

*Please provide the following information, and submit to the NOAA DM Plan Repository.*

### **Reference to Master DM Plan (if applicable)**

*As stated in Section IV, Requirement 1.3, DM Plans may be hierarchical. If this DM Plan inherits provisions from a higher-level DM Plan already submitted to the Repository, then this more-specific Plan only needs to provide information that differs from what was provided in the Master DM Plan.*

URL of higher-level DM Plan (if any) as submitted to DM Plan Repository:

## **1. General Description of Data to be Managed**

### **1.1. Name of the Data, data collection Project, or data-producing Program:**

2007 US Army Corps of Engineers (USACE) National Coastal Mapping Program (NCMP)  
Great Lakes Topo/Bathy LiDAR: Lake Erie (PA shoreline) and Lake Michigan (Manitou Islands, Grand Traverse Bay, Little Traverse Bay)

### **1.2. Summary description of the data:**

The data contained in these files contain hydrographic and topographic data collected by the CHARTS (Compact

Hydrographic Airborne Rapid Total Survey) system along the Lake Erie coast of Pennsylvania and in Lake Michigan for

the Manitou Islands, Grand Traverse Bay, and Little Traverse Bay. The Grand Traverse Bay and Little Traverse Bay data

were processed at a later date than the Pennsylvania coast and Manitou Islands data. The U.S. Army Corps of Engineers

collects and maintains LiDAR data including orthophotos in coastal areas of the United States and its territories.

The Corps acquires this data in the course of performing its mission of flood control, navigation, environmental engineering,

and support for the Army and others. This is a bare earth data set. It was bare-earthed by the NOAA Office for Coastal Management.

Lake Erie (PA shoreline) dates of collection: 17-20 Aug 2007

Lake Michigan (Manitou Islands) dates of collection: 11-20 Sept 2007

Lake Michigan (Grand Traverse Bay and Little Traverse Bay) dates of collection: 10-18 Sept 2007

Original contact information:

Contact Org: JALBTCX

Title: Data Production Manager

Phone: 228-252-1111

Email: shoals-info@sam.usace.army.mil

**1.3. Is this a one-time data collection, or an ongoing series of measurements?**

One-time data collection

**1.4. Actual or planned temporal coverage of the data:**

2007-08-17 to 2007-09-18

**1.5. Actual or planned geographic coverage of the data:**

W: -86.179199, E: -79.756299, N: 45.56493, S: 42.12793

**1.6. Type(s) of data:**

*(e.g., digital numeric data, imagery, photographs, video, audio, database, tabular data, etc.)*

**1.7. Data collection method(s):**

*(e.g., satellite, airplane, unmanned aerial system, radar, weather station, moored buoy, research vessel, autonomous underwater vehicle, animal tagging, manual surveys, enforcement activities, numerical model, etc.)*

**1.8. If data are from a NOAA Observing System of Record, indicate name of system:**

**1.8.1. If data are from another observing system, please specify:**

**2. Point of Contact for this Data Management Plan (author or maintainer)**

**2.1. Name:**

NOAA Office for Coastal Management (NOAA/OCM)

**2.2. Title:**

Metadata Contact

**2.3. Affiliation or facility:**

NOAA Office for Coastal Management (NOAA/OCM)

**2.4. E-mail address:**

coastal.info@noaa.gov

**2.5. Phone number:**

(843) 740-1202

**3. Responsible Party for Data Management**

*Program Managers, or their designee, shall be responsible for assuring the proper management of the data produced by their Program. Please indicate the responsible party below.*

**3.1. Name:****3.2. Title:**

Data Steward

**4. Resources**

*Programs must identify resources within their own budget for managing the data they produce.*

**4.1. Have resources for management of these data been identified?****4.2. Approximate percentage of the budget for these data devoted to data management (specify percentage or "unknown"):****5. Data Lineage and Quality**

*NOAA has issued Information Quality Guidelines for ensuring and maximizing the quality, objectivity, utility, and integrity of information which it disseminates.*

**5.1. Processing workflow of the data from collection or acquisition to making it publicly accessible**

*(describe or provide URL of description):*

**Process Steps:**

- 2008-01-01 00:00:00 - These data were collected using the CHARTS surveys system. It is owned by the Naval Oceanographic Office and operated through contract. The system collects topographic lidar data at 20 kHz and hydrographic data at 3 kHz. The system also collects RGB imagery at 1 Hz. A CASI-1500 hyperspectral line scanner is integrated with the system as well. Aircraft position, velocity and acceleration information are collected through a combination of Novatel and POS A/V equipment. Raw data are collected and transferred to the office for downloading and processing in SHOALS GCS software. GPS data are processed using POSpac software and the results are combined with the lidar data to produce 3-D positions for each lidar shot. These data are edited using Fledermaus software where anomalous data are removed from the dataset. The data are broken into files, with each covering approximately 5 km along the shoreline. The edited data are written to 5 km tiles along the shoreline using chartsLAS, a program written by NAVO. This program reads data from the original binary format files and produces separate ASCII files for first and last return data. The data are converted from ellipsoid to orthometric heights, based on the GEOID03 model, within the chartsLAS program. The bathymetry files contain all of the returns from the bathymetric sensor which include returns both above and below the water.
- 2009-02-23 00:00:00 - The NOAA Office for Coastal Management (OCM) received topo and hydro files in ASCII format. The files contained Lidar elevation and intensity measurements. Both the topo and hydro points were classed as 'never

classified.' The data were provided in Geographic coordinates and ellipsoidal heights and in IGLD85 heights. OCM performed the following processing to the ellipsoidal height data for data storage and Digital Coast provisioning purposes: 1. LASEdit was used to convert the ascii formatted files to las format. 2. Both the topo and the hydro points were classified as never classified. Hydro points were changed to class 11 (bathymetry) and topo points were classified to class 2 (ground or bare earth). 3. The LAS data were sorted by latitude and the headers were updated. The Grand Traverse Bay and Little Traverse Bay data were received by the NOAA OCM at a later date from the previously processed data (Lake Erie - PA Shoreline and Lake Michigan - Manitou Islands) in this data set. These later received data were processed from the TL (last return topography) and H (bathymetry) ASCII files. The data were converted to las format using lastools. The H files were converted from IGLD85 vertical datum to NAVD88 using Vdatum and then converted to ellipsoid heights using GEOID03. Points were re-classified from 0 (never classified) to 11 (NOAA OCM bathymetry). These data were processed by NOAA OCM on 201206.

**5.1.1. If data at different stages of the workflow, or products derived from these data, are subject to a separate data management plan, provide reference to other plan:**

**5.2. Quality control procedures employed (describe or provide URL of description):**

## 6. Data Documentation

*The EDMC Data Documentation Procedural Directive requires that NOAA data be well documented, specifies the use of ISO 19115 and related standards for documentation of new data, and provides links to resources and tools for metadata creation and validation.*

**6.1. Does metadata comply with EDMC Data Documentation directive?**

No

**6.1.1. If metadata are non-existent or non-compliant, please explain:**

Missing/invalid information:

- 1.6. Type(s) of data
- 1.7. Data collection method(s)
- 3.1. Responsible Party for Data Management
- 4.1. Have resources for management of these data been identified?
- 4.2. Approximate percentage of the budget for these data devoted to data management
- 5.2. Quality control procedures employed
- 7.1. Do these data comply with the Data Access directive?
- 7.1.1. If data are not available or has limitations, has a Waiver been filed?
- 7.1.2. If there are limitations to data access, describe how data are protected
- 7.4. Approximate delay between data collection and dissemination
- 8.1. Actual or planned long-term data archive location

- 8.3. Approximate delay between data collection and submission to an archive facility
- 8.4. How will the data be protected from accidental or malicious modification or deletion prior to receipt by the archive?

**6.2. Name of organization or facility providing metadata hosting:**

NMFS Office of Science and Technology

**6.2.1. If service is needed for metadata hosting, please indicate:****6.3. URL of metadata folder or data catalog, if known:**

<https://www.fisheries.noaa.gov/inport/item/50061>

**6.4. Process for producing and maintaining metadata**

*(describe or provide URL of description):*

Metadata produced and maintained in accordance with the NOAA Data Documentation Procedural Directive: [https://nosc.noaa.gov/EDMC/DAARWG/docs/EDMC\\_PD-Data\\_Documentation\\_v1.pdf](https://nosc.noaa.gov/EDMC/DAARWG/docs/EDMC_PD-Data_Documentation_v1.pdf)

**7. Data Access**

*NAO 212-15 states that access to environmental data may only be restricted when distribution is explicitly limited by law, regulation, policy (such as those applicable to personally identifiable information or protected critical infrastructure information or proprietary trade information) or by security requirements. The EDMC Data Access Procedural Directive contains specific guidance, recommends the use of open-standard, interoperable, non-proprietary web services, provides information about resources and tools to enable data access, and includes a Waiver to be submitted to justify any approach other than full, unrestricted public access.*

**7.1. Do these data comply with the Data Access directive?**

**7.1.1. If the data are not to be made available to the public at all, or with limitations, has a Waiver (Appendix A of Data Access directive) been filed?**

**7.1.2. If there are limitations to public data access, describe how data are protected from unauthorized access or disclosure:**

**7.2. Name of organization of facility providing data access:**

NOAA Office for Coastal Management (NOAA/OCM)

**7.2.1. If data hosting service is needed, please indicate:****7.2.2. URL of data access service, if known:**

<https://coast.noaa.gov/dataviewer/#/lidar/search/where:ID=115>

<https://noaa-nos-coastal-lidar-pds.s3.amazonaws.com/laz/geoid18/115/index.html>

**7.3. Data access methods or services offered:**

This data can be obtained on-line at the following URL:

<https://coast.noaa.gov/dataviewer/#/lidar/search/where:ID=115>

;

**7.4. Approximate delay between data collection and dissemination:**

**7.4.1. If delay is longer than latency of automated processing, indicate under what authority data access is delayed:**

**8. Data Preservation and Protection**

*The NOAA Procedure for Scientific Records Appraisal and Archive Approval describes how to identify, appraise and decide what scientific records are to be preserved in a NOAA archive.*

**8.1. Actual or planned long-term data archive location:**

*(Specify NCEI-MD, NCEI-CO, NCEI-NC, NCEI-MS, World Data Center (WDC) facility, Other, To Be Determined, Unable to Archive, or No Archiving Intended)*

**8.1.1. If World Data Center or Other, specify:**

**8.1.2. If To Be Determined, Unable to Archive or No Archiving Intended, explain:**

**8.2. Data storage facility prior to being sent to an archive facility (if any):**

Office for Coastal Management - Charleston, SC

**8.3. Approximate delay between data collection and submission to an archive facility:****8.4. How will the data be protected from accidental or malicious modification or deletion prior to receipt by the archive?**

*Discuss data back-up, disaster recovery/contingency planning, and off-site data storage relevant to the data collection*

**9. Additional Line Office or Staff Office Questions**

*Line and Staff Offices may extend this template by inserting additional questions in this section.*