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:
2015 NYS ITS Lidar: Madison and Ostego Counties, NY

1.2. Summary description of the data:
This data set consists of LiDAR Point Cloud data that covers approximately 1,844 square miles in Madison and Ostego Counties in New York. Each classified LAS tile contains LiDAR point information, which has been calibrated, controlled, and classified.

Ground Conditions: water at normal levels; no unusual inundation; no snow; leaf off

How the Withheld Points are Identified: There were no Withheld (ignore) points identified in the files using the standard LAS Withheld bit.

Class Code:1

Class Item: Undetermined/Unclassified

Class Code:2

Class Item: Ground

Class Code:7

Class Item:Low Point (Noise)

Class Code:9

Class Item:Water

Class Code:10

Class Item:Ignore Ground

Class Code:17

Class Item:Bridge Deck

Class Code:18

Class Item:High Noise

Points with extreme elevations (negative values, or positive values well above the expected maximum) are present in this dataset. These points are classified as low or high noise in classified point cloud tiles.

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:
2015-04-16 to 2015-06-07

1.5. Actual or planned geographic coverage of the data:
W: -75.9844, E: -74.6221, N: 43.1865, S: 42.4072

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 Tile (EPT) file 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:
   - 2015-04-16 00:00:00 - Aerial LiDAR Acquisition: Aerial data collection was acquired in twenty-seven (27) missions. Seven (7) missions were flown using the Trimble-Harrier 68i LiDAR system at a max flying height of 884m AGL. Twenty missions (20) were flown with Optech GEMINI LiDAR system at a max flying height of 700m AGL. This was to support a 2.18 ppm^2 LiDAR point cloud. Airborne GPS and IMU data was collected during the acquisition and supported by POS/AV 510 for both sensors. Data acquisition was completed on June 7th 2015. Ground Control Survey: A survey was performed by Axis GeoSpatial, LLC to support the acquisition of Light Detection and Ranging (LiDAR). The control network involved a total of seven hundred sixty-one (761) check points, of which 757 were used in the final accuracy analysis (376 NVA + 381 VVA). The points were a combination of the following ground cover classification: Open Terrain, Urban Terrain, Bare Earth, and High Grass.
   - 2015-06-06 00:00:00 - LiDAR Pre-processing: Airborne GPS and IMU data were

merged to develop a Single Best Estimate (SBET) of the LiDAR system trajectory for each lift. LiDAR ranging data were initially calibrated using previous best parameters for this instrument and aircraft. Relative calibration was evaluated using advanced plane-matching analysis and parameter corrections derived. This process was repeated interactively until residual errors between overlapping swaths, across all project lifts, was reduced to 2 cm or less. Data was then block adjusted to match surveyed calibration control. Raw data NVA was checked using independently surveyed check points. Swath overage points were identified and tagged within each swath file.

- 2015-06-06 00:00:00 - Initial processing of the GPS data was processed using POSPAC MMS 7.2. The solution file was generated and LpMaster software was used to generate georeferenced laser returns which were then processed in strip form allowing for the QC of the overlap between strips (lines). The data from each line were combined and automated classification routines run to determine the initial surface model. This initial surface model was then verified to the surveyed test points

- 2015-07-30 00:00:00 - LiDAR Post-Processing: The calibrated and controlled LiDAR swaths were processed using automatic point classification routines in TerraSolid software. These routines operate against the entire collection (all swaths, all lifts), eliminating character differences between files. Data were then distributed as virtual tiles to experienced LiDAR analysts for localized automatic classification, manual editing, and peer-based QC checks. Supervisory QC monitoring of work in progress and completed editing ensured consistency of classification character and adherence to project requirements across the entire project. All classification tags are stored in the original swath files. After completion of classification and final QC approval, the NVA and VVA for the project are calculated. Sample areas for each land cover type present in the project were extracted and forwarded to the client, along with the results of the accuracy tests. Upon acceptance, the complete classified LiDAR swath files were delivered to the client.

- 2015-10-01 00:00:00 - LiDAR Classification: The calibrated LiDAR data was run through automated classification routines and then manually checked and edited. The data was classified into the following classes: 1-unclassified*, 2-ground, 7-low noise, 9-water, 10-ignored ground, 17-bridges, and 18-high noise.

- Original point clouds in LAS/LAZ format were restructured as an Entwine Point Tile 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 elevations in NAVD88 (GEOID12A).

- 2023-06-29 00:00:00 - The NOAA Office for Coastal Management (OCM) created references to the Entwine Point Tile (EPT) file 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_NY_MadisonOtsegoCo_2015_LAS_2017/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/70221

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=9854/details/9854
https://rockyweb.usgs.gov/vdelivery/Datasets/Staged/Elevation/LPC/Projects/Central_NY_Madison_Ot

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_CO

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 tape and 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.