TITLE: **HLY1201_DBO5_Sediment Parameters_README.docx**

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DATA ARCHIVE: COMIDA Hanna Shoal (HS), http://arcticstudies.org/hannashoal

DATASET OVERVIEW:
This dataset contains summary measurements of surface sediment collected at each station for the transect DBO5 during HLY1201 identified by Cast Number (#), DBO Line (DBO5), DBO Station Name, Historical Station Name, Date (yr-mo-day), Latitude (°N), Longitude (°W), and Station Depth (m) and associated surface sediment parameters. The following parameters are listed in this data file for surface sediment (sed) values: grain size (≤0 phi, 1 phi, 2 phi, 3 phi, 4 phi, and ≥5 phi, 1-4 phi=sand, and modal phi size), percent total organic carbon (TOC), percent total organic nitrogen (TON), C/N, del-13 carbon value (per mil), del-15 nitrogen value (per mil), and surface sediment chlorophyll (chl a) content.

INSTRUMENT DESCRIPTION:
A van Veen grab (0.1 m^2 sediment grab), weighted with 32 kg of lead was used in the collection of surface sediment samples for all parameters in this file.

DATA COLLECTION AND PROCESSING
Surface samples (1 cm) were collected with a cut-off 10 cc syringe and subsequently processed for chlorophyll a content. Sediment chlorophyll was measured shipboard using a Turner Designs AU-20 fluorometer (non-acidification or Welschmeyer method) following a 24-hour in the dark incubation with 90% acetone at 4°C method (see Cooper et al. 2012, 2013 for further details). A sediment subsample was also collected from the first van Veen grab used for collections. A subsample of surface sediment was collected and placed in whirl-pak bags, frozen, and processed post-cruise at the Chesapeake Biological Laboratory. After defrosting the sediments, sediment grain size was determined in the laboratory after removal of organics and of iron oxides following the process of Gee and Bauder (1986). Sediment samples were acidified and provided to CBL's Nutrient Analytical Service's Lab (NASL) for determination of TOC and TON. Procedures and techniques used by NASL are available at http://nasl.cbl.umces.edu/. An additional subsample of the acidified sediment sample was packaged in small aluminum boats and analyzed on a Thermo Delta+ Stable Isotope mass spectrometer.

DATA FORMAT
Data File Structure: Excel
File Names (Formats): **HLY1201_DBO5_Sediment Parameters.xlsx**

DATA PARAMETERS:

- Cruise ID-Ship, Year, Cruise # =HLY1201 (HLY=USCGC Healy)
- Cast Number (Num) - sequentially numbered from beginning to end of cruise
- DBO Line/Region – DBO 1,2,3,4, or 5 transect line or within the DBO bounding box (see DBO EOL data site for bounding boxes)
- DBOStnName –DBO official station ID name (see DBO EOL data site for coordinates
- Historical Station Name - based on historical transect names
- DateData - year/mo/day
- DateYear – Year of collection
- Latitude -in decimal degrees (°N)
  Longitude - in decimal degrees (°W)
- Station (Stn) Depth - bottom station depth in meters
- SurfSed (Surface Sediment) Phi size-percent of surface sediment grain size fraction: phi_≤0 (gravel and rock), phi_1 (coarse send), phi_2 (medium sand), phi_3 (fine sand), phi_4 (very fine sand), phi_1-4 (sand total), phi_≥5 (silt and clay)
- SurfSed Modal Size– highest percent of surface sediment grain size phi class in sample
- SurfSed TOC - total organic carbon (%) in surface sediment
- SurfSed TON - total organic nitrogen (%) in surface sediment
- SurfSed CN - carbon-to-nitrogen ratio (wt./wt.) in surface sediment
- SurfSed 13C - Sediment carbon-13 value (per mil, (o/oo)
- SurfSed 15N –Sediment nitrogen-15 content (o/oo)
- SedSed chla - Sediment chlorophyll content in surface sediments (mg/m2)
- Sed Chl-a - concentration chlorophyll that has settled on one m^2 (mg/m^2)

Data Version Number and Date: Version 1, 07/11/15

REFERENCES

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