

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:

North Carolina 2016 NATURAL HAZARD Polygons

1.2. Summary description of the data:

This feature class resides within the SOCECON Feature Data Set of the North Carolina 2016 ESI geodatabase. It contains vector polygons representing Natural Hazard human-use resource data for marine and estuarine waters of North Carolina and adjacent lands and waters.

The vector polygons represent predicted flood inundation in the event of a Category 1, 2, 3, 4, or 5 storm. For each storm category, the level of flooding is binned into anticipated depth of flood waters: ≤ 3 feet, > 3 feet, > 6 , and > 9 feet. These are modeled data, based on the National Hurricane Center's Sea, Lake and Overland Surges from Hurricanes (SLOSH) model (<https://www.nhc.noaa.gov/surge/slosh.php>). Raster model data, prepared in 2015, was converted to vector polygons for the purpose of the ESI. These data should be used for planning purposes only.

The ArcGIS feature class (NATURAL HAZARD POLYS) has 2 associated attribute tables, considered as Entities or "Child Items" in this metadata record. Location-specific Type and Source information are stored in these related data tables, SOC_DAT and SOURCE (described below), which are stand-alone tables within the Geodatabase.

This data set is a portion of the ESI data for North Carolina - 2016. As a whole, the ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil, and include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources.

Additional human-use information is provided in other feature class themes within the SOCECON Feature Data Set, including NAVIGATION/MARINE (POINTS, LINES, and POLYGONS), PARKS/MANAGED AREA (POINTS and POLYGONS), POLITICAL/JURISDICTIONAL (POINTS and POLYGONS), RESOURCE MANAGEMENT (POINTS and POLYGONS), and SOCECON (POINTS AND POLYGONS).

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:

2014 to 2016

1.5. Actual or planned geographic coverage of the data:

W: -78.6308, E: -75.2142, N: 36.5819, S: 33.6182

This reflects the extent of all land and water features included in the overall North Carolina ESI study region. The bounding box for this particular feature class may vary depending on occurrences identified and mapped.

1.6. Type(s) of data:

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

ESI Program Manager

2.2. Title:

Metadata Contact

2.3. Affiliation or facility:**2.4. E-mail address:**

orr.esi@noaa.gov

2.5. Phone number:**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:

ESI Program Manager

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:

- 2016-08-01 00:00:00 - The original NHC SLOSH data was a raster data layer with a geographic extent from Maine to Texas. The first process step was to subdivide the source raster data into geographic regions corresponding to an area slightly larger than the ESI region's geographic extent. The resultant data were then converted to polygons within Arcmap, using the conversion tool Raster to Polygon. (Citation: National Storm Surge Online Map Service)
- 2016-08-01 00:00:00 - A tool was developed, automating the next several steps to ensure consistency. The SLOSH polygon data were projected into the appropriate UTM zone, then clipped to the ESI shoreline and converted from multipart to singlepart polygons. The resultant polygons were unioned with a universal polygon representing the entire area of interest. This step enables identification of SLOSH polys that do not correspond to land (either due to the vectorization process or because of differences between the SLOSH model's shoreline and the ESI shoreline); these polygons are coded for deletion. Area, perimeter and ratio (area/perimeter) is calculated all polygons.
- 2016-08-01 00:00:00 - A field, "INUNDATION", is added to the feature data table, and a value of "<= 3 ft", "> 3 ft", "> 6 ft", "> 9 ft" calculated based on the grid code value from the raster data set. Small (slivers resulting from vectorization) polygons, not assigned an inundation value, are selected and eliminated – merged with the largest adjacent polygon.
- 2016-08-01 00:00:00 - Shoreline gaps are identified. These are polygons that 1) do not have an inundation value, 2) share a boundary with the shoreline, and 3) share boundaries with polygons that do have an inundation value. These polygons may represent areas where the vectorized SLOSH data did not extend to the shoreline either because of shoreline differences of the raster-vector process. A conservative method was used to avoid attributing shoreline with potential flooding where it was

not intended. Only features that had an area of less than 8500 square meters and an area/perimeter ratio less than 15 were selected. These polygons were dissolved into the adjacent flood polygon with the longest length. Because this process was conservative, there are several places where the land nearest the shoreline is not shown as flooding. This is likely not the case, and users need to be aware that these types of areas and small islands may erroneously not highlight flooding potential. Use judgement and consider the flood potential of nearby regions.

- 2016-08-01 00:00:00 - The final polygon data are converted from singlepart to multipart features and they are reprojected into a geographic coordinate system, NAD 83.

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)
- 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
- 7.2. Name of organization of facility providing data access
 - 7.2.1. If data hosting service is needed, please indicate
- 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/53711>

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:

7.2.1. If data hosting service is needed, please indicate:

7.2.2. URL of data access service, if known:

https://response.restoration.noaa.gov/esi_download

7.3. Data access methods or services offered:

Data can be accessed by downloading the zipped ArcGIS geodatabase from the Download URL (see Distribution Information). Questions can be directed to the ESI Program Manager (Point Of Contact).

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 of Response and Restoration - Seattle, WA

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.