

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:

Chesapeake Bay and the Outer Coasts of Maryland and Virginia 2016 ESI FISH Polygons, Lines

1.2. Summary description of the data:

This data set contains sensitive biological resource data for marine, estuarine, anadromous, and freshwater fish species in Chesapeake Bay and the Outer Coasts of Maryland and Virginia. Vector polygons in this data set represent fish distribution, concentration areas, spawning areas, nursery areas, and migration runs. Species specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the ESI data for Chesapeake Bay and the Outer Coasts of Maryland and Virginia. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources. See also the FISHL data layer, part of the larger Chesapeake Bay and the Outer Coasts of Maryland and Virginia ESI database, for additional fish information.

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: -77.5418, E: -74.7942, N: 39.7215, S: 36.5498

This reflects the extent of all land and water features included in the overall Chesapeake Bay and Outer Coasts of Maryland and Virginia 2016 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):

Lineage Statement:

This atlas supersedes two separate first edition atlases, Virginia (2005, #25) and Maryland (2007, #47). Data for fish distributions consists of input from resource experts from NOAA, MD DNR, VDGIF, VIMS, and USFWS; hardcopy maps; scientific reports; and digital data from VIMS, MD DNR, VDGIF, USFWS, and TNC.

Process Steps:

- 2016-09-01 00:00:00 - Striped bass distributions, spawning and nursery areas were mapped using data from MD DNR, VDGIF, and VIMS. Spawning areas in Maryland were mapped based on the official designation of spawning reaches and rivers. Additional spawning areas and nursery areas were mapped based on input from MD DNR biologists. In Virginia, spawning and nursery areas were mapped based on input from VIMS and VDGIF biologists. Areas in the ESI identified as striped bass 'spawning' or 'nursery' areas, specifically large areas in the Potomac, York, James, and Rappahannock Rivers, represent the most important early life stage areas; however, striped bass likely utilize other smaller tributaries and water bodies for spawning as well. Alewife, blueback herring, American shad, and hickory shad distributions were mapped based on presence and likely presence as identified in the Nature Conservancy's Chesapeake Fish Passage Prioritization Project data comprised of data supplied by NOAA, USFWS, VDGIF, and MD DNR. In Maryland spawning and nursery areas for alewife and blueback herring were developed using data supplied by MD DNR, with significant edits made based on input from MD DNR biologists. American shad and hickory shad spawning and nursery areas were based on input from MD DNR biologists. In Virginia, alewife, blueback herring, American shad, and hickory shad spawning and nursery areas were based on data from the Habitat Requirements for Chesapeake Bay Living Resources. This data was thoroughly reviewed and edited by VIMS and VDGIF biologists. It should be noted that alewife, blueback herring, and shad species spawn outside of the areas identified as 'spawning areas' in the ESI. This is especially true of the two herring species which utilize freshwater streams and lakes to a large degree for spawning. In both Virginia and Maryland white and yellow perch spawning and nursery areas were mapped using the Habitat Requirements for Chesapeake Bay Living Resources, then modified based on input from MD DNR, USFWS, VIMS, and VDGIF biologists. Populations of shortnose sturgeon and Atlantic sturgeon are found in Chesapeake Bay and adult and sub-adult Atlantic sturgeon also occur in the coastal waters of Virginia and Maryland. Data on shortnose sturgeon populations in Chesapeake Bay

is limited to incidental catches during a tagging program for Atlantic sturgeon by USFWS, and to a few recent studies of movements in the Potomac River. Generally shortnose sturgeon are concentrated in the upper portions of the Chesapeake Bay, roughly from the mouth of the Chester River and north, but they are not uncommon to the mouth of the Potomac, and have been found to stray as far south as James River in Virginia. No spawning of shortnose sturgeon has been documented in Chesapeake Bay, but there is some evidence of potential for spawning in the Potomac River and possibly the Susquehanna. Atlantic sturgeon inhabit all areas in the Chesapeake Bay at various life stages.

- 2016-09-01 00:00:00 - In the ESI data tables, larvae refer to fish less than 4 weeks old, juveniles refer to young-of-year, and adults include both sub-adults (age 2 to 15) and adults. Eggs, larvae, and juveniles are restricted to known or potential spawning rivers, including the James River, Rappahannock River, and the York River system, which includes the Mattaponi and Pamunkey Rivers. Spawning of Atlantic sturgeon has been documented in the James and Pamunkey Rivers, and is believed to occur in the Mattaponi and Rappahannock Rivers. In the James River evidence supports the view that spawning occurs during spring and fall migration runs. Atlantic sturgeon have also been observed staging in the lower Potomac river and one adult was tracked as far upstream as Brent Point. Spawning areas and concentration areas for Atlantic sturgeon were mapped based on input from USFWS, VCU, NOAA, MD DNR, and VDGIF biologists.

- The main source of data used to depict fish distributions in the FISH LINES data layer came from The Nature Conservancy's Chesapeake Fish Passage Prioritization Project. This data set was reviewed by MD DNR, VDGIF, and USFWS staff and recommendations were made as to which species and reaches should be displayed in the ESI. Data in the FISH LINES layer were mapped to areas in the ESI that extend beyond the polygons that make up the hydro layer of the ESI. Species mapped to the FISH LINES layer that were derived from the Chesapeake Fish Passage Prioritization Project include alewife, blueback herring, American shad, and hickory shad. Small distributions of white perch and yellow perch that were mapped to the FISH LINES data layer were derived from the Habitat Requirements for Chesapeake Bay Living Resources. The above digital and/or hardcopy sources were compiled by the project biologist to create the FISH LINES data layer.

- 2016-09-01 00:00:00 - Data from the above sources were compiled by the project biologist to create the FISH POLYGONS and LINES data layers. Three general approaches are used for compiling the data layer: 1) information gathered during initial interviews and from hardcopy sources are compiled onto U.S. Geological Survey 1:24,000 topographic quadrangles and digitized; 2) hardcopy maps are digitized at their source scale; 3) digital data layers are evaluated and used "as is" or integrated with the hardcopy data sources. See the Lineage section for additional information. Once the ESI, biology, and human-use data are compiled into the standard ESI digital data format, a second set of interviews with participating resource experts are conducted to review the compiled data. If necessary, edits to the FISH POLYGONS and LINES data layers were made based on the

recommendations of the resource experts, and final hardcopy maps and digital data are created.

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
- 7.4. 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/55093>

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:

Office of Response and Restoration (ORR)

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.