

*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:**

2012 USACE HSDRRS Lidar: New Orleans

### **1.2. Summary description of the data:**

Acquisition of Light Detection and Ranging (LiDAR) elevation data was for the Hurricane and Storm Damage Risk Reduction System (HSDRRS). In February 2012, USACE, Contracting Division contracted with The Atlantic Group to provide acquisition of Light Detection and Ranging (LiDAR) elevation data in the Hurricane and Storm Damage Risk Reduction System, St. Charles, Jefferson, Orleans, St. Bernard and Plaquemines Parishes, LA. This data will be used to support interior drainage modeling. LiDAR data should be collected to fully capture the total interior of the HSDRRS, including floodwalls, structures, and levees, and 200 feet outside of the HSDRRS to water's edge as appropriate. The project shall include capture of LiDAR data and the creation of digital elevation models derived from the LiDAR. The project area is approximately 418.4 sq. miles, including a 200' buffer. The purpose of the survey is to obtain measurements of the bare ground surface, as well as top surface feature elevation data for providing geometry input to USACE hydrodynamic and other numerical models as well as for performing economic related assessments.

Upon receipt of data, the NOAA Office for Coastal Management (OCM) noted that many areas have lidar points over water that are classified as ground. This was mainly seen in lidar points over Lake Pontchartrain. In these areas, those points were reclassified from ground (2) to unclassified (1). In other areas, however, the user should be aware that points over water may be classified as ground.

In addition to the lidar point data, bare earth Digital Elevation Models (DEMs), at a 2 ft grid spacing, created from the lidar point data are also available. These data are available for download here: <https://coast.noaa.gov/dataviewer/#/lidar/search/where:ID=6352>

Breaklines created from the lidar are also available for download in shp format at: <https://noaa-nos-coastal-lidar-pds.s3.amazonaws.com/laz/geoid18/6350/breaklines>

The DEM and breakline products have not been reviewed by the NOAA Office for

Coastal Management (OCM) and any conclusions drawn from the analysis of this information are not the responsibility of NOAA, OCM or its partners.

Original contact information:

Contact Name: Patrick Robinson

Contact Org: Atlantic Group

Title: LiDARManager

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Email: [probinson@theatlgrp.com](mailto:probinson@theatlgrp.com)

**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:**

2012-03-04 to 2012-03-25

**1.5. Actual or planned geographic coverage of the data:**

W: -90.609656, E: -89.609035, N: 30.169328, S: 29.632568

**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:

- 2012-01-01 00:00:00 - The ABGPS, IMU, and raw Optech LiDAR data are integrated into the Optech post processor software. The resultant file is in a LAS binary file format. The LAS file version 1.2 format can be easily transferred from one file format to another. It is a binary file format that maintains information specific to the LiDAR data (return#, intensity value, xyz, etc.). The resultant points are produced in the geodetic coordinates referenced to the NAD83 horizontal datum and NAVD88 2004.65 vertical datum.
- 2012-01-01 00:00:00 - The unedited data are classified to facilitate the application of the appropriate feature extraction filters. A combination of proprietary filters is applied as appropriate for the production of bare earth digital terrain models (dtms). Interactive editing methods are applied to those areas where it is inappropriate or impossible to use the feature extraction filters, based upon the design criteria and/or limitations of the relevant filters. These same feature extraction filters are used to produce elevation height surfaces. The LiDAR mass points were delivered in

American Society for Photogrammetry and Remote Sensing LAS 1.2 format. The header file for each dataset is complete as defined by the LAS 1.2 specification. The data was classified as follows: Class 1 = Unclassified. This class includes all non-ground classified points. Class 2 = Ground. Class 7 = Low Points. Class 9 = water. Class 12 = Overlap.

- 2012-01-01 00:00:00 - Conversion from Geodetic coordinates NAD83 into Louisiana state plane zone 1702 using NAD83 and conversion from ellipsoid heights (meters) into orthometric heights using NAVD88 (US Survey Foot). Files are orthogonally tiled based to a 1500m x 1500m extent, and labeled with a "Tile\_ID" attribute.

- 2017-08-15 00:00:00 - The NOAA Office for Coastal Management (OCM) received 525 files in las 1.2 format. LAS files from the 2004.65 folder were processed. The files contained lidar intensity and elevation measurements for the USACE HSDRRS project area. The data were in LA State Plane, Zone 1702 (NAD83 2007) coordinates and in NAVD88 elevations in feet. OCM performed the following processing on the data for Digital Coast storage and provisioning purposes: 1. The data were converted from las to laz format. 2. Spaces in the filenames were converted to underscores. 3. The LAsTools software scripts lasinfo and lasvalidate were run on the las files to check for errors. 4. The data were converted from GPS seconds of the week to adjusted GPS time. 5. In 46 files, reclassified points that were over Lake Pontchartrain from ground (2) to unclassified (1). 6. Reclassified outlier elevation points (greater than 2000 ft and less than -100 ft) to noise (7). 7. Internal OCM scripts were run to convert the files from LA State Plane Zone 1702 coordinates to geographic coordinates and to convert from NAVD88 elevations in feet to ellipsoid elevations in meters using Geoid09. 8. Internal OCM scripts were run on the las files to assign the geokeys, to sort the data by gps time and zip the data to database and to http.

**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
- 7.4. 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/49764>

**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](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=6350>

<https://noaa-nos-coastal-lidar-pds.s3.amazonaws.com/laz/geoid18/6350/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=6350>;

**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.*