

*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:**

National Estuarine Research Reserve System - NERRS - Water Quality Data

### **1.2. Summary description of the data:**

Water quality observations made over long time periods can provide important feedback to scientists and to local, state, and national resource managers about actions taken to manage, protect, and restore estuaries. They also provide valuable information for evaluating the impacts of environmental change on coastal habitats and species. There are at least four water quality stations at each National Estuarine Research Reserve. Each station is designed to characterize long-term variability and short term changes in environmental conditions. Data are collected with data loggers at fifteen minute intervals and instruments are deployed continuously and year round where possible. Water quality parameters collected include: water temperature, specific conductivity, salinity, percent saturation of dissolved oxygen, dissolved oxygen concentration, pH, depth, and turbidity. Chlorophyll fluorescence is an optional parameter and pressure corrected water depth is a calculated value. The National Estuarine Research Reserves is a network of 28 reserves protected for long-term research, ecosystem monitoring, education, and coastal stewardship. Established by the Coastal Zone Management Act, the reserve system is a partnership program between NOAA and the coastal states. NOAA provides funding, national guidance, and technical assistance. Each reserve is managed on daily basis by a lead state agency or university with input from local partners. These data are collected as part of the NERRS System-Wide Monitoring Program - SWMP, which includes: 1. abiotic indicators of water quality and weather; 2. biological monitoring; and 3. watershed, habitat, and land use mapping. Data were collected under individual Reserve NOAA grant/cooperative agreements and managed by the CDMO under NOAA grant/cooperative agreement #NA17NOS4200104 (2017) and prior grants. For more information on Reserve locations and programs, please visit [www.nerrsdata.org](http://www.nerrsdata.org) or [www.nerrs.noaa.gov](http://www.nerrs.noaa.gov).

### **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:**

1995-01-01 to null

**1.5. Actual or planned geographic coverage of the data:**

W: -160.4, E: -62.4, N: 61.648, S: 17.706

**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:**

Jeremy Cothran

**2.2. Title:**

Metadata Contact

**2.3. Affiliation or facility:**

**2.4. E-mail address:**

jeremy.cothran@gmail.com

**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):*

Lineage Statement:

Data were run through automated quality assurance/quality control (QAQC) checks for sensor range, missing, or garbled data. Sensors are calibrated per manufacturer's instructions and CDMO protocols. Field conditions are noted at equipment deployment and retrieval. Deployments are limited to a maximum of four weeks. Post-deployment calibration checks are also conducted and noted per the manufacturer's instructions and CDMO protocols. Additional QAQC is performed by Reserve staff and the CDMO as described at: [www.nerrsdata.org/data/qaqc.cfm](http://www.nerrsdata.org/data/qaqc.cfm).

**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):**

All NERR SWMP data incur primary data QAQC (automated checks) at the CDMO within one week of data retrieval as the provisional data are ingested into the CDMO database. The data are then emailed back to the Reserve where Reserve staff use tools provided by the CDMO, Microsoft Excel macros, to perform secondary QAQC on the data. Data that have been through secondary QAQC are submitted back to the CDMO and ingested into the database quarterly and again annually; these data are posted as provisional plus. After annual submission to the CDMO is complete, the data undergo final tertiary QAQC by the CDMO. The data and its accompanying metadata documentation are checked for completeness before dissemination as authenticated historical data via the CDMO Online Data Information Server at [www.nerrsdata.org](http://www.nerrsdata.org). Processing/QAQC stages are clearly denoted within the data file transmission and are ongoing, the process date given below reflects the years this metadata record was created.

**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
- 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/47713>

**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](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:**

<http://cdmo.baruch.sc.edu>

**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):**

**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.*