

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 Lidar DEM: Allegan County (MI)

1.2. Summary description of the data:

This metadata record describes the hydro-flattened bare earth digital elevation model (DEM) derived from the classified LiDAR data for the 2015 Michigan LiDAR project covering approximately 842 square miles, in which its extents cover Allegan County.

The NOAA Office for Coastal Management (OCM) downloaded the MI_25County-AlleganCo_2015 Digital Elevation Model (DEM) files from this USGS site: <ftp://rockyftp.cr.usgs.gov/vdelivery/Datasets/Staged/Elevation/OPR/> and processed the data to the Data Access Viewer (DAV) and <https://dataviewer.cr.usgs.gov/>.

In addition to these bare earth Digital Elevation Model (DEM) data, the lidar point data that these DEMs were created from, are also available. These data are available for custom download at the link provided in the URL section of this metadata record.

Hydro breaklines are also available. These data are available for download at the link provided in the URL section of this metadata record. Please note that these products have not been reviewed by the NOAA Office for Coastal Management (OCM) and any conclusions drawn from the analysis of this information are not the responsibility of NOAA or OCM.

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:

2014-12-10 to 2014-12-23

1.5. Actual or planned geographic coverage of the data:

W: -86.272384, E: -85.543668, N: 42.765409, S: 42.417596

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?

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

- 2015-01-01 00:00:00 - At selected locations throughout the site, accurate GPS coordinates and elevations are surveyed and the points are marked with targets.
- 2015-01-01 00:00:00 - New LiDAR data is captured for the project area using a Leica ALS80 w/MPiA LiDAR instrument an integrated IPAS20 GPS/INS system mounted within a Aero Commander twin engine airplane.
- 2015-01-01 00:00:00 - The airborne GPS data is post-processed in Intertial Explorer software and LEICA CloudPro software to determine the LiDAR sensor's angle and orientation in the terrain (project) coordinate system and datums during the survey.
- 2015-01-01 00:00:00 - The post processed GPS/INS solution is applied to the raw lidar data to orient and project the data points into the project area reference system as an unclassified point cloud.
- 2015-01-01 00:00:00 - The georeferenced lidar data is then classified and edited in Terrasolid Terrascan software. Data is classified to produce: Class 1: unclassified, Class 2: ground, Class 7: low point, Class 9: water, Class 10: ignored ground, Class 11: withheld.
- 2015-01-01 00:00:00 - The bare earth points of the processed lidar data are then output to a DEM tile format. The DEM is compared to the ground control and elevation differences between the surface and surveyed elevation are recorded in tabular form. Vertical accuracy statistics are then developed to produce vertical RMSE and overall accuracy estimates and reports.
- 2018-04-27 00:00:00 - The NOAA Office for Coastal Management (OCM) downloaded 3953 MI_25County-AlleganCo_2015 Digital Elevation Model (DEM) files from this USGS site: <ftp://rockyftp.cr.usgs.gov/vdelivery/Datasets/Staged/Elevation/OPR/>. The data were in MI State Plane South coordinates and NAVD88 (Geoid12A) elevations in feet. The bare earth raster files were at a 2 ft grid spacing. OCM performed the following processing on the data for Digital Coast storage and provisioning purposes: 1. Converted the raster files from elevations in feet to meters using `gdal_translate` 2. Copied the files to https

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
- 4.1. Have resources for management of these data been identified?
- 4.2. Approximate percentage of the budget for these data devoted to data management
- 5.2. Quality control procedures employed
- 7.1. Do these data comply with the Data Access directive?
- 7.1.1. If data are not available or has limitations, has a Waiver been filed?
- 7.1.2. If there are limitations to data access, describe how data are protected
- 7.4. Approximate delay between data collection and dissemination
- 8.1. Actual or planned long-term data archive location
- 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?

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/52454>

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?

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=8519>

https://noaa-nos-coastal-lidar-pds.s3.us-east-1.amazonaws.com/dem/MI_Allegan_DEM_2015_8519/ind

7.3. Data access methods or services offered:

Data is available online for custom and bulk 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)

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

9. Additional Line Office or Staff Office Questions

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