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 USGS Lidar: Dodge County, WI

1.2. Summary description of the data:

Product Description of Original Data:

These lidar data are processed Classified LAS 1.4 files, formatted to 1351 individual 4, 500 ft x 4,500 ft tiles; used to create intensity images, 3D breaklines and hydro-flattened DEMs as necessary.

Geographic Extent: The AOI is covering approximately 907 square miles of Dodge County along with a 100-foot buffer zone outside the county for the lidar data.

Dataset Description of Original Data:

The WI Dodge County Lidar 2017 B17 Lidar project called for the Planning, Acquisition, processing and derivative products of lidar data to be collected at a nominal pulse spacing (NPS) of 0.70 meter. Project specifications were based on the U.S. Geological Survey National Geospatial Program Lidar Base Specification, Version 1.2. The data was developed based on a horizontal projection/datum of NAD 1983 2011 WISCRS Dodge and Jefferson Survey Feet and vertical datum of NAVD88 (GEOID12B), Survey Feet. Lidar data was delivered as; flightline-extent raw LAS v1.4 swaths, classified point cloud LAS v1.4 files formatted to 1351 individual 4,500 ft x 4,500 ft tiles in NAD 1983 2011 WISCRS Dodge and Jefferson Survey Feet. Derivatives were produced as tiled; Bare Earth Surface DEMs, Intensity Images; all tiled to the same 4,500 ft x 4,500 ft schema.

Ground Conditions: Lidar was collected in April 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, Woolpert established a total of 15 ground control points that were used to calibrate the lidar to known ground locations established throughout the project area. Additional independent accuracy checkpoints were collected (58 NVA points and 48 VVA points) and used to assess the vertical accuracy of the data. These checkpoints were not used to calibrate or post process the data.

This metadata record supports the data entry in the NOAA Digital Coast Data Access Viewer (DAV). For this data set, the DAV is leveraging the Entwine Point Tiles (EPT) hosted by USGS on Amazon Web Services.

- **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:** 2017-04-12, 2017-04-14, 2017-04-15, 2017-04-17, 2017-04-23
- **1.5. Actual or planned geographic coverage of the data:** W: -89.011948644, E: -88.398340438, N: 43.634264032, S: 43.193717273

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):

Lineage Statement:

The NOAA Office for Coastal Management (OCM) ingested references to the USGS Entwine Point Tiles (EPT) hosted on Amazon Web Services (AWS) into the Digital Coast Data Access Viewer (DAV). The DAV accesses the point cloud as it resides on AWS under the usgs-lidar-public-container.

Process Steps:

- 2017-04-12 00:00:00 - Classified LAS Processing: Classification Filters were applied to aid in the definition of terrain characteristics and to maintain ground. Filtering processes address aspects of the data such as; ground points, noise points, air points, low points, manmade features, vegetation, and overlap points. The Bare Earth surface was manually reviewed to ensure correct classification of Class 2 (Ground). Upon completion of bare earth review hydro-breaklines were generated through heads-up digitization. Ground (Class 2) Lidar points inside Inland Ponds and Lakes, and Inland Streams and Rivers were classified to Water (Class 9). A buffer of 2.3 feet was used around each hydro-flattened feature to classify Ground points (Class 2) to Ignored ground (Class 10). Island features were checked to ensure that Ground point (Class 2) remained classified as Ground. Ground points (Class 2) within 2.3 feet of breaklines, used to reduce triangulation between bridge decks were also classified to Ignored ground (Class 10). All bridge decks were classified to Bridge (Class 17). All remaining Points were filtered, or manually classified to their respective Point Classification; Processed (Class 1), Low Noise (Class 7), High Noise (Class 18) Overlap data was identified using the Overlap Flag, LAS 1.4 specifications. All data was manually reviewed and any remaining artifacts removed. The bare-

earth (Class 2 - Ground) lidar points underwent a manual QA/QC step to verify the quality of the DEM as well as a peer-based QC review. This included a review of the DEM surface to remove artifacts and ensure topographic quality. Classification of water (class 9) and ignored ground (class 10) was completed via the use of the hydrologic breaklines collected for the hydro-flattening phase. Buildings (Class 6) was achieved via the used of digitized building footprints. The overlap classes were determined by first identifying the overlapping areas and reclassifying the LAS data by offset from a corridor. This allows the returns located on the edge of the swath to be removed from the bare earth coverage in an effort to produce a more uniform data density. The returns determined to be overlap including overlap default, ground, water, and ignored ground are then applied an overlap flag and reclassified to their respective standard classification value. The surveyed ground control points are used to make vertical adjustments to the data set and to perform the accuracy checks and statistical analysis of the lidar dataset. Supervisory QC monitoring of work in progress and completed editing ensured consistency of classification character and adherence to project requirements across the entire project area. The resulting deliverables for this task order consist of classified LAS file in LAS 1.4 format, DEM files in ERDAS IMG format and ArcGrid format, 8-bit gray scale Intensity files in GeoTIFF format, Hydrologic and Bridge abutment breakline data in ESRI geodatabase format.

- Original point clouds in LAS/LAZ format were restructured as Entwine Point Tiles and stored on Amazon Web Services. The data were re-projected horizontally to WGS84 web mercator (EPSG 3857) and the vertical units were converted to meters (NAVD88 Geoid12B).

- 2024-03-14 00:00:00 - The NOAA Office for Coastal Management (OCM) created references to the Entwine Point Tiles (EPT) that were ingested into the NOAA Digital Coast Data Access Viewer (DAV). No changes were made to the data. The DAV will access the point cloud as it resides on Amazon Web Services (AWS) under the usgslidar-public container. This is the AWS URL being accessed: https://s3-us-west-2. amazonaws.com/usgs-lidar-public/USGS_LPC_WI_DodgeCo_2017_LAS_2019/ept.json

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/72327

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=10096/details/10096 https://rockyweb.usgs.gov/vdelivery/Datasets/Staged/Elevation/LPC/Projects/USGS_LPC_WI_DodgeCo

7.3. Data access methods or services offered:

Data is 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) 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.