

*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 Georgia Department of Natural Resources (GADNR) Topographic Lidar: Barrow, Clarke, Madison and Oglethorpe Counties

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

NOAA Contract: EA133C11CQ0009

NOAA Task Order Number: T0013

The PS FY13 GA DNR Elevation Data Task Order involves collecting and delivering topographic elevation point data derived from multiple return light detection and ranging (LiDAR) measurements in 4 counties in Georgia. The Statement of Work (SOW) was developed by the National Oceanic and Atmospheric Administration's (NOAA) Office for Coastal Management (referred to as the Center) in partnership with the Georgia Department of Natural Resources (GADNR) Environmental Protection Division (EPD). The counties included are Barrow, Clarke, Madison and Oglethorpe. The data collected for these 4 counties will exhibit Hydro Flattened DEMs for inclusion into the National Elevation Dataset (NED). The purpose of the data is for use in coastal management decision making, including applications such as floodplain mapping and water rights management.

LiDAR was collected at 1.0 points per square meter (1.0m GSD) for Barrow, Clarke, Madison and Oglethorpe Counties. This area was flown during snow free and leaf-off conditions.

**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:**

2013-01-22 to 2013-02-15

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

W: -83.880586, E: -82.767975, N: 34.283061, S: 33.680598

**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:

- 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 the 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 three feet 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 4' 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.
- 2014-01-01 00:00:00 - The NOAA Office for Coastal Management (OCM) received the topographic lidar files in LAS format from Photo Science. The files contained lidar elevation measurements and additional information. The data for Barrow and

Clarke Counties were received in Georgia State Plane West Zone 1002, NAD83 coordinates. The data for Madison and Oglethorpe were received in Georgia State Plane East Zone 1001, NAD83 coordinates. Both sets of data were vertically referenced to NAVD88 using the Geoid09 model. The vertical units of the data were feet. OCM performed the following processing for data storage and Digital Coast provisioning purposes: 1. The topographic las files were converted from orthometric (NAVD88) heights to ellipsoidal heights using Geoid09. 2. The topographic las files were converted from a Projected Coordinate System (State Plane) to a Geographic Coordinate System (NAD83). 3. The topographic las files' vertical units were converted from feet to meters. 4. The topographic las files' horizontal units were converted from feet to decimal degrees.

**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/49732>

**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=2617>

<https://noaa-nos-coastal-lidar-pds.s3.amazonaws.com/laz/geoid18/2617/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=2617>;

**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.*