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 - 2009 OLC Lidar: Hood to Coast, OR

1.2. Summary description of the data:

Watershed Sciences, Inc. (WS) collected Light Detection and Ranging (LiDAR) data for the Department of Geology and Mineral Industries (DOGAMI) and the Oregon Department of Forestry (ODF). The Areas of Interest (AOIs) cover portions of eight counties in northwest Oregon. The extent of requested LiDAR area totals ~1,549,015 acres; the extent of the LiDAR area delivered covers ~1,586,385 acres. The delivered acreage for the study area is greater than the original amount due to buffering of the original AOIs for flight planning optimization.

The LiDAR survey utilized a Leica ALS50 Phase II mounted in Cessna Caravan 208B and an Optech 3100 laser system mounted in a Cessna Caravan 208. The Leica ALS50 Phase II system was set to acquire ≥105,000 laser pulses per second (i.e. 105 kHz pulse rate) and flown at 900 meters above ground level (AGL), capturing a scan angle of ±14o from nadir1. The Optech 3100 system was set to acquire 71,000 laser pulses per second (i.e. 71 kHz pulse rate) and flown at 900 meters above ground level (AGL) capturing a scan angle of ±14 degrees from nadir. These settings are developed to yield points with an average native density of ≥8 points per square meter over terrestrial surfaces. The native pulse density is the number of pulses emitted by the LiDAR system. Some types of surfaces (i.e., dense vegetation or water) may return fewer pulses than the laser originally emitted. Therefore, the delivered density can be less than the native density and lightly variable according to distributions of terrain, land cover and water bodies.

The NOAA Office for Coastal Management (OCM) received 5,163 LAZ files from the Oregon Lidar Comission, with 4158 in Oregon State Plane North projection, and 1,005 in Oregon Lambert projection. These files were processed to the Data Access Viewer (DAV) and https. In addition to the lidar point data, bare earth digital elevation models (DEMs), at 3-foot resolution in ESRI GRID format, created from the lidar point data, are available for download at the link in the Related Items section of this metadata record. Please note that these products have not been reviewed by OCM, and any conclusions drawn from the analysis of this information are not the responsibility of NOAA or OCM.

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:
2007-03-16 to 2007-04-15, 2007-04-27 to 2007-05-11, 2007-05, 2007-06-14, 2007-09-29 to 2007-10-07, 2007-10-14, 2007-10-22 to 2007-10-23, 2007-11-06 to 2007-11-07, 2008-05-18 to 2009-04-11

1.5. Actual or planned geographic coverage of the data:
W: -124, E: -121, N: 46, S: 44.9

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):

Process Steps:

- Resolve kinematic corrections for aircraft position data using kinematic aircraft GPS and static ground GPS data. Software: Waypoint GPS v.8.10, Trimble Geomatics Office v.1.62
- Develop a smoothed best estimate of trajectory (SBET) file that blends the post-processed aircraft position with attitude data. Sensor head position and attitude are calculated throughout the survey. The SBET data are used extensively for laser point processing. Software: IPAS v.1.4
- Calculate laser point position by associating the SBET position to each laser point return time, scan angle, intensity, etc. Creates raw laser point cloud data for the entire survey in *.las (ASPRS v1.1) format. Software: ALS Post Processing Software
- Import raw laser points into manageable blocks (less than 500 MB) to perform manual relative accuracy calibration and filter for pits/birds. Ground points are then classified for individual flight lines (to be used for relative accuracy testing and calibration). Software: TerraScan v.9.001
- Using ground classified points per each flight line, the relative accuracy is tested. Automated line-to-line calibrations are then performed for system attitude parameters (pitch, roll, heading), mirror flex (scale) and GPS/IMU drift. Calibrations are performed on ground classified points from paired flight lines. Every flight line is used for relative accuracy calibration. Software: TerraMatch v.9.001
- Position and attitude data are imported. Resulting data are classified as ground and nonground points. Statistical absolute accuracy is assessed via direct comparisons of ground classified points to ground RTK survey data. Data are then converted to orthometric elevations (NAVD88) by applying a Geoid03 correction.

Ground models are created as a triangulated surface and exported as ArcInfo ASCII grids at a 3-foot pixel resolution. Software: TerraScan v.9.001, ArcMap v9.3, TerraModeler v.9.001
- The NOAA Office for Coastal Management (OCM) received 5163 laz files from the Oregon Lidar Commission. The lidar data had elevation and intensity measurements. The data were in Oregon State Plane North and Oregon Lambert (NAD83 HARN) coordinates (Int Feet) and NAVD88 (Geoid 03) elevations in feet. The data were classified as: 1-Unclassified, 2-Ground. OCM processed all classifications of points to the Digital Coast Data Access Viewer (DAV). OCM performed the following processing on the data for Digital Coast storage and provisioning purposes: Internal OCM scripts were run on the laz files to convert from orthometric (NAVD88) elevations to ellipsoid elevations using the Geoid 03 model, to convert from projected (NAD83 HARN) coordinates in international feet to geographic coordinates, to convert vertical units from feet to meters, 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:
- 1.7. 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/57700

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=8873
https://noaa-nos-coastal-lidar-pds.s3.amazonaws.com/laz/geoid18/8873/index.html

7.3. Data access methods or services offered:
Data is available online for 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_CO

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 tape and 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.