

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:

2005 FEMA BE Lidar: Ulster County (NY)

1.2. Summary description of the data:

Terrain data, as defined in FEMA Guidelines and Specifications, Appendix N: Data Capture Standards, describe the digital topographic data that were used to create the elevation data representing the terrain environment of a watershed and/or floodplain. Terrain data requirements allow for flexibility in the types of information provided as sources used to produce final terrain deliverables. Once this type of data is provided, FEMA will be able to account for the origins of the flood study elevation data.

NOAA OCM received a delivery from the FEMA Engineering Library which included a point shapefile filled with bare-earth points for the 2005 collection of Ulster County. Within this project was a .ASC DTM file which covered a larger area than the footprint of the shapefile. Ultimately, the smaller footprint was assumed to be validated bare-earth points and processed for public download through the Digital Coast. Final deliverables date to 2007 and cannot be assumed to meet later standards and specifications. Although data review suggests a DEM/DTM product would suffice as the vertical accuracy was tested thoroughly. Be advised that only portions of Ulster County were delivered and OCM is uncertain if more verified and classified data exist.

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:

2005-04-18 to 2005-05-18

1.5. Actual or planned geographic coverage of the data:

W: -74.783, E: -73.9114, N: 42.1811, S: 41.5794

1.6. Type(s) of data:

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

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:

- 2007-03-27 00:00:00 - SinkBreach is a linear spatial file representing sink breaches used to hydrologically correct terrain models. A comparison of flow path automatically generated by a GIS software using elevation data and known flow paths from existing maps and/or orthophotos shows sinks that need to be corrected. NoData, VoidArea, ExternalBoundary and Island are polygon spatial files created by reviewing elevation datasets. Flood*Ware processes were used to generate a surface model that is sampled at the center of each grid cell. For best results, the Bi-Linear Interpolation function should be used to extract elevations, rather than the standard Nearest-Neighbor function. The Bare-Earth LIDAR returns and vendor-supplied Break Lines are used to construct the un-corrected DEM using a 3rd-order, inverse distance- weighted Bi-Linear Interpolation over a neighborhood consisting of the twelve closest points within 50 meters of the center of the grid cell. See Watson, D.F. and Philip, G.M., A Refinement of Inverse Distance Weighted Interpolation. *Geo-Processing*, 2 315-327, 1985. For Detailed and Limited-Detail Studies the surveyed sections are used to construct a bed elevation geometry to hydraulically correct the elevation model. The cross sectional area, wetted perimeter, stream slope, manning's N, and hydraulic radius are computed using an iterative numerical integration approach. An hydraulic-based approach is applied along flow tubes to interpolate surveyed bed elevations between surveyed sections. This approach uses a conservation of flow approach to vary the hydraulic radius, wetted perimeter, and cross sectional areas according to measured changes in top width and channel slope. The resulting matrix of bed elevation geometry is then applied to the area within the wetted-perimeter to replace the LIDAR returns from the water surface with the bed elevations. See Reed, C.J., Sanders B., and Lopez-Torrijos, R., LIDAR- Minimum Complements for a Hydraulically Correct Elevation Model Copyright 2003, American Society for Photogrammetry and Remote Sensing, Terrain Data- Applications and Visualization Conference Proceedings. For all study types, including Redelineation, corrections are made to the Elevation Model as dictated by the Hydraulic Model or the fit of an effective study to the terrain.

Where voids in the Bare-earth LIDAR require better definition additional LIDAR is extracted from the All Returns LIDAR and visually compared to the Elevation Model.

When additional points are deemed to be available in the All Returns the Bare-Earth LIDAR is augmented with the All Returns points and the Elevation Model is rebuilt.

- 2016-07-06 00:00:00 - The NOAA Office for Coastal Management (OCM) received a point shapefile containing lidar points without attributes as part of a FEMA delivery.

The data was received in UTM Zone 18 in meters and were vertically referenced to NAVD88 using the Geoid03 model in meters. OCM performed the following processing for data storage and Digital Coast provisioning purposes: 1. The

shapefile was converted to an LAS 1.2 file with LASTools' shp2las. 2. The LAS files were classified as Class 2 - Ground points. 3. The LAS files were converted from orthometric (NAVD88) heights to ellipsoidal heights using the Geoid03 model. 4. The LAS files were converted from UTM coordinates to Geographic Coordinates in decimal degree. 5. The LAS files were reviewed for outliers and removed accordingly.

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/49881>

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=5056>

<https://noaa-nos-coastal-lidar-pds.s3.amazonaws.com/laz/geoid18/5056/index.html>

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=5056>;

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.