

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 NOAA NGS Topobathy Lidar DEM: Florida Keys Outer Reef, Block 04

1.2. Summary description of the data:

These data were collected by the National Oceanic Atmospheric Administration National Geodetic Survey Remote Sensing Division using a Riegl VQ880G system. The data were acquired from 20170216 - 20170220. The data includes topobathy data in an LAS 1.2 format file classified as unclassified (1), ground (2), noise (7), bathymetric point (26), submerged object (29), and International Hydrographic Organization (IHO) S-57 object (30) in accordance with the American Society for Photogrammetry and Remote Sensing (ASPRS) classification standards. This data set may also include lidar intensity values and encoded RGB image values.

The DEM was created from the bathymetric points (class 26) using las2dem from LAStools and GDAL.

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:

2017-02-16 to 2017-02-20

1.5. Actual or planned geographic coverage of the data:

W: -80.289, E: -80.08, N: 25.807, S: 25.173

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:

- 2017-10-27 00:00:00 - Data were processed to an initial LAS format using the Riegl RiProcess software. The Applanix POSPac software was utilized for GPS and inertial processing, and GeoCue, Terrasolid, and LP360 software for data visualization, 3D editing, and export to final LAS file. Data were processed in NAD83 horizontal and vertical datum.
- 2017-02-01 00:00:00 - The NOAA Office for Coastal Management (OCM) received files in las format. The files contained lidar elevation and intensity measurements of the Florida outer keys block4. The data were in UTM Zone 17 coordinates and ellipsoid elevations in meters. The data classifications for the data are: unclassified (1), ground (2), noise (7), bathymetric point (26), submerged object (29), and International Hydrographic Organization (IHO) S-57 object (30) CM performed the following processing on the data for Digital Coast storage and provisioning purposes: 1. Converted from UTM Zone 17 to geographic coordinates 2. Sorted by gps time 3. Compressed the data using laszip
- 2018-02-12 00:00:00 - The point cloud data were converted to UTM zone 17N coordinates and tiled into 10 million point LAZ files or smaller using lastile from LAStools. Tiles incorporated a buffer to allow DEM creation one tile at a time. (Citation: 2017 NOAA NGS Topobathy Lidar: Florida Keys Outer Reef, Block 04)
- 2018-02-12 00:00:00 - Tiled point cloud files were interpolated to raster tifs using las2dem. This uses a triangulated irregular network approach. (Citation: 2017 NOAA NGS Topobathy Lidar: Florida Keys Outer Reef, Block 04)
- 2018-02-12 00:00:00 - DEM TIFF tiles were mosaiced into a single file using GDAL utilities gdalbuildvrt and gdal_translate.

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/51529>

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=8480>

7.3. Data access methods or services offered:

This data can be obtained on-line at the following URL: <https://coast.noaa.gov/dataviewer/#/lidar/search/where:ID=8480>;

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.