

*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:**

2007 Northwest Florida Water Management District (NFWFMD) Lidar: Portions of Bay, Calhoun, Jackson and Washington Counties

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

LIDAR data is remotely sensed high-resolution elevation data collected by an airborne collection platform.

Using a combination of laser range finding, GPS positioning and inertial measurement technologies; LIDAR instruments are

able to make highly detailed Digital Elevation Models (DEMs) of the earth's terrain, man-made structures and vegetation.

Using a LH Systems ALS50 Light Detection And Ranging (LiDAR) system, 262 flight lines of high density (submeter ground

sample distance) data were collected over areas in Bay, Calhoun, Jackson and Washington Counties in Florida. This data set

was collected at the same time as the collection for Jefferson County, FL. Collectively, these data sets cover

approximately 1201 square miles. The data acquisition occurred in 17 missions between February 22, 2007 and March

13, 2007. Multiple returns were recorded for each laser pulse along with an intensity value for each return.

This data was collected at sub-meter resolution to provide average point spacing of 0.7 m for collected points. Up to

5 returns were recorded for each pulse in addition to an intensity value.

Original contact information:

Contact Name: John Crowe

Contact Org: Northwest Florida Water Management District (NFWFMD)

Phone: 850-539-5999

Email: john.crowe@nfwfmd.state.fl.us

**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:**

2007-02-22 to 2007-03-13

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

W: -85.891976, E: -85.294776, N: 30.647342, S: 30.137242

**1.6. Type(s) of data:**

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

Map (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:

- 2007-02-22 00:00:00 - Data Collection: Using a LH Systems ALS50 Light Detection And Ranging (LiDAR) system, 262 flight lines of high density (submeter ground sample distance) data were collected over areas in Bay, Calhoun, Jackson and Washington Counties in Florida. This data set was collected at the same time as the collection for Jefferson County, FL. Collectively, these data sets cover approximately 1201 square miles. The data acquisition occurred in 17 missions between February 22, 2007 and March 13, 2007. Multiple returns were recorded for each laser pulse along with an intensity value for each return. During the LiDAR campaign, the Sanborn field crew conducted a GPS field survey to establish final coordinates of the ground base stations for final processing of the base-remote GPS solutions. Four (4) airborne global positioning system (GPS) base stations were used to support the LiDAR data acquisition. GPS ground control check points were also collected by the LiDAR team while onsite for product accuracy validation and delivery.

- 2007-04-01 00:00:00 - Airborne GPS Processing: Airborne GPS data was differentially processed and integrated with the post processed IMU data to derive a smoothed best estimate of trajectory (SBET). The SBET was used to reduce the LiDAR slant range measurements to a raw reflective surface for each flight line. The overlap between flight lines was removed to provide a homogeneous coverage, and the coverage was classified to extract a bare earth digital elevation model (DEM). Airborne GPS is differentially processed using the GrafNAV V7.50 software by

Waypoint Consulting of Calgary, Alberta, Canada. The PDOP and distance separation is as follows: IMU data is processed using the PosPac V4.2 software by Applanix Corporation of Richmond Hill, Ontario, Canada. The reflective surface is derived using the ALS Post Processor software by Leica Geosystems GIS & Mapping Division of Atlanta, Georgia. The classification and quality control (QC) of LiDAR data is carried out using TerraScan software by Terrasolid Limited of Helsinki, Finland.

- 2007-05-01 00:00:00 - IMU data Processing: IMU data provides information concerning roll, pitch and yaw of collection platform during collection event. IMU information allows the pulse vector to be properly placed in 3D space allowing the distance from the aircraft reference point to be properly positioned on the elevation model surface. IMU data is processed using the PosPac V4.2 software by Applanix Corporation of Richmond Hill, Ontario, Canada.

- 2007-06-01 00:00:00 - Reflective Surface Generation: The reflective surface is derived using the ALS Post Processor software by Leica Geosystems GIS & Mapping Division of Atlanta, Georgia.

- 2007-10-01 00:00:00 - LIDAR Ground Point Classification: The classification and quality control (QC) of LiDAR Ground point class is carried out using TerraScan software by Terrasolid Limited of Helsinki, Finland. In the filtering process points are classified as Ground or one of several non-Ground classes including Unclassified, Overlap, and Low Points.

- 2007-11-01 00:00:00 - Reclassification of Water Points: LiDAR returns from open water surfaces are commonly included in the Ground class by the ground filtering algorithms. Using 2D and 3D visualization methods, 2D vector polygons were digitized for significant waterways and water bodies that were readily identifiable in the LiDAR data. These polygons were then used to re-classify points in open water from the filtered Ground class to the Water class.

- 2007-11-09 00:00:00 - Coordinate Reprojection: Output LAS Files LIDAR points maintained in UTM coordinate system converted to Geographic projection with units of Decimal Degrees

- 2008-07-21 00:00:00 - The NOAA Office for Coastal Management (OCM) received files in LAS format. The files contained LiDAR intensity and elevation measurements. OCM performed the following processing on the data to make it available within the LiDAR Data Retrieval Tool (LDART): 1. The data were converted from NAVD88 (orthometric) heights to GRS80 (ellipsoid) heights using Geoid 03. 2. The LAS header fields were sorted by latitude and updated. 3. The data was filtered to eliminate outliers.

**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/49871>

### 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=84>

<https://noaa-nos-coastal-lidar-pds.s3.amazonaws.com/laz/geoid18/84/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>

The data set is dynamically generated based on user-specified parameters.

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**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.*