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: West Central Illinois

1.2. Summary description of the data:

Product: These lidar data are processed Classified LAS 1.4 files, formatted to 22,028 individual 2000 foot x 2000 foot tiles; used to create intensity images, 3D breaklines and hydro-flattened DEMs as necessary.

Geographic Extent: West Central Illinois, covering approximately 3,077 square miles. Counties included are Schuyler, Brown, Menard, Mason, Sangamon, and Morgan. A lidar survey was collected over two (2) areas of interest (AOI) in Illinois identified as the Base AOI and the Option AOI. The Base AOI covers approximately 1,926 square miles in total and the Option AOI covers approximately 1,151 square miles for a total of 3,077 square miles.

Dataset Description of the Original Data: West Central Illinois 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 0.5 meter. Project specifications are based on the U.S. Geological Survey National Geospatial Program Base Lidar Specification, Version 1.2; Quality Level 2+. The data was developed based on a horizontal projection/ datum of NAD83 (2011), State Plane Coordinate System Illinois West (FIPS 1202), US Survey Feet and vertical datum of NAVD88 (GEOID12B), US Survey Feet. Lidar data was delivered as processed Classified LAS 1.4 files, formatted to 22,208 individual 2000 foot x 2000 US survey feet tiles, as 22,208 tiled Intensity Imagery, and as 22,209 tiled bare earth DEMs; all tiled to the same 2000 foot x 2000 foot schema. In an effort to preserve smooth continuity of the surface in which there are multiple overlapping swaths, an isolated area of cross flight line 229 was bit set at withheld in the following nine tiles: 2207_1295, 2207_1293, 2209_1297, 2209_1295, 2209_1293, 2311_1297, 2311_1295, 2311_1293, and 2313_1297. One tile located in Mason County, titled 2353_1367, did not contain LAS points as it consisted strictly of water with no ground points present. Therefore, no intensity image TIF could be produced for this tile, only a hydro-flattened DEM image is available. This tile is included in the tile index consisting of 22,209 tiles.

Ground Conditions: Lidar was collected in December 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, Surveying and Mapping, LLC (SAM) established a total of 63 ground control points that were used to calibrate the lidar to known ground locations established throughout the Base AOI and Option AOI project areas. An additional 162 independent accuracy checkpoints, 91 in Bare Earth and Urban landcovers (91 NVA points), 71 in tall Grass/tall weeds/crops, Brush lands/short trees, Forested categories (71 VVA points), were 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:
2017-12-03 to 2017-12-13

1.5. Actual or planned geographic coverage of the data:
W: -90.91, E: -89.21, N: 40.44, S: 39.52

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:
- 2018-12-20 00:00:00 - LAS Point Classification QL2+: The point classification was performed as described below. Classification Filters were applied to aid in the definition of; terrain characteristics, vegetation attribution of low, medium or high and building roof tops. Filtering processes address aspects of the data such as: ground points, noise points, air points, low points, Low vegetation 0.5-5 ft, medium vegetation 5-20 ft, high vegetation >20 ft, manmade features, buildings, and overlap points. The Classified point cloud data was manually reviewed to ensure correct classification of; ground (ASPRS class 2), and building roof tops (ASPRS class 6).

After the bare earth surface was finalized, it was then used to generate all hydro-breaklines through heads-up digitization. All ground (ASPRS class 2) lidar data inside of the Inland Ponds and Lakes, and Inland Streams and Rivers are classified to water (ASPRS class 9). A buffer of 2.5 feet was used around each hydro-flattened feature to classify ground (ASPRS class 2) to ignored ground (ASPRS class 10). Island features were checked to ensure that Ground point (ASPRS class 2) remained classified as Ground. Ground points (ASPRS class 2) within 2.5 feet of bridge breaklines, used to reduce triangulation between bridge decks were also classified to Ignored ground (ASPRS class 10). All bridge decks were classified to Bridge deck (ASPRS class 17). All remaining points were filtered, or manually classified to their respective point classification; processed (ASPRS class 1), low vegetation (ASPRS class 3), medium vegetation (ASPRS class 4), high vegetation (ASPRS class 5), buildings (ASPRS class 6), low noise (ASPRS class 7), high noise (ASPRS class 18). TerraScan v20.07.2018 was used to identify the overlap flag and bit set flags to LAS v1.4 specifications. LP360 64bit was used to deduce the Well Known Text (WKT) and an ASI proprietary software was used to format the LAS to the final LAS v1.4 Format 6 version. LAStools by rapidlasso GmbH, open source, lasvalidate, lasread v1.1 and a ASI proprietary software was used to perform final analysis to checks on LAS header information, LAS point classes, and LAS timestamps.
- 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 no changes were made to the vertical (NAVD88 GEOID12B US survey feet).
- 2024-04-08 00:00:00 - The NOAA Office for Coastal Management (OCM) created references to the Entwine Point Tile (EPT) that was 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 usgs-lidar-public container. This is the AWS URL being accessed: https://s3-us-west-2.amazonaws.com/usgs-lidar-public/USGS_LPC_IL_WestCentral_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/72412

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=10108/details/10108
https://rockyweb.usgs.gov/vdelivery/Datasets/Staged/Elevation/LPC/Projects/USGS_LPC_IL_WestCentr

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.