

LISMaRC Phase II Epifauna Sample Block and Site Simper Cluster, Distribution of Communities, and Geographic Regions in the Long Island Sound Cable Fund Initiative Phase II area of eastern Long Island Sound Collected during SEABOSS Operations (2017-2018)

METADATA

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Dataset Title: *LISMaRC Phase II Epifauna Sample Block and Site Simper Cluster, Distribution of Communities, and Geographic Regions in the Long Island Sound Cable Fund Initiative Phase II area of eastern Long Island Sound Collected during SEABOSS Operations (2017-2018)*

Filename: LISMaRC_BenthicEcology_2017_18_EpifaunaSeaBossBlockSite_Clusters.shp

Online Linkage: <http://www.marine-geo.org/portals/lis/>

Abstract: *The shapefile includes sample block- (SB) and site-specific (NB) epifaunal community types determined using SIMPROF hierarchical clustering and broader geographic regions defined using community types and their spatial distribution. Taxon and biogenic feature abundance (SEABOSS images only) were assessed for images collected during USGS SEABed Observation and Sampling System (SEABOSS) in November and December 2017 and May 2018. These are the complete records of block- and site-level multivariate community analyses.*

Dataset purpose: *This dataset provides detailed information on the epifaunal communities in the Phase II study area which can be used to map the spatial characteristics of these communities relative to several environmental features to meet the Long Island Sound Cable Fund's goal of ecological characterization of the Long Island Sound sea floor in conjunction with habitat mapping efforts.*

Time period of content: *These data were collected during November and December 2017 and May 2018.*

Dataset Status: *Complete*

Update Frequency: *None Planned*

Theme Keywords: *Benthic ecology, Epifauna, diversity, habitat, seafloor imaging, SEABOSS, Connecticut, New York, Long Island Sound, Fishers Island Sound, estuary, Long Island Sound Mapping and Research Collaborative, LISMaRC*

Access Constraints: *none*

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Data Quality Considerations: *see below*

Attribute accuracy: *All attributes were evaluated during data processing and analysis as standard quality control to ensure attributes contain accurate and relevant information and values.*

Completeness: *The information provided on epifaunal communities is complete*

Positional accuracy: *Shapefile object locations correspond to sample sites (NB) and the centroids of sample blocks (SB). Block and site locations were selected with the overall objective to sample as many of the different seafloor habitats that were evident in the side scan mosaic that had been previously developed for the study area.*

Process Steps: *Image data from all SEABOSS surveys were aggregated to block and site designations and mean values calculated to identify large scale variation in community structure (i.e., images within sites treated as replicates versus samples). Multivariate analyses were implemented with live taxa and biogenic features as well as live taxa only. SIMPROF was used to identify similarities between sites at the 1% threshold level for hierarchical cluster analyses.*

A qualitative hierarchical approach for aggregating sites as implemented based on geographic proximity and similarity of ecological features. The most parsimonious was a set of four groupings representing coastal, west, central, and east regions within the map area.

SEABOSS captured orthogonal images of the seafloor. These images were analyzed for percent cover of all living seafloor species (excluding fish) and biogenic features. Percent cover was quantified using a grid of square cells overlaid on each image (n=216 grid cells). Within each grid square, organisms and biogenic features were identified to lowest possible taxonomic level.

The sum of these grid cells for each image and organism or biogenic feature is reported in this dataset. Within-image measures of diversity and richness of taxa and biogenic features were determined per image.

Attributes:

Name: Sample block or site.

Geo_Region: Qualitative geographic regions based on the spatial distribution of community type.

Simp_Clust: Sample block- or site-specific community type determined using SIMPROF hierarchical clustering.

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