

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:

2013 Harford County, MD Aerial Lidar Data

### 1.2. Summary description of the data:

This metadata record describes the classified bare earth lidar data products derived from the Harford County, MD LiDAR project covering the defined project area of Harford County and immediate surroundings.

### 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:

2013-03-09, 2013-04-06

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

W: -76.57660376, E: -76.06263414, N: 39.7306577, S: 39.38731473

### 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:

- 2013-01-01 00:00:00 - At selected locations throughout the site, accurate GPS coordinates and elevations are surveyed and the points are marked with targets.
- 2013-01-01 00:00:00 - New LiDAR data is captured for the project area using a Leica ALS60 w/MPiA LiDAR instrument an integrated IPAS20 GPS/INS system mounted within a Piper Navajo twin engine airplane. The lidar capture was composed of 3 separate flight missions on 2 separate dates. Lines 18-30 and lines 31-40 flown 20130309 and lines 1-17 flown 20130406.

- 2013-01-01 00:00:00 - The airborne GPS data is post-processed in IPAS Pro v.1.35 software and TerraTec TerraPos v.2.0.2 and then combined with the IMU data in Novatel/Waypoint Inertial Explorer software to determine the LiDAR sensor's angle and orientation in the terrain (project) coordinate system and datums during the survey.
- 2013-01-01 00:00:00 - The post processed GPS/INS solution is applied to the raw lidar data to orient and project the data points into the project area reference system as an unclassified point cloud.
- 2013-01-01 00:00:00 - The georeferenced lidar data is then classified and edited in Terrasolid Terrascan software. Data is classified to produce: Class 1: unclassified points, Class 2: ground points, Class 7: low point, Class 17: overlap unclassified, Class 18: overlap bare-earth ground.
- 2013-01-01 00:00:00 - The ground class of the processed lidar data is then compared to the ground control and elevation differences between the lidar surface and surveyed elevation are recorded in tabular form. Vertical accuracy statistics are then developed to produce vertical RMSE and overall accuracy estimates and reports.
- 2018-03-08 00:00:00 - NOAA OCM downloaded the point cloud data from the Maryland iMAP ([imap.maryland.gov](http://imap.maryland.gov)). Data were in Maryland State Plane (1900) survey feet with vertical NAVD88 (Geoid03) survey feet. Data were reprojected to geographic coordinates and vertically transformed to ellipsoid heights in meters. It should be noted that Geoid03 is unusual for a data set collected in 2013. Since the metadata explicitly listed Geoid03, that model was used to transform the data. The LAZ files had no georeferencing headers and could not provide verification. Examination of the data showed only classes 1,2,7, and 12 were present in the data. This is contrary to the above processing step that does not mention class 12 and lists classes 17 and 18. Class 12 is believed to be overlap points that have not been otherwise classified. Data were ingested into the Digital Coast Data Access Viewer for custom download. (Citation: Classified lidar)

**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/51981>

**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=8491>

<https://noaa-nos-coastal-lidar-pds.s3.amazonaws.com/laz/geoid18/8491/index.html>

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

Data is available online for 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.*