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:

Ecological Marine Units: Water Quality

1.2. Summary description of the data:

A compilation of ocean water quality (temperature, salinity, and dissolved oxygen) data at ¼ degree spatial resolution for the entire United States Exclusive Economic Zone. The dataset is derived from the ESRI Ecological Marine Unit (EMU) dataset, which was assembled from non-supervised statistical clustering of over 52 million points from NOAA's World Ocean Atlas (2013) WoA database, an authoritative 57 year archive of global water column data. This derived dataset is divided into three separate point shapefiles, each representing either temperature (degrees Celsius), salinity (practical salinity units), or dissolved oxygen (mg/L). Values represent a climatological average. Each shapefile is formatted such that a single point location (i.e., unique associated latitude and longitude) contains a unique column entry for a given depth interval. Depth intervals are variable from 5 m near the surface to 100 m in the deeper regions (> 2000 m) for a total of 102 depth levels. All disclaimers provided by the original dataset authors apply to this derived dataset. For detail on these disclaimers, please refer to the following reference: Sayre, R., J. Dangermond, D. Wright, S. Breyer, K. Butler, K. Van Graafeiland, M.J. Costello, P. Harris, K. Goodin, M. Kavanaugh, N. Cressie, J. Guinotte, Z. Basher, P. Halpin, M. Monaco, P. Aniello, C. Frye, D. Stephens, P. Valentine, J. Smith, R. Smith, D.P. VanSistine, J. Cress, H. Warner, C. Brown, J. Steffenson, D. Cribbs, B. Van Esch, D. Hopkins, G. Noll, S. Kopp, and C. Convis. 2017. A New Map of Global Ecological Marine Units – An Environmental Stratification Approach. Washington, DC: American Association of Geographers. 36 pages.

1.3. Is this a one-time data collection, or an ongoing series of measurements?

1.4. Actual or planned temporal coverage of the data:

1.5. Actual or planned geographic coverage of the data:

W: -179.875, E: 179.875, N: 74.625, S: -17.375

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:

2.2. Title:
Metadata Contact

2.3. Affiliation or facility:

2.4. E-mail address:

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:

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:

- 2018-08-01 00:00:00 - (1) ESRI Ecological Marine Units data clipped to the boundaries of the United States Exclusive Economic Zone were provided by Keith VanGraafeiland (ESRI). Data were provided in a large point shapefile format with multiple points associated with a single latitude and longitude location. Original attribute fields included those representing depth, unique ecological marine units, nutrients (nitrates, phosphates, silicates), temperature, salinity, dissolved oxygen, among other related fields. (2) Data were re-shaped into a single point shapefile for each parameter (i.e., temperature, salinity, dissolved oxygen). These shapefiles contain a unique point representing each single latitude and longitude location. Attribute fields for parameters at depth were added for each point within the shapefile. These fields were derived from the original dataset and represent the given parameter within each depth interval (e.g., DOmgL_001-DOmgL_102 wherein DOmgL_001 represents dissolved oxygen (mg/L) for waters between 0 and 5 m depth). Depth bins: Depth Bin # Bottom Depth of Bin (m) 1 -5 2 -10 3 -15 4 -20 5 -25 6 -30 7 -35 8 -40 9 -45 10 -50 11 -55 12 -60 13 -65 14 -70 15 -75 16 -80 17 -85 18 -90 19 -95 20 -100 21 -125 22 -150 23 -175 24 -200 25 -225 26 -250 27 -275 28 -300 29 -325 30 -350 31 -375 32 -400 33 -425 34 -450 35 -475 36 -500 37 -550 38 -600 39 -650 40 -700 41 -750 42 -800 43 -850 44 -900 45 -950 46 -1000 47 -1050 48 -1100 49 -1150 50 -1200 51 -1250 52 -1300 53 -1350 54 -1400 55 -1450 56 -1500 57 -1550 58 -1600 59 -1650 60 -1700 61 -1750 62 -1800 63 -1850 64 -1900 65 -1950 66 -2000 67 -2100 68 -2200 69 -2300 70 -2400 71 -2500 72 -2600 73 -2700 74 -2800 75 -2900 76 -3000 77 -3100 78 -3200 79 -3300 80 -3400 81 -3500 82 -3600 83 -3700 84 -3800 85 -3900 86 -4000 87 -4100 88 -4200 89 -4300 90 -4400 91 -4500 92 -4600 93 -4700 94 -4800 95 -4900 96 -5000 97 -5100 98 -5200 99 -5300 100 -5400 101 -5500 102 -6000

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:
- 1.3. Is this a one-time data collection, or an ongoing series of measurements?
- 1.4. Actual or planned temporal coverage of the data
- 1.7. Data collection method(s)
- 2.1. Point of Contact Name
- 2.4. Point of Contact Email
- 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
- 7.2. Name of organization of facility providing data access
- 7.2.1. If data hosting service is needed, please indicate
- 7.3. Data access methods or services offered
- 7.4. Approximate delay between data collection and dissemination
- 8.1. Actual or planned long-term data archive location
- 8.2. Data storage facility prior to being sent to an archive facility
- 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/66137

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://marinecadastre.gov/downloads/data/mc/EMUWaterQuality.zip
https://marinecadastre.gov/oceanreports/

7.3. Data access methods or services offered:

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):
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.