

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:**

2016 North Carolina Digital Elevation Model Phase Four Counties at a 3.125 foot Resolution

1.2. Summary description of the data:

The Digital Elevation Models (DEM) were generated at a 3.125 foot resolution as rasters, using the ground (Class 2) points and the hydro flattened breaklines as inputs from the project. The DEMs were produced specific to the 2016 Phase Four project area consisting of 20 North Carolina counties. LiDAR data for the project and the validation site was collected by a single aerial vendor on ESP team between February 27, 2016 and April 17, 2016 and between December 9, 2016 and February 21 of 2017 using Geiger-mode Avalanche Photodiode (GmAPD) sensors. The aerial vendor on the ESP team was Harris Corporation (Harris). Two GmAPD (Geiger-mode) sensors (serial numbers 002 and 003) were used for the data collection of LiDAR data at a 0.35 meter nominal post spacing (NPS). The following counties or portions of counties were collected in the February through April, 2016 mobilization: Alleghany, Stokes, Surry, Cleveland, Gaston, Mecklenburg, Cabarrus, Stanly, Union, and Anson. The following counties or portions of counties we collected in the December, 2016 through February, 2017 mobilization: Cleveland, Gaston, Mecklenburg, Cabarrus, Stanly, Wilkes, Yadkin, Forsyth, Alexander, Catawba, Iredell, Davie, Rowan, and Davidson. All data was collected during leaf-off conditions. Ground survey support for the project included the establishment of GPS base stations and the collection of control points used for calibration. All data was delivered in the North Carolina State Plane Coordinate System, with a horizontal datum of NAD83 (2011), vertical datum of NAVD88 (Geoid 12B), in US Survey Feet. Data was delivered tiled to a 2,500 foot by 2,500 foot tiling scheme unless otherwise specified in this product description. All LiDAR was delivered in LASer (LAS) version 1.4 standard format. Products for this project derived from the source LiDAR included: intensity images in GeoTIFF format, hydro-flattening breaklines in ESRI File Geodatabase format, Digital Elevation Models (DEMs) in TIF format, ESRI Terrain Datasets (by county) in ESRI File Geodatabase format, product and project-level metadata, and project reports to include the Report of Survey, Post-Acquisition Report, and Project Report. All LiDAR and derivative products for this project met the specifications stipulated in Delivery Order

22, the NC LiDAR Standard, and the USGS minimum standards for QL1 LiDAR data. This project was a joint effort between NC Emergency Management, NC Geodetic Survey, and the NCDOT. The following people served as the main representatives for each stakeholder: NC Emergency Management- Hope Morgan (primary contact) and John Dorman; NC Geodetic Survey- Gary Thompson and Watson Ross; NCDOT- Keith Johnston and Marc Swartz, and the United States Geological Survey (USGS).

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:

2016-02-27 to 2017-10-30

1.5. Actual or planned geographic coverage of the data:

W: -81.796371, E: -79.846639, N: 36.607426, S: 34.819963

1.6. Type(s) of data:

(e.g., digital numeric data, imagery, photographs, video, audio, database, tabular data, etc.)
raster digital data

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:

- 2017-01-01 00:00:00 - Hydro Flattened Raster DEMs were generated using the Class 2 (ground) lidar points in conjunction with the hydro breaklines to create a 3.125 foot hydro-flattened Raster DEM. Using automated batch routines in ESP Utilities, an TIF file was created for each tile of the project. DEM surface was reviewed using ESP Analyst to check for any surface anomalies or incorrect elevations found within the surface (Citation: Lidar Point cloud: NC 2016 Phase 4)
- 2022-01-25 00:00:00 - Data were downloaded from the USGS, unzipped, and converted to cloud optimized Geotiff format. They were ingested into the Digital Coast Data Access Viewer for custom download. (Citation: DEM zip files)

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/66487>

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=9445/details/9445>

https://noaa-nos-coastal-lidar-pds.s3.us-east-1.amazonaws.com/dem/NC_phase4_DEM_2016_9445/ind

7.3. Data access methods or services offered:

Data is available online for bulk or 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)

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.