

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:

NOAA Office for Coastal Management (OCM) Lake Level Data: -6 Feet to +6 Feet Water Level Change

1.2. Summary description of the data:

These data were created as part of the National Oceanic and Atmospheric Administration Office for Coastal Management's efforts to create an online

mapping viewer depicting potential water level increase and decrease in the coastal areas of the Great Lakes. The lakes included are: Erie, Huron, Michigan,

Ontario, St. Clair, and Superior. The purpose of the mapping viewer is to provide coastal managers and scientists with a preliminary look at lake level

change and potential coastal impacts. The viewer is a screening-level tool that uses nationally consistent data sets and analyses to help users examine

multiple scenarios and prioritize actions. The Lake Level Viewer may be accessed at <https://coast.noaa.gov/llv>.

These data consist of 13 water extent polygons and 13 water depth rasters (3 m resolution, depth values in meters) that show the potential water level when

the water level is decreased from 0 feet to -6 feet (resulting in potential land exposure) and when water level is increased from 0 to +6 feet (resulting

in potential flooding). These data are based on the each lake's long term average water level over the period of record (1913-2008). More information on

the long term average water level can be found at <https://www.glerl.noaa.gov//pubs/fulltext/2013/20130021.pdf>,

<https://www.glerl.noaa.gov//pubs/fulltext/2013/20130022.pdf>, and the Great Lakes Water Level Dashboard (<https://www.glerl.noaa.gov/data/dashboard/GLWLD.html>).

The process used to produce the data can be described as a bathtub approach. The process uses two source data sets to derive the final water extent polygons

and water depth rasters for each iteration of water level decrease or increase: the Digital Elevation Model (DEM) of the area and each lake's long term

average water level over the period of record (1918-2017) at the time of data set creation. Data can be downloaded at <https://coast.noaa.gov/llv>.

The model used to produce these data does not account for erosion, subsidence, or any future construction. Water levels are as they would appear during calm

conditions (excludes wind-driven effects). As with all remotely sensed data, all features should be verified with a site visit. The data are provided as is,

without warranty to their performance, merchantable state, or fitness for any particular purpose. The entire risk associated with the results and

performance of these data is assumed by the user. This data should be used strictly as a planning reference and not for navigation, permitting, or other

legal purposes.

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:

2017

1.5. Actual or planned geographic coverage of the data:

W: -91.02, E: -75.74, N: 49.61, S: 40.75

1.6. Type(s) of data:

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

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:

- 2017-01-01 00:00:00 - The process to derive the rasters and polygons is as follows:
 1. A water level surface is generated for each lake using each lake's long term average water level over the period of record (1918-2003). Each 1 foot iteration (from -6 feet to + 6 feet) of water level was either subtracted or added to

this base water level surface and subsequently used for mapping. 2. Using the DEM and the water level surface (for each 1 foot iteration of drop or rise), raster calculations are made using ArcGIS Spatial Analyst Raster Calculation tool to generate multiple rasters, one 32-bit floating point raster representing the depth of water level and one 8-bit single value raster representing the extent of water level.

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:

- 1.6. Type(s) of data
- 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/48103>

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?

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:****7.3. Data access methods or services offered:**

This data may be downloaded at <https://coast.noaa.gov/llv>;

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.