

*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:**

2005 - 2007 US Army Corps of Engineers (USACE) Topo/Bathy Lidar: Maine, Massachusetts, and Rhode Island

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

MASSACHUSETTS AND RHODE ISLAND: The U.S. Army Corps of Engineers collects (by themselves and contractors) 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.

Topographic LIDAR datasets were collected using a SHOALS-1000T at 500m altitude, spot density of 2m x 1 m and sampling rate 10kHz.

Bathymetric data were collected using a SHOALS-1000T hydrographic laser flying at 400m altitude, spot spacing 5m x 5m and 1kHz

sampling rate.

MA and RI Data Date of Collection: Topo 20051111-20051202 Bathy: 20070527-20070601

MAINE: The U.S. Army Corps of Engineers collects (by themselves and contractors) and maintains LiDAR data including orthophotos

in coastal areas of the United States and its territories. Topographic LIDAR datasets were collected using a SHOALS-1000T at

500m altitude, spot density of 2m x 1m and sampling rate of 10 kHz. Topo data were also collected with a Leica ALS-50 sensor

at 1600m altitude spot spacing of 1m x 1m spot spacing, and 133 kHz sampling rate.

Bathymetric data were collected using a

SHOALS-1000T hydrographic laser flying at 400m altitude, spot spacing 5m x 5m and 1kHz sampling rate.

ME Data Date of Collection: Topo 20051019-20070806 Bathy: 20070606-20070611

Original contact information:

Contact Org: JALBTCX

Title: Data Production Manager

Phone: 228-252-1103

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:**

2005-11-11 to 2007-08-06

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

W: -71.944389, E: -69.714932, N: 43.808611, S: 41.133922

**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:

- 2008-04-29 00:00:00 - FOR MASSACHUSETTS AND RHODE ISLAND DATA  
Acquisition LIDAR data were acquired using a SHOALS-1000T. Sensor orientation was measured using a POS AV 410. Prior to survey PDOP was checked and missions planned to avoid PDOP greater than 3.0. During survey the plane was always within 30km of a GPS ground control point, to provide a good quality position solution. Final positions were determined using a post-processed inertially aided Kinematic GPS (KGPS) solution. GPS ground control data were acquired at 1Hz. Data received by the airborne system were continually monitored for data quality during acquisition operations. Display windows showed coverage and information about the system status. In addition, center waveforms at 5Hz were shown. All of this information allowed the airborne operator to assess the quality of data being collected. Data were processed in the field to verify coverage and data quality. Processing SHOALS-1000T data were processed using the SHOALS Ground Control System (GCS). The GCS includes links to Applanix POSpac software for GPS and inertial processing, and IVS Fledermaus software for data visualization, 3D editing and tie-line analysis. All data were processed in NAD83 horizontal and vertical

datum. Data were later converted to the NAVD88 vertical datum using the GEOID03 model. Fugro in-house utilities were used to split the data in to pre-defined boxes, each covering approximately 5km of shoreline. ASCII files include Longitude, Latitude, UTM Zone, Easting (UTM), Northing, Elevation, Elevation (NAD83), Date, Time, Intensity (Topo). FOR MAINE DATA Acquisition Lidar data were acquired using a SHOALS-1000T. Sensor orientation was measured using a POS AV 410, while images were acquired at 1Hz using a Duncantech DT4000 digital camera. Prior to survey PDOP was checked and missions planned to avoid PDOP greater than 3.0. During survey the plane was always within 30km of a GPS ground control point, to provide a good quality position solution. Final positions were determined using a post-processed inertially aided Kinematic GPS (KGPS) solution. GPS ground control data were acquired at 1Hz. Topographic Data were also acquired using a Leica ALS-50 operated by Fugro EarthData. Processing SHOALS data were processed using the SHOALS Ground Control System (GCS). The GCS includes links to Applanix POSPac software for GPS and inertial processing, and IVS Fledermaus software for data visualization, 3D editing and tie-line analysis. ALS-50 data were processed the TerraSolid Terrascan software. Applanix POSPac software was used for GPS and inertial processing. All data were processed in NAD83 horizontal and vertical datum. Data were later converted to the NAVD88 vertical datum using the GEOID03 model. Fugro in-house utilities were used to split the data in to pre-defined boxes, each covering approximately 5km of shoreline. ASCII files include Longitude, Latitude, UTM Zone, Easting (UTM), Northing, Elevation, Elevation (NAD83), Date, Time, Intensity (Topo).

- 2009-04-20 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 ellipsoid and orthometric heights. OCM performed the following processing to the ellipsoid height data to make it available within the Digital Coast: 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.' Points in the files marked as hydro where from the green laser. Their classification was changed to class 11. They generally contain bathy points, but there may be some points on land. Those points could include vegetation or other non-ground objects. Topo laser points were changed to 'unclassified.' 3. The LAS data were sorted by latitude and the headers were updated. 4. The data were filtered to eliminate elevation outliers.

- 2022-12-16 00:00:00 - The non-hydro data were classified using programs in the LAStools package. Steps included: 1) conversion to UTM zone 19 2) ground classification with lasground\_new 3) height determination with lasheight 4) building and vegetation classification with lasclassify using a step of 4 5) conversion from UTM zone 19 to geographic

**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/50052>

**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://noaa-nos-coastal-lidar-pds.s3.amazonaws.com/entwine/geoid18/116/ept.json>  
<https://coast.noaa.gov/dataviewer/#/lidar/search/where:ID=116>  
<https://noaa-nos-coastal-lidar-pds.s3.amazonaws.com/laz/geoid18/116/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>;

### 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.*