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 USGS Lidar: South Terrebonne and Gulf Islands, LA

1.2. Summary description of the data:

This data set is the classified lidar point data which encompasses a 100 meter buffer around the south Terrebonne basin in Louisiana and the gulf coast islands of Cat Island, West Ship Island, East Ship Island, Horn Island, Petit Bois Island, Dauphin Island, Pelican Island, and the Chandeleur Islands, covering approximately 2093 square miles.

Original Dataset Description: This data set consists of LiDAR point cloud LAS swath files and tiled Las files. Each LAS file contains LiDAR point information, which has been calibrated, controlled, and classified. Each file represents a separate swath of LiDAR. LiDAR data collected for the G15PD00057, South Terrebonne and Gulf Islands survey has a nominal pulse spacing of 0.7 meters, and includes up to 4 discrete returns per pulse, along with intensity values for each return. LiDAR datasets were post processed to generate elevation point cloud swaths for each flight line. Deliverables include the point cloud swaths, tiled point clouds classified by land cover type, breaklines to support hydro-flattening of digital elevation models (DEM)s, intensity tiles, and bare-earth DEM tiles. Point cloud deliverables are stored in the LAS version 1.2 format, point data record format 1. The tiling scheme for tiled deliverables is a 1500 meter x 1500 meter grid. Tile number is the appropriate cell number values found in the USNG index. All deliverables were generated in conformance with the U.S. Geological Survey National Geospatial Program Guidelines and Base Specifications, Version 1.0.

Original Data Collection Ground Conditions: water at normal levels; no unusual inundation; no snow; leaf off

This metadata record supports the data entry in the NOAA Digital Coast Data Access Viewer (DAV). For this data set, the DAV is leveraging the Entwine Point Tiles (EPT) hosted by USGS on Amazon Web Services.

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:
2015-01-18 to 2015-02-13

1.5. Actual or planned geographic coverage of the data:
W: -91.374, E: -88.051, N: 30.307, S: 29.036

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?

Yes

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

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):

Lineage Statement:
The NOAA Office for Coastal Management (OCM) ingested references to the USGS Entwine Point Tiles (EPT) hosted on Amazon Web Services (AWS) into the Digital Coast Data Access Viewer (DAV). The DAV accesses the point cloud as it resides on AWS under the usgs-lidar-public-container.

Process Steps:

- 2015-02-13 00:00:00 - Aerial LiDAR Acquisition: Aerial data collection was acquired, in Twenty Two (22) missions, using the Leica ALS80 SN# 8235 & ALS60 SN# 6130 at an altitude of 2,000 & 1,400 meters AGL respectively. This was to support a 4.0 ppm^2 LiDAR point cloud. Airborne GPS and IMU data was collected during the acquisition and supported by Leica GPS 1200 base stations that occupied temporary monuments in conjunction with CORS stations, Data acquisition started January 26, 2015 and was complete February 13, 2015. Ground Control Survey: A survey was performed to support the acquisition of Light Detection and Ranging (LiDAR). The control network involved a total of 246 check points (41 FVA and 120 SVA). The points were a combination of the following ground cover classification: Open Terrain, Urban Terrain, Bare Earth, High Grass and Low Trees. All field survey observations were conducted between January 19, 2015 and February 13, 2015 with Leica GPS 1200 equipment.
- 2015-06-17 00:00:00 - LiDAR Pre-processing: Airborne GPS and IMU data were merged to develop a Smooth Best Estimate of Trajectory (SBET) of the LiDAR system for each mission. LiDAR ranging data were initially calibrated using previous best parameters for this instrument and aircraft. Relative calibration was evaluated using advanced plane-matching analysis and parameter corrections derived. This process was repeated interactively until residual errors between overlapping swaths, across all project lifts, was reduced to 2 cm or less. Raw data NVA were checked using surveyed check points.
- 2015-09-17 00:00:00 - RAW Data Processing: The Initial processing of the GPS data was processed using Inertial Explorer producing a solution file for each mission.

Leica CloudPro software was then used to generate georeferenced laser returns into LAS 1.2 file format for each flight-line per each mission, this went through an initial Quality Control of the overlap between the flight-line swaths.
- 2015-10-08 00:00:00 - LiDAR Post-processing: The calibrated and controlled LiDAR swaths were processed using automatic point classification routines in TerraSolid software. These routines operate against the entire collection (all swaths, all lifts), eliminating character differences between files. Data were then distributed as virtual tiles to experienced LiDAR analysts for localized automatic classification, manual editing, and peer-based QC checks. Supervisory QC monitoring of work in progress and completed editing ensured consistency of classification character and adherence to project requirements across the entire project. All classification tags are stored in the original swath files. After completion of classification and final QC approval, the NVA and VVA for the project are calculated. Sample areas for each land cover type present in the project were extracted and forwarded to the client, along with the results of the accuracy tests. Upon acceptance, the complete classified LiDAR swath files were delivered to the client.
- 2016-01-01 00:00:00 - LiDAR Classification: The calibrated LiDAR data went through automated classification routines and then manually edited and checked. The LiDAR point cloud data was classified into the following classes: 1-unclassified*, 2-ground, 3-Low/Medium Vegetation (Less than or equal to 3 meters), 7-low noise, 9-water, 10-buffer, 15-withheld ground, 16-withheld unclassified
- Original point clouds in LAS/LAZ format were restructured as Entwine Point Tiles and stored on Amazon Web Services. The data were re-projected horizontally to WGS84 web mercator (EPSG 3857) and and the vertical units of meters (NAVD88 GEOID12A) were retained.
- 2024-10-15 00:00:00 - The NOAA Office for Coastal Management (OCM) created references to the Entwine Point Tile (EPT) that was ingested into the NOAA Digital Coast Data Access Viewer (DAV). No changes were made to the data. The DAV will access the point cloud as it resides on Amazon Web Services (AWS) under the usgs-lidar-public container. This is the AWS URL being accessed: https://s3-us-west-2.amazonaws.com/usgs-lidar-public/USGS_LPC_LA_SoTerrebonne_GI_2015_LAS_2016/ept.json NOTE: During the review of the data, OCM noticed that there was a tile missing from the EPT dataset. Checking the LPC tile index, it was determined that Tile 15RYN1422 was corrupt in the LPC folder and missing in the EPT files. Received confirmation from USGS that the LPC file was corrupt and USGS has pulled that file from distribution. USGS was unable to find a correct version of the file in their archive. OCM processed the USGS EPTs, but there will be a hole in the data for this tile. This hole is in the southern part of Terrebonne basin area and covers a small area of undeveloped, uninhabited marsh. Also noted during the review was that there were class 11 points that appear to be overlap unclassified and overlap ground. The original metadata and report do not list class 11 as an included classification in this dataset. They do list Class 15 as withheld ground and Class 16 as withheld unclassified, ss seen in Process Step 5 above). These points also look to have the withheld bit set. At some time, these points must have been converted

from class 15 and 16 to Class 11.

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
- 5.2. Quality control procedures employed
- 7.1.1. If data are not available or has limitations, has a Waiver been filed?
- 7.4. Approximate delay between data collection and dissemination
- 8.3. Approximate delay between data collection and submission to an archive facility

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/73667

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?

Yes

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=10143/details/10143
https://rockyweb.usgs.gov/vdelivery/Datasets/Staged/Elevation/LPC/Projects/South_Terrebonne_and_

7.3. Data access methods or services offered:

Data is available online for bulk and 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)

NCEI_NC

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

Data is backed up to cloud storage.

9. Additional Line Office or Staff Office Questions

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