

*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:**

2017 Lidar DEM: Eastern Maine - Madawaska

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

No metadata record was provided for this data set. This metadata record was created by NOAA OCM based on the metadata provided with the larger data collection of 2017 Lidar: Eastern Maine. Information specific to the QL1 Madawaska area collection are included where the information was provided in the Project Report. A link to this report is provided in the URL section of this metadata record.

The NOAA Office for Coastal Management (OCM) received 44 DEM files from the State of Maine. OCM processed the data to be available on the Digital Coast Data Access Viewer (DAV) and for bulk download.

This 0.5 m DEM covers Madawaska, ME in Aroostock County, covering approximately 5.4 square miles in northern Maine.

In addition to these bare earth Digital Elevation Model (DEM) data, the lidar point data that these DEM data were created from, are also available. A link to the metadata record for this data set is provided in the Related Items section. Additionally, the hydro breaklines are available. See the URL section of this metadata record for a link to the hydro breaklines.

Maine 2017 LiDAR project called for the planning, acquisition, processing, and derivative products of LiDAR data to be collected at a nominal pulse spacing (NPS) of 0.7 meters. Project specifications are based on the U.S. Geological Survey National Geospatial Program Base LiDAR Specification, Version 1.2. The data for counties in the eastern AOI was developed based on a horizontal projection/datum of NAD83 (2011) UTM Zone 19, meters and vertical datum of NAVD88 (GEOID12B), meters. LiDAR data was delivered as flightline-extent unclassified LAS swaths, as processed Classified LAS 1.4 files formatted to 11,133 individual 1,500-meter x 1,500-meter tiles, 63 individual 750-meter x 750-meter tiles, and 36 individual 500-meter x 500-meter tiles, as tiled intensity imagery, and as tiled bare earth DEMs; all tiled to the same 1,500-meter x 1,500-meter schema. Continuous hydro-flattened breaklines were produced in Esri file geodatabase

format.

Ground Conditions: LiDAR was collected in the spring and fall of 2017, while no snow was on the ground and rivers were at or below normal levels. In order to post process the LiDAR data to meet task order specifications and meet ASPRS vertical accuracy guidelines, Quantum Spatial, Inc. established a total of 181 ground control points that were used to calibrate the LiDAR to known ground locations established throughout the project area. An additional 301 independent accuracy checkpoints, 178 in Bare Earth and Urban landcovers (178 NVA points), 123 in Forested, Shrubs, and Tall Weeds categories (123 VVA points), were used to assess the vertical accuracy of the data. These checkpoints were not used to calibrate or post process the data.

**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:**

2017-05-20

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

W: -68.371278, E: -68.291414, N: 47.374621, S: 47.333779

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

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

Raster digital data

**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:

- 2017-01-01 00:00:00 - Hydro-Flattened Raster DEM Processing: Class 2 (Ground) LiDAR points in conjunction with the hydro-breaklines were used to create a 1-meter hydro-flattened raster DEM. Using proprietary QSI software, an ERDAS Imagine .IMG file was created for each tile using a linear interpolation method. Each surface is reviewed using Global Mapper to check for any surface anomalies or incorrect elevations found within the surface.
- 2019-08-23 00:00:00 - The NOAA Office for Coastal Management (OCM) received 44 raster DEM img format files from the State of Maine GIS. The data were in UTM Zone 19 NAD83(2011) meters coordinates and NAVD88 (Geoid12b) elevations in meters. The DEMs are at 0.5 m grid spacing. A separate, specific metadata record was not provided for this data set, so the DEM metadata record for the larger data collection, 2017 Lidar DEM: Eastern Maine was used. Where available, information specific to this smaller collection has been included. OCM did the following processing to the data for Digital Coast storage and provisioning purposes: 1. Converted the files from img format to tif format using gdal\_translate 2. Assigned

EPSG codes using gdal\_translate 3. Copied the files to https

**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:

- 1.7. 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/57289>

**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=8842>

[https://noaa-nos-coastal-lidar-pds.s3.us-east-1.amazonaws.com/dem/ME\\_Madawaska\\_DEM\\_2017\\_884](https://noaa-nos-coastal-lidar-pds.s3.us-east-1.amazonaws.com/dem/ME_Madawaska_DEM_2017_884)

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

Data are available online for bulk and custom downloads.

### 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.*