

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:

2013 Topographic Lidar DEM: Oahu

1.2. Summary description of the data:

The Oahu, Hawaii Elevation Data Task Order involves collecting and delivering topographic elevation point data derived from multiple return light detection and ranging (LiDAR) measurements on the island of Oahu in Hawaii. The Statement of Work (SOW) for the area covering the northern 2/3 of Oahu was developed by the National Oceanic and Atmospheric Administration's (NOAA) Office for Coastal Management. A separate but related task order was issued by the USGS National Geospatial Technical Operations Center (NGTOC), under their Geospatial Products and Services Contract (GPSC), to leverage the same resources committed to the NOAA LiDAR project for the acquisition of LiDAR data in the southern 1/3 portion of Oahu. The combined task orders yielded one study area covering the entire island of Oahu. The data collected for the island of Oahu will exhibit Hydro Flattened DEMs for inclusion into the NED. The purpose of the data is for use in coastal management decision making, including applications such as flood plain mapping and water rights management. The point density for this data set was specified in the SOW at 1.15 pts/m². The NOAA Office for Coastal Management tested the NPS (nominal pulse spacing) for this data set in April 2015. The NPS was determined to be 0.84 m. The data used in the NPS determination were the first returns of classes 1,2,9, and 10.

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:

2013-06-01 to 2013-08-09

1.5. Actual or planned geographic coverage of the data:

W: -158.294904, E: -157.645193, N: 21.727501, S: 21.251804

1.6. Type(s) of data:

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

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:

- 2013-01-01 00:00:00 - Applanix software was used in the post processing of the airborne GPS and inertial data that is critical to the positioning and orientation of the sensor during all flights. POSPac MMS provides the smoothed best estimate of trajectory (SBET) that is necessary for Optech's post processor to develop the point cloud from the LiDAR missions. The point cloud is the mathematical three dimensional collection of all returns from all laser pulses as determined from the aerial mission. At this point this data is ready for analysis, classification, and filtering to generate a bare earth surface model in which the above ground features are removed from the data set. The point cloud was manipulated within the Optech or Leica software; GeoCue, TerraScan, and TerraModeler software was used for the automated data classification, manual cleanup, and bare earth generation from this data. Project specific macros were used to classify the ground and to remove the side overlap between parallel flight lines. All data was manually reviewed and any remaining artifacts removed using functionality provided by TerraScan and TerraModeler. Class 2 LIDAR was used to create a bare earth surface model. The surface model was then used to heads-up digitize 2D breaklines of inland streams and rivers. Inland Ponds and Lakes of 2 acres or greater were also collected. Elevation values were assigned to all Inland Ponds and Lakes using TerraModeler functionality. Elevation values were assigned to all Inland Streams and Rivers using Photo Science proprietary software. All Class 2 LIDAR data falling inside of the collected breaklines were then classified to Class 9 and Class 2 LIDAR data falling within a proximity of one meter will be classified to Class 10 using TerraScan macro functionality. The breakline files were translated to ESRI Shapefile format using ESRI conversion tools. Data was then run through additional macros to ensure deliverable classification levels matching LAS ASPRS Classification structure. GeoCue functionality was used to ensure correct LAS Version. In house software was used as a final QA/QC check to provide LAS Analysis of the delivered tiles. Tiles were run through automated scripting within ArcMap and were combined with the Hydro Flattened Breaklines to create the 1 meter DEM. Final DEM tiles were clipped to the tile boundary in order to provide a seamless dataset. A manual QA review of the tiles was completed in ArcMap and Global Mapper to ensure full coverage with no gaps or slivers within the project area. (Citation: LiDAR)
- 2018-03-13 00:00:00 - The NOAA Office for Coastal Management (OCM) received the DEM files in img format via hard drive from PhotoScience, Inc. Data were ingested into the Digital Coast Data Access Viewer.
- 2021-07-08 00:00:00 - DEM data were found to be tagged with NAD83(2011) UTM

zone 4, which is valid for Alaska. The proper tag should have been NAD83(PA11) UTM zone 4. The proper tagging was added and the data was converted to cloud optimized Tiff format at the same time. Note that the tagging does not have a vertical component, though the data are in ellipsoid heights.

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:

- 1.6. Type(s) of data
- 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
- 7.3. Data access methods or services offered
- 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/52020>

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=8497>

https://noaa-nos-coastal-lidar-pds.s3.us-east-1.amazonaws.com/dem/NOAA_Oahu_DEM_2013_8497/in

7.3. Data access methods or services offered:**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.