*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 ISGS Lidar: 8 County, IL

### 1.2. Summary description of the data:

Product: Processed, classified lidar point cloud data tiles in LAS 1.4 format.

Geographic Extent: The data covers approximately 3985 square miles in the Wabash and Embarras Rivers Basin in east central Illinois.

IL_8County_B1 (Work Unit 1922332):

The data covers 2576 square miles in the following counties: Clark, Coles, Cumberland, Douglas, Edgar

Collected by Merrick & Company, Inc.

IL_8County_B2 (Work Unit 193826):

The data covers 1409 square miles in the following counties: Crawford, Jasper, Lawrence

Collected by Woolpert

Dataset Description of the Original Data: The 2020 data acquisition of 8 Counties in the Wabash and Embarras Basin lidar project called for the planning, acquisition, processing, and production of derivative products of QL2+ lidar data to be collected at a nominal pulse spacing (NPS) of 0.5 meters. Project specifications were based on the U.S. Geological Survey National Geospatial Program Base Lidar Specification, Version 2.1. The data was developed based on a horizontal datum/projection of NAD83 (2011) State Plane Illinois East Zone Survey Feet, and a vertical datum of NAVD88 (GEOID12B) US Survey Feet. Lidar data was delivered as processed LAS 1.4 files formatted to individual 2,000-foot x 2,000-foot tiles. The contractual aggregate nominal pulse spacing (ANPS) is less than or equal to 0.5m. The contractual aggregate nominal point density (ANPD) is 4. 0 points or greater per square meter. Classifications include: Unclassified, Ground, Automated Low Veg [0.5-5 feet], Automated Medium Veg [5-20 feet], Automated High Veg [>20 feet], Automated Buildings, Low Noise, Water, Bridge Decks, High Noise and Ignore Ground (breakline proximity). Model key points are bit-flagged and created from

ground (class = 2) points using a five foot horizontal and a 0.2 foot vertical variance.

Ground Conditions: Lidar was collected from March 30, 2020 through May 4, 2020 while no snow was on the ground and rivers were at or below normal levels. In order to post process the lidar data to meet task order specifications and meet ASPRS vertical accuracy guidelines,

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:**
2020-04-08 to 2020-05-04, 2020-03-30 to 2020-04-10

**1.5. Actual or planned geographic coverage of the data:**
W: -88.5, E: -87.5, N: 39.9, S: 39.19
IL_8County_B1 (Work Unit 192232):

The data covers 2576 square miles in the following counties: Clark, Coles, Cumberland, Douglas, Edgar

W: -88.4, E: -87.46, N: 39.21, S: 38.54
IL_8County_B2 (Work Unit 193826):

The data covers 1409 square miles in the following counties: Crawford, Jasper, Lawrence

**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:
- 2020-11-23 00:00:00 - LIDAR data was collected using the Optech Galaxy sensor. The raw data was verified in MARS software for complete coverage of the project area, and boresighted to align the flightlines. Raw data files were parsed into

manageable client-specific tiles. These tiles were then processed through automated filtering that separates the data into different classification groups: unclassified points, ground points, low veg [0.5-5 feet], medium veg [5-20 feet], high veg [>20 feet] , automated buildings, low noise, water, bridge decks, high noise and ignore ground (breakline proximity). The data was next taken into MARS to reclassify the erroneous points that may remain in the LIDAR point cloud after auto filter. Four points or greater per square meter (QL2) ASPRS ver 1.4 format.
- 2020-11-23 00:00:00 - LiDAR swath data was measured to have an averageof 0.39 meter nominal pulse spacing and a 6.6 pulses per meter. The method used was counting first return points within the each swath then dividing by the area of the extent of the corresponding swath to get density. NPS was mathematically derived from this density number. This was performed on each swath then averaged to generate the two numbers above. This USGS method does not consider swath sidelap in these calculations.
- 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 no changes were made to the vertical ( NAVD88 GEOID12B US survey feet).
- 2024-04-08 00:00:00 - The NOAA Office for Coastal Management (OCM) created references to the Entwine Point Tiles (EPT) that were 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. These are the AWS URLs being accessed: https://s3-us-west-2.amazonaws.com/usgs-lidar-public/IL_8County_B1_2020/ept.json https://s3-us-west-2.amazonaws.com/usgs-lidar-public/IL_8County_B2_2020/ept.json

#### 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/72410

**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=10107/details/10107

https://rockyweb.usgs.gov/vdelivery/Datasets/Staged/Elevation/LPC/Projects/IL_8County_2020_A20/

**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.*