

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:

2022 OGRIP Lidar: Lucas County, OH

1.2. Summary description of the data:

Original Dataset: This task is for a high-resolution data set of lidar covering the entire Lucas County area (+/- 347.1 sq. mi). The lidar was collected and processed to meet a maximum Nominal Post Spacing (NPS) of 0.25 meter (16ppsm). Lidar data is a remotely sensed high resolution elevation data collected by a Leica CityMapper digital sensor active scanning (lidar) sensor. Lidar was collected between March 15, 2022, and March 21 2022 while no snow was on the ground, leaf-off and rivers were at or below normal levels. The lidar systems collect data point clouds that are used to produce highly detailed Digital Elevation Models (DEMs) of the earth's terrain, man-made structures, and vegetation. The data was developed based on a horizontal datum/projection of NAD 83(HARN) State Plane Ohio North FIPS 3401 and a vertical datum of NAVD88 in units of US Survey Feet. Lidar data was delivered as processed LAS version 1.4 files formatted to 6.647 individual 1,250' x 1,250' tiles.

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:

2022-03-15 to 2022-03-21

1.5. Actual or planned geographic coverage of the data:

W: -83.891411, E: -83.096134, N: 41.744252, S: 41.411624

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) downloaded the Lucas County, Ohio lidar data from the Ohio Geographically Referenced Information Program (OGRIP). NOAA OCM processed the data to make it available for custom downloads from the NOAA Digital Coast Data Access Viewer and for bulk downloads from AWS S3.

Process Steps:

- 2022-12-01 00:00:00 - Using City Mapper lidar sensors to acquire high density data, at a nominal pulse spacing (NPS) of 0.25 meters, were collected for this task order in 3 total missions. Multiple returns were recorded for each laser pulse along with an intensity value for each return. The survey crews were on-site, operating a Global Navigation Satellite System (GNSS) Base Station for the airborne GPS support.
- 2022-12-01 00:00:00 - The individual flight lines were inspected to ensure the systematic and residual errors have been identified and removed. Then, the flight lines were compared to adjacent flight lines for any mismatches to obtain a homogenous coverage throughout the project area. The point cloud underwent a classification process to determine bare-earth points and non-ground points utilizing "first and only" as well as "last of many" lidar returns. This process determined Default (Class 1), Bare-earth (Class 2), Low Vegetation (Class 3), Medium Vegetation (Class 4), High Vegetation (Class 5), Building (Class 6), Noise (Class 7), Overlap Default (Class 17), and Overlap Ground (Class 18). 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. 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 and 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 1.2 format and 2.5 feet pixel size DEM files in Erdas IMG format. All data was manually reviewed and any remaining artifacts removed using functionality provided by TerraScan and TerraModeler. Global Mapper was used as a final check of the bare earth dataset. GeoCue was then used to create the deliverable industry-standard LAS files. Woolpert proprietary software and LP360 was used to perform final statistical analysis of the classes in the LAS files, on a per tile level to verify final classification metrics and full LAS header information.
- 2024-10-04 00:00:00 - The NOAA Office for Coastal Management (OCM) downloaded

the Lucas County, OH lidar data from the Ohio Geographically Referenced Information Program (OGRIP). The data were in Ohio State Plane North NAD83 HARN, US survey feet coordinates and in NAVD88 (Geoid03) elevations in feet. The data were classified as: 1 - Unclassified, 2 - Ground, 3 - Low Vegetation, 4 - Medium Vegetation, 5 - High Vegetation, 6 - Building Rooftops, 17- Overlap Default. OCM processed all classifications of points to the Digital Coast Data Access Viewer (DAV). Classes available on the DAV are: 1, 2, 3, 4, 5, 6, 17. OCM performed the following processing on the data for Digital Coast storage and provisioning purposes: 1. An internal OCM script was run to check the number of points by classification and by flight ID and the gps and intensity ranges. 2. Internal OCM scripts were run on the laz files to: a. Convert the files from OH State Plane North NAD83 HARN, US survey feet coordinates to geographic coordinates b. Convert the files from NAVD88 (Geoid03) elevations to ellipsoid (NAD83 2011) elevations c. Convert the files from elevations in feet to meters d. Filter out points whose location did not fall within the following geographic bounding box: -85,40,-82.5,43 e. Filter out points whose elevation values were less than -100 feet or greater than 2000 feet f. Assign the geokeys, to sort the data by gps time and zip the data to database and to AWS S3

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/73607>

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=10185/details/10185>
<https://noaa-nos-coastal-lidar-pds.s3.amazonaws.com/laz/geoid18/10185/index.html>

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.