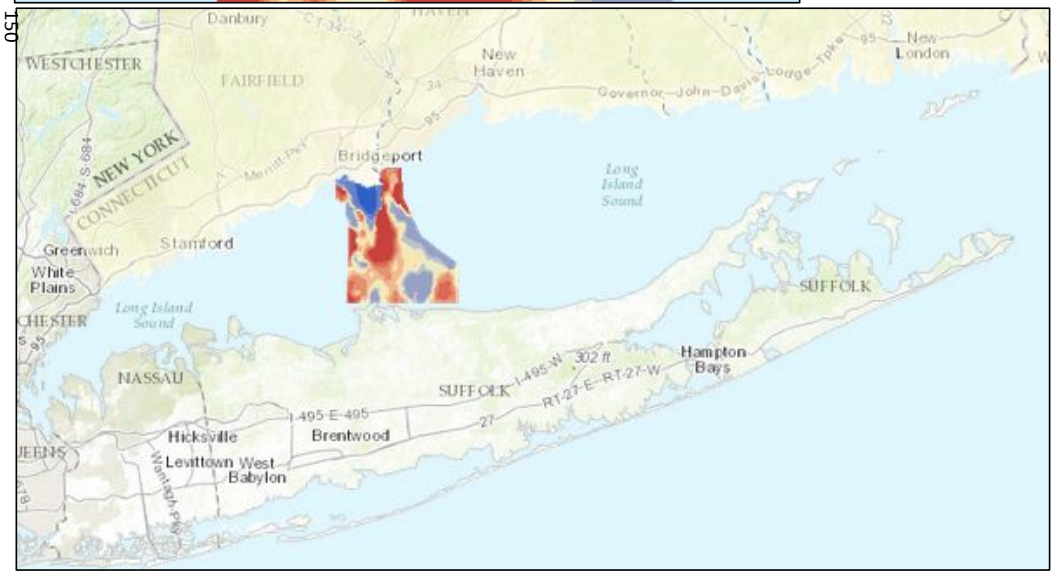
Access Instructions: Go to: http://opdgig.dos.ny.gov/#/map and search "Long Island Sound Sedimentary Environments Energy" in the search data window

Long Island Sound Sediment Matrix Density

New York Geographic Information Gateway

Source: NYOPD, Dr. Cecilia McHugh and students (Queens College NY), Dr. Tim Kenna (Lamont Doherty Earth Observatory of Columbia University)





Legend:

- <2
- 2.01 - 2.51
- 2.52 - 2.59
- 2.6 - 2.6
- 2.61
- 2.62 - 2.62
- 2.63
- 2.64 - 2.64
- 2.65
- >2.65

LONG ISLAND SOUND BLUE PLAN
Sustainable Ecosystems - Compatible Uses

Long Island Sound Sediment Matrix Density

Blue Plan Sector(s): Ecological Characterization > Habitats > Physical > Geology/Sediments/Topography

Summary Description: Displays the interpolated results of sediment matrix density from surficial grab samples as of Summer 2013 and Fall 2012 within the project pilot area. This file contains the results of sediment matrix density anlayses (indications of mineral composition) and based on surficial VanVeen grab samples collected during Summer of 2013 and Fall 2012 in the central Long Island Sound Pilot Area. Results were interpolated from sample points based Kringing algorithms.

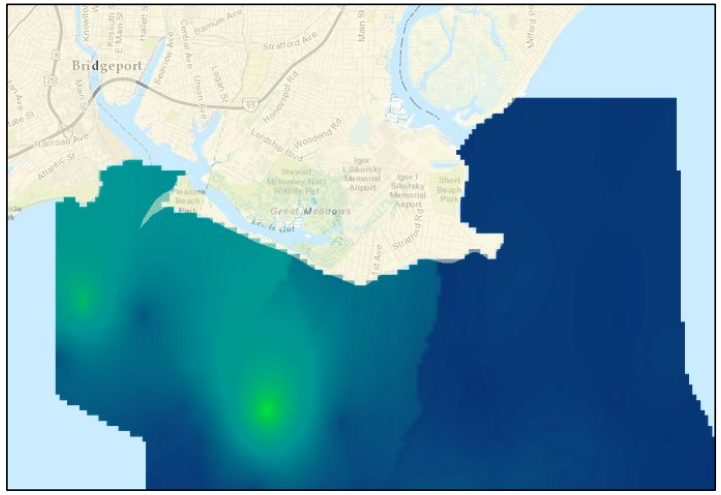
Full Description: Go to:
http://opdgig.dos.ny.gov/geoportal/catalog/search/resource/detailsnoheader.page?uuid={3BD92594-CDC5-4A2D-A285-E258EEB72B6D}

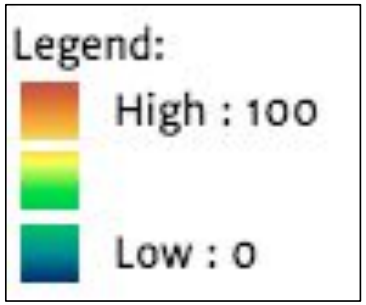
Access Instructions: Go to: http://opdgig.dos.ny.gov/#/map and search "Long Island Sound Sediment Percent Sand" in the search data window

Long Island Sound Sediment Percent Gravel

New York Geographic Information Gateway

Source: NYOPD, Dr. Cecilia McHugh and students (Queens College NY), Dr. Tim Kenna (Lamont Doherty Earth Observatory of Columbia University)





LONG ISLAND SOUND BLUE PLAN
Sustainable Ecosystems - Compatible Uses

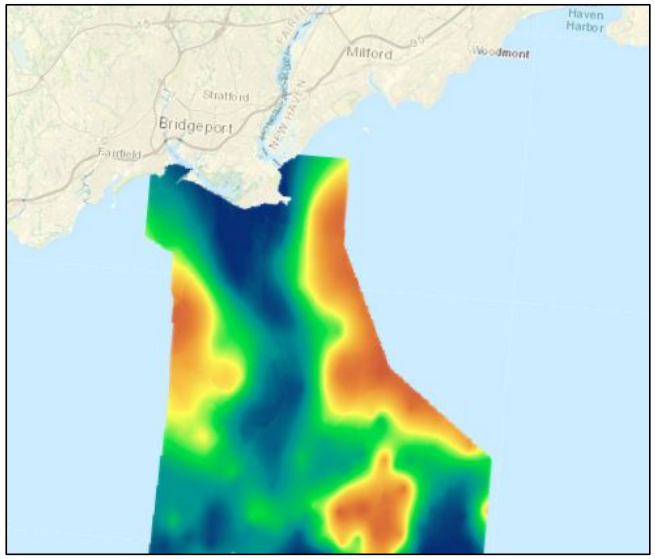
Long Island Sound Sediment Percent Gravel

Blue Plan Sector(s): Ecological Characterization > Habitats > Physical > Geology/Sediments/Topography

Summary Description: Displays the interpolated results of percent gravel content from surficial grab samples as of Summer 2013 and Fall 2012 within the project pilot area
Purpose: This file contains the results of gravel content based on the sediment grain size analyses performed on samples collected during Summer of 2013 and 2012 in the central Long Island Sound Pilot Area. Results were interpolated from sample points based Kringing algorithms.

Full Description: Go to:
http://opdgig.dos.ny.gov/geoportal/catalog/search/resource/detailsnoheader.page?uuid={259E1A02-DF76-42E2-9C72-4E5184E8727D}

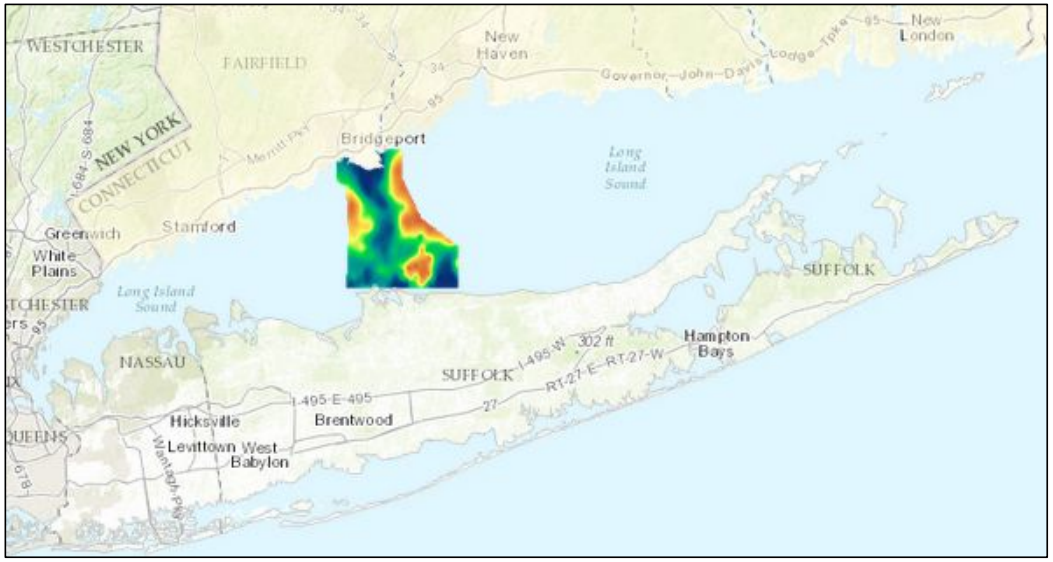
Access Instructions: Go to: http://opdgig.dos.ny.gov/#/map and search "Long Island Sound Sediment Percent Gravel" in the search data window

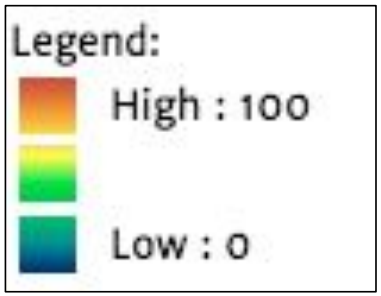


Long Island Sound Sediment Percent Mud

New York Geographic Information Gateway

Source: NYOPD, Dr. Cecilia McHugh and students (Queens College NY), Dr. Tim Kenna (Lamont Doherty Earth Observatory of Columbia University)





LONG ISLAND SOUND BLUE PLAN
Sustainable Ecosystems - Compatible Uses

Long Island Sound Sediment Percent Mud

Blue Plan Sector(s): Ecological Characterization > Habitats > Physical > Geology/Sediments/Topography

Summary Description: Displays the interpolated results of percent mud content (clays and silts) from surficial grab samples as of Summer 2013 and Fall 2012 within the project pilot area. This file contains the results of mud content (clays and silts) based on the sediment grain size analyses performed on samples collected during Summer of 2013 and 2012 in the central Long Island Sound Pilot Area. Results were interpolated from smaple points based Kringing algorithms.

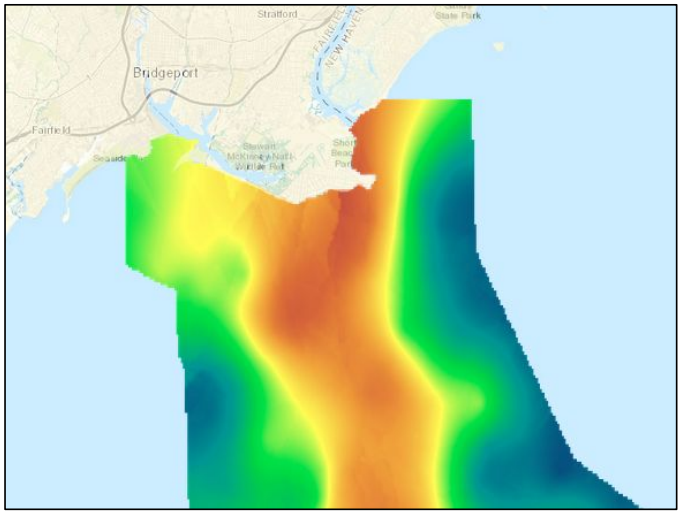
Full Description: Go to:
http://opdgig.dos.ny.gov/geoportal/catalog/search/resource/detailsnoheader.page?uuid={2BA9FF57-D352-420E-A403-66E0AECB42FE}

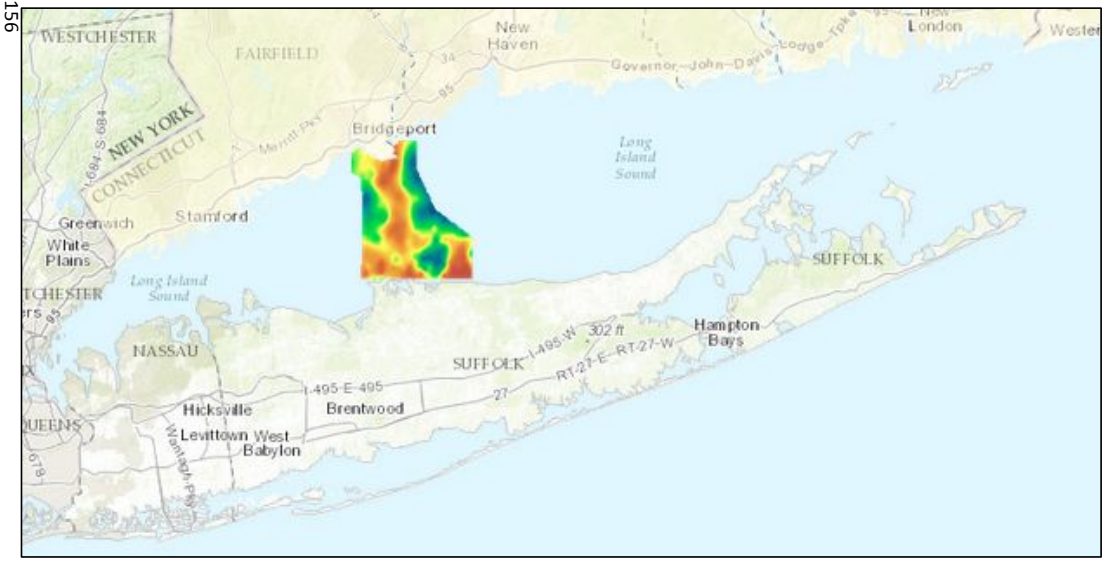
Access Instructions: Go to: http://opdgig.dos.ny.gov/#/map and search "Long Island Sound Sediment Percent Mud" in the search data window

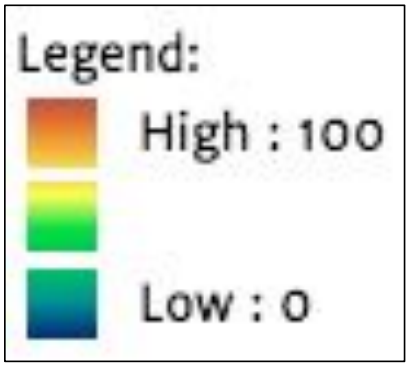
Long Island Sound Sediment Percent Sand

New York Geographic Information Gateway

Source: NYOPD, Dr. Cecilia McHugh and students (Queens College NY), Dr. Tim Kenna (Lamont Doherty Earth Observatory of Columbia University)







LONG ISLAND SOUND BLUE PLAN
Sustainable Ecosystems - Compatible Uses

Long Island Sound Sediment Percent Sand

Blue Plan Sector(s): Ecological Characterization > Habitats > Physical > Geology/Sediments/Topography

Summary Description: Displays the interpolated results of percent sand content from surficial grab samples as of Summer 2013 and Fall 2012 within the project pilot area. This file contains the results of sand content based on the sediment grain size analyses performed on samples collected during Summer of 2013 and 2012 in the central Long Island Sound Pilot Area. Results were interpolated from sample points based Kringing algorithms.

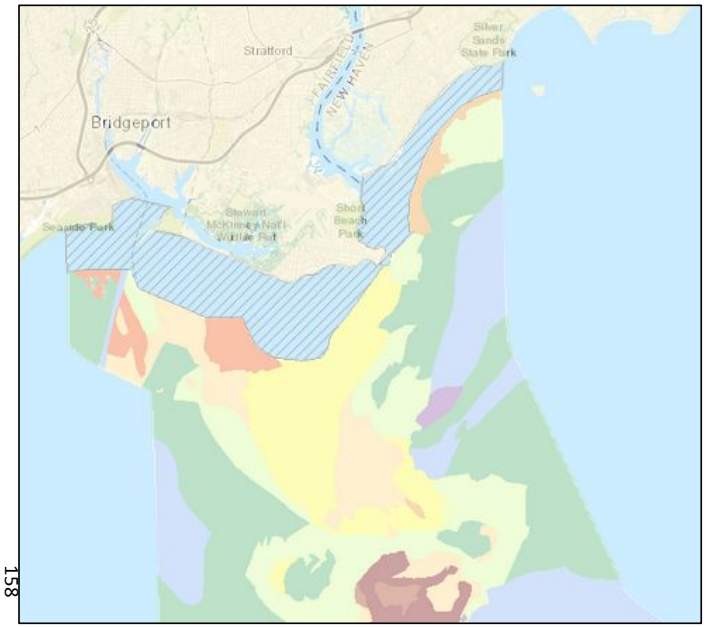
Full Description: Go to:
http://opdgig.dos.ny.gov/geoportal/catalog/search/resource/detailsnoheader.page?uuid={62AD49F7-5715-4F50-9453-D4DDE170E196}

Access Instructions: Go to: http://opdgig.dos.ny.gov/#/map and search "Long Island Sound Sediment Percent Sand" in the search data window

Long Island Sound Sediment Texture Falk Classification

New York Geographic Information Gateway

Source: NYOPD, Dr. Cecilia McHugh and students (Queens College NY), Dr. Tim Kenna (Lamont Doherty Earth Observatory of Columbia University)



Legend:
- gravel
- mud, sand gravel
- muddy gravel
- gravelly sand
- gravel, mud sand
- sand
- muddy sand
- gravelly mud
- sandy mud
- mud
- not surveyed

LONG ISLAND SOUND BLUE PLAN
Sustainable Ecosystems - Compatible Uses

Long Island Sound Sediment Texture Falk Classification

Blue Plan Sector(s): Ecological Characterization > Habitats > Physical > Geology/Sediments/Topography

Summary Description: Displays the results of Falks's Classifcation system applied to grain size analyses from samples collected as of Summer 2013 and Fall 2012 within the project pilot area. This file contains the results of applying Falk's Classification system to the sediment grain size analyses performed on samples collected during Summer of 2013 and 2012 in the central Long Island Sound Pilot Area. Classes were delineated from sample points and seafloor bathymetry/backscatter based manual interpretation and best professional judgment.

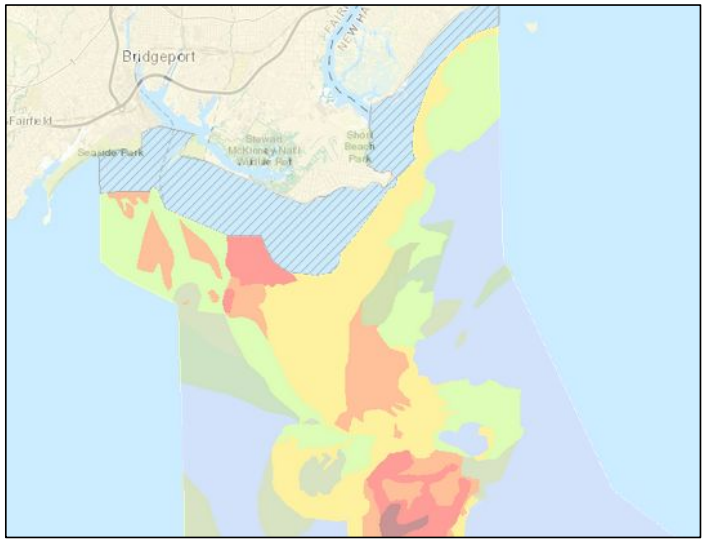
Full Description: Go to:
http://opdgig.dos.ny.gov/geoportal/catalog/search/resource/detailsnoheader.page?uuid={85A79793-F0FA-41ED-99CF-75DA0FA246FF}

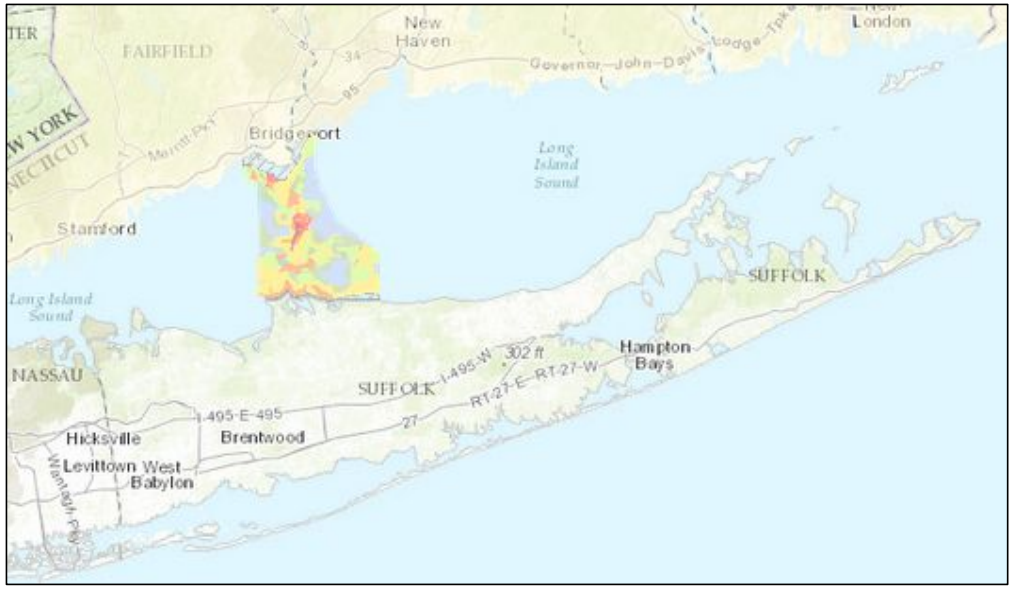
Access Instructions: Go to: http://opdgig.dos.ny.gov/#/map and search "Long Island Sound Sediment Texture Falk Classification" in the search data window

Long Island Sound Sediment Texture Shepard Classification

New York Geographic Information Gateway

Source: NYOPD, Dr. Cecilia McHugh and students (Queens College NY), Dr. Tim Kenna (Lamont Doherty Earth Observatory of Columbia University)





Legend:
- bedrock
- gravel
- gravelly sed
- sand
- silty sand
- clayey sand
- sand silt clay
- sandy silt
- sandy clay
- clayey silt
- silty clay
- not surveyed

LONG ISLAND SOUND BLUE PLAN
Sustainable Ecosystems - Compatible Uses

Long Island Sound Sediment Texture Shepard Classification

Blue Plan Sector(s): Ecological Characterization > Habitats > Physical > Geology/Sediments/Topography

Summary Description: Displays the results of Shepard's Classification system applied to grain size analyses from samples collected as of Summer 2013 and Fall 2012 within the project pilot area *Purpose:* This file contains the results of applying Shepard's Classification system to the sediment grain size analyses performed on samples collected during Summer of 2013 and 2012 in the central Long Island Sound Pilot Area. Classes were delineated from sample points and seafloor bathymetry/backscatter based manual interpretation and best professional judgment.

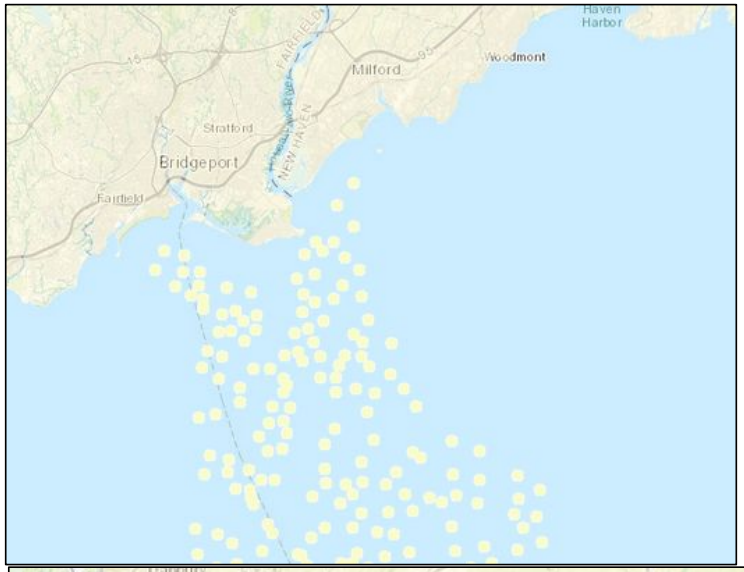
Full Description: Go to:
http://opdgig.dos.ny.gov/geoportal/catalog/search/resource/detailsnoheader.page?uuid={FFDE8DAC-3CBC-409B-B349-A0FC05173CDE}

Access Instructions: Go to: http://opdgig.dos.ny.gov/#/map and search "Long Island Sound Sediment Texture Shepard Classification" in the search data window

Long Island Sound Surficial VanVeen Grab Samples and Sediment Samples

New York Geographic Information Gateway

Source: NYOPD, Dr. Cecilia McHugh and students (Queens College NY), Dr. Tim Kenna (Lamont Doherty Earth Observatory of Columbia University)



Legend:

LONG ISLAND SOUND BLUE PLAN
Sustainable Ecosystems - Compatible Uses

Long Island Sound Surficial VanVeen Grab Samples and Sediment Samples

Blue Plan Sector(s): Ecological Characterization > Habitats > Physical > Geology/Sediments/Topography

Summary Description: Displays the location of sediment grab samples and sample descriptions as of Summer 2013 and Fall 2012 within the project pilot area. This file contains the locations of surficial VanVeen grab samples and sediment sample descriptions collected during Summer of 2013 and 2012 in the central Long Island Sound Pilot Area.

Full Description: Go to:
http://opdgig.dos.ny.gov/geoportal/catalog/search/resource/detailsnoheader.page?uuid={C37056A6-E0F4-40F4-962D-81BEEFC6A304}

Access Instructions: Go to: http://opdgig.dos.ny.gov/#/map and search "Long Island Sound Surficial VanVeen Grab Samples and Sediment Samples" in the search data window