

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:

Outer Coast of Washington and Oregon 2014 ESI FISH Polygons, Lines

1.2. Summary description of the data:

This data set contains sensitive biological resource data for marine, estuarine, anadromous, diadromous, and freshwater fish species for the Outer Coast of Washington and Oregon. Vector polygons in this data set represent fish distributions, concentrations areas, spawning areas, and migratory corridors. Vector lines in this data set represent fish distributions and anadromous rearing and spawning areas. 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 Outer Coast of Washington and Oregon. 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.

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:

2013 to 2014

1.5. Actual or planned geographic coverage of the data:

W: -125.6816, E: -123.5192, N: 48.5059, S: 41.9967

This reflects the extent of all land and water features included in the overall Outer Coast of Washington and Oregon 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:

Data for fish distributions was obtained from a variety of sources including knowledge of resource experts from NOAA, Oregon Department of Fish and Wildlife (ODFW), Washington Department of Fish and Wildlife (WDFW), Washington State Department of Natural Resources (WDNR), U.S. Fish and Wildlife Service (USFWS), and Washington Treaty Tribes; hardcopy maps; scientific reports; and digital data from ODFW, WDFW, National Marine Fisheries Service (NMFS), and USFWS.

Process Steps:

- 2015-10-01 00:00:00 - Fish distributions in Oregon estuaries were acquired primarily from three sources: expert knowledge, NOAA's Distribution and Abundance of Fishes and Invertebrates in West Coast Estuaries Volume 1: Data Summaries, and various fish inventory reports provided by ODFW staff. Salmonid species mapped to estuaries were translated to polygonal features from the Fish Distribution lines provided by ODFW. Estuarine species in Washington were mapped primarily from NOAA's Distribution and Abundance of Fishes and Invertebrates in West Coast Estuaries Volume 1: Data Summaries, as well as expert knowledge of WDFW staff and Fish Distribution lines from WDFW's Priority Habitats and Species (PHS) database. Green sturgeon were mapped independently from other species, and distributions were based off ODFW and WDFW reports and sampling data, as well as critical habitat, and expert knowledge from NOAA, WDFW, and ODFW. Spawning grounds for green sturgeon do not exist within the ESI's area of interest; however the Rogue River estuary remains an important nursery for young of year green sturgeon from the northern distinct population segment. Additionally, the Columbia River estuary is critical habitat for white sturgeon adults and subadults, green sturgeon adults and sub-adults especially during the summer and fall, and supports the largest spawning run of eulachon within Oregon and Washington. Eulachon distributions were mapped independently based off expert knowledge from ODFW, WDFW, and Tribal biologists as well as the Critical Habitat Final Biological Report, the Status Review of Eulachon in WA, OR, and CA, and NOAA's Distribution and Abundance of Fishes and Invertebrates in West Coast Estuaries Volume 1: Data Summaries.

- 2015-10-01 00:00:00 - Nearshore marine distributions of fishes, at depths of less than 50m, were mapped based on seafloor habitat. Rocky and sandy habitats were identified using the draft seafloor mapping product, Survey of Benthic Communities near Potential Renewable Energy Sites Offshore the Pacific Northwest, from Oregon State University. Two habitats were identified; rocky habitat consisted of the following surficial classes grouped together: "rock", "hard", "boulder", and "rock mix", sandy habitat consisted of all other surficial classes grouped together including "cobble" and "cobble mix" in addition to the softer substrates. Species

were then mapped to one or both of the habitats based on life history information from *Certainly More Than You Want To Know About Fishes of the Pacific Coast* (CMTYWKAFFPC), and expert knowledge of fishes and habitat preferences from ODFW, WDFW, NOAA, and Tribal biologists. Marine salmonid distributions were mapped based off published literature, including NOAA technical reports, critical habitat biological reviews, and journal articles. Additional review of salmonid distributions and timing was provided by Laurie Weitkamp at NOAA's Northwest Fisheries Science Center (NWFSC) Newport, OR office.

- 2015-10-01 00:00:00 - Groundfish distributions within waters deeper than 50 m were mapped based off the habitat suitability probability models developed by NMFS for the 2005 Essential Fish Habitat Groundfish review. Presence/absence thresholds were set at 0.200 for all species, and species were grouped spatially by habitat preference to create groundfish distributions. Two groups were created and much like the nearshore groups, the first group had species that show fidelity to hard substrates and the other group was comprised of primarily soft bottom species.

Distributions of most pelagic species, aside from salmonids, were mapped based on scientific articles, Milton Love's CMTYWKAFFPC, and expert knowledge from NOAA, ODFW, WDFW, and Tribal biologists. Pacific herring spawning areas in Yaquina Bay, OR were compiled from ODFW survey data spanning multiple years. Polygonal areas represent all known spawning habitat in Yaquina Bay as identified across all survey years. Spawning grounds for Pacific herring in Washington were included as-is from WDFW's PHS database. Surf smelt spawning areas in Washington were mapped by creating 50 m on/off buffers to match areas where survey data indicated spawning in the PHS database. Additional spawning areas were identified by Hoh and Quinalt biologists within Treaty Tribe reservation boundaries.

- 2015-10-01 00:00:00 - Process step to develop the FISHL (Fish Lines) feature class: Data sources include the Oregon Fish Habitat Distribution database from ODFW; expert knowledge from ODFW, WDFW, USFWS, NOAA, and Tribal biologists; the Statewide Washington Integrated Fish Distribution Database as part of WDFW's Priority Habitats and Species Database; Washington Pacific Lamprey Distribution Lines from USFWS, Salmonid Timing tables from WDFW and ODFW, and NOAA Fisheries reports. ODFW Fish Distribution data was used for the majority of FISHL in Oregon. Data was only included for current distributions of salmonids, and records marked as concurrence of professional opinion or observed fish, documented or otherwise. Data lines were flattened, such that if lines for five species overlapped, they were merged to a single common line that was then attributed with the five species and their recorded life history stage. The flattening of distribution lines created many extremely short but distinct combinations of species and/or life stages. In cases where these lines were less than 50 m in length, they were merged with adjoining lines and conflicts in life history stage were resolved using by using the most sensitive life stage denoted in the two distribution lines: spawning "is greater than" rearing "is greater than" migrating. The same process was used for Washington Fish Distribution data. The only difference being the records that were kept for inclusion. Only those records marked as "

documented" or "presumed" were included in the ESI. In many case fish distributions from both ODFW and WDFW data sets were used to populate polygonal layers for the FISH element. Eulachon distributions were mapped to the FISHL layer using reports of spawning runs from NOAA technical reports and expert knowledge. Some runs were also included from Tribal biologists expert knowledge, specifically the Quinault and Hoh tribes. Pacific lamprey and western brook lamprey distributions were mapped to existing lines based on fish distributions from ODFW, USFWS, and expert knowledge of ODFW, USFWS, WDFW, and Tribal biologists. Resident freshwater salmonids and other species were also mapped based on distributions from the Statewide Washington Integrated Fish Distribution database, including bull trout, rainbow trout, dolly varden, largemouth bass, and kokanee. The above digital and/or hardcopy sources were compiled by the project biologist to create the FISHL data layer.

- 2015-10-01 00:00:00 - The above digital and/or hardcopy sources were compiled by the project biologist to create the FISH and FISHL data layers. Depending on the type of source data, three general approaches are used for compiling each 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 on the type of source data for this data layer. 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 and FISHL data layers are 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/55726>

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.