

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:

2020 GLOS Underwater Lidar: Lake Huron, MI

### 1.2. Summary description of the data:

Elevations were collected using an underwater laser scanner (lidar) in Lake Huron, MI from November 16 to 18, 2020. Data were geospatially adjusted to match a multibeam survey conducted at the same time. Positional accuracy was not accessed. Data represent the best estimate of the bottom surface.

### 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:

2020-11-16 to 2020-11-18

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

W: -82.372932, E: -82.372336, N: 43.1470679999, S: 43.146755  
In Lake Huron.

### 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?****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:

- 2020-11-18 00:00:00 - Multiple locations were tried to test the ROV and laser system. The Detroit River, St. Clair River, and Lake Erie shoreline were found to lack the necessary water clarity. Lake Huron was tried in locations identified using navigation charts. A target was located that appeared to be a large cargo shipwreck.

The City of Genoa was a grain freighter that sunk in 1911. The basic structure of the wreck remains on the bed of Lake Huron heavily deteriorated. The ROV was launched at the site and successfully collected laser data of the wreck. Ambient light in the water limited the usable range of the laser, so passes were collected over some areas only.

- 2020-11-18 00:00:00 - A review of the data collected during the inspections was completed in the ASI office. The 3D files were converted to point clouds and erroneous noise was removed. The LiDAR files were adjusted in position to best file the sonar data collected of the wreck. The assembly of this report was then completed. The report includes documentation methodology, equipment descriptions, observations, observation images, and 3D dataset. Data files are provided of the various areas survey by MBES in meters located in UTM zone 17 as collected and in elevation referenced to NAVD88 and adjusted using Geoid 2018-CONUS. The laser data is provided in LAS format as collected as well as in cleaned XYZ files that have been best-fit positioned to match the MBES data. (Citation: Raw data)

- 2021-05-20 00:00:00 - Data were delivered to the Great Lakes Observing System (GLOS) and subsequently passed to NOAA Digital Coast for distribution. Both the cleaned text files and the raw LAS files were received. The raw LAS files did not have sufficient information to do the geometric corrections that had been done to the cleaned text files and were not further processed. The cleaned text files were converted to LAS/LAZ format using LAsTools txt2las. The points are all tagged as class 2 (ground) as it is presumed that the cleaning step removed non-ground/bathymetry. This metadata record was created from the report delivered by ASI Group to GLOS. No other metadata was received. GLOS was consulted regarding any accuracy assessments or contractual spatial accuracy requirements. There were none. The accuracy is assumed to be on par with the multi-beam echo sounder data collected at the same time, but that also does not appear to have an accuracy assessment. (Citation: cleaned data)

- Data were converted from UTM zone 17 NAD83(2011) orthometric NAVD88 coordinates to NAD83(2011) ellipsoid heights in geographic coordinates. This allows the distribution through the NOAA Digital Coast Data Access Viewer, which may do further coordinate system changes.

**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
- 7.3. 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/64644>

**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://noaa-nos-coastal-lidar-pds.s3.amazonaws.com/laz/geoid18/9302/index.html>  
<https://coast.noaa.gov/dataviewer/#/lidar/search/where:id=9302>

**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.*