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 Vilas Lidar: Vilas County, WI

1.2. Summary description of the data:

Product: These lidar data are processed Classified LAS 1.2 files, formatted to 5000 ft x 5000 ft tiles; bare earth DTM, DEM, first-return DSM, contours, breaklines, and intensity images as necessary. Geographic Extent: Vilas County, Wisconsin covering approximately 1017 square miles. Dataset Description: Vilas County, Wisconsin 2013 Lidar project called for the Planning, Acquisition, processing and derivative products of lidar data to be collected at a nominal pulse spacing (NPS) of 1.0 meters. Project specifications are based on the U.S. Geological Survey National Geospatial Program Base Lidar Specification, Version 1.0. The data was developed based on a horizontal projection/datum of NAD_1983(2011)_WISCRS_Vilas_County_Feet (EPSG code: 7638), and vertical datum of NAVD88 - Geoid12A (Feet). Lidar data was delivered as flightlineextent unclassified LAS swaths, as processed Classified LAS 1.2 files, formatted to 1264 individual 5000 ft x 5000 ft tiles, as tiled Intensity Imagery, and as tiled bare earth DEMs; all tiled to the same 5000 ft x 5000 ft schema. Ground Conditions: Lidar was collected in early 2013, 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, Ayres Associates established ground control points that were used to calibrate the lidar to known ground locations established throughout the Vilas County, Wisconsin project area. An additional 1498 independent accuracy checkpoints were used to assess the vertical accuracy of the data. These checkpoints were not used to calibrate or post process the data.

This metadata was modified by NOAA to reflect adding access to the data via the Digital Coast Data Access Viewer (DAV). The DAV is leveraging an Entwine Point Tiles (EPT) version of the data hosted by USGS. The EPT data is in Web Mercator (EPSG:3857). The above paragraph describes the data as originally submitted by the Ayres Associates. Original funding for the joint project covering Oneida and Vilas Counties came from the counties and a grant from the USGS.

- **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:** 2013-05-13 to 2013-05-16
- **1.5. Actual or planned geographic coverage of the data:** W: -90.05015, E: -88.928014, N: 46.302565, S: 45.854192

1.6. Type(s) of data:

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

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?

Yes

4.2. Approximate percentage of the budget for these data devoted to data management (specify percentage or "unknown"):

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:

- 2014-01-01 00:00:00 - LiDAR processing utilizes several software packages, including GeoCue and the TerraSolid suite of processing components. The GeoCue software is a database management system for housing the LiDAR dataset (usually multiple gigabytes in size). GeoCue incorporates a thorough checklist of processing steps and quality assurance/quality control (QA/QC) procedures that assist in the LiDAR workflow. The TerraSolid software suite is used to automate the initial classification of the LiDAR point cloud based on a set of predetermined parameters. Lidar technicians refer to ground cover research (natural and cultural features) within the project area and determine algorithms most suitable for the initial automated LiDAR classification. (Some algorithms/filters recognize the ground in forests well, while others have greater capability in urban areas). During this process each point is given an initial classification (e.g., as ground, vegetation, or noise) based on the point's coordinates and the relation to its neighbors. Classifications to be assigned include all those outlined by ASPRS standards. The initial classifications produce a coarse and inexact dataset, but offer an adequate starting point for the subsequent manual classification procedure. Hydrographic breaklines are extracted using the point cloud to ensure hydroflattened water surfaces. This process involves viewing the point cloud in a metrically sound stereo environment. From this generated "imagery", breaklines are photogrammetrically compiled. Breakline polygons are created to represent open water bodies. Ponded water bodies are differentiated by two sizes; ponds two acres or less in size, and ponds greater than two acres in size. The LiDAR points that fall within these areas are classified as "water." Breaklines representing streams and rivers shall be

smooth, continuous, and represent the water surface without any stair steps except for dams and rapids. All hydrographic breaklines include a 1.5 foot buffer, with the points being re-classified as Class 10 (ignored ground). TerraSolid is further used for the subsequent manual classification of the LiDAR points allowing technicians to view the point cloud in a number of ways to ensure accuracy and consistency of points and uniformity of point coverage.

- 2023-12-11 00:00:00 - Lidar tiles were converted to Entwine Point Tile (EPT) format in Web Mercator by the USGS. NOAA added references to the EPT data to allow access and custom processing via the Digital Coast Data Access Viewer. This metadata was created to support the Data Access Viewer. (Citation: Vilas EPT lidar non-tribal)

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
- 5.2. Quality control procedures employed
- 7.1.1. If data are not available or has limitations, has a Waiver been filed?
- 7.4. Approximate delay between data collection and dissemination

- 8.3. Approximate delay between data collection and submission to an archive facility

- **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/71658
- 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

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?

Yes

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=9998/details/9998

7.3. Data access methods or services offered: Data is available online for bulk or 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) NCEI_NC

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

Data is backed up to cloud storage.

9. Additional Line Office or Staff Office Questions

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