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:

Water temperature, salinity, and others collected by CTD from NOAA Ship Nancy Foster in the Caribbean Sea and Southern Gulf of Mexico from 2016-05-10 to 2016-06-15 (NCEI Accession 0210506)

1.2. Summary description of the data:

This dataset contains sea water property (profile) data taken by Conductivity, Temperature, Depth (CTD) from NOAA Ship Nancy Foster during two merged collaborative fisheries oceanography surveys (described in detail below). Data cover 2016-05-10 to 2016-06-15 period. The vessel's Sea-Bird Electronics (SBE) 911plus CTD system was operated at 119 discrete station locations along the survey track. At each location, the CTD package was lowered from the surface to a predetermined depth, sampling continuously. The CTD was configured with a pressure sensor, dual temperature, conductivity, and dissolved oxygen sensors, a chlorophyll a (chl_a) fluorometer, a colored dissolved organic matter (CDOM) fluorometer, and an altimeter. The sensor package was attached to a frame configured with a 24-bottle water sampler and 10-liter Niskin water sampling bottles.

The raw CTD data were post-processed to a final state using the SBE Data Processing Software package (Windows-based, publicly available at www.seabird.com). The specific subroutines applied to the data are outlined in the header of each ascii data file found in the dataset (.cnv files). The header of each file also includes the time and location of the cast. In addition to the ascii data in this data submission, .jpg plots of each CTD cast have also been included. These data were not calibrated to bottle samples and are considered final.

The measured and derived parameters in this dataset are:

Time of Cast (elapsed from start, s) Pressure (Digiquartz, db) Temperature (from primary sensor, ITS-90, deg C) Temperature (from secondary sensor, ITS-90, deg C) Conductivity (from primary sensor, S/m) Conductivity (from secondary sensor, S/m) Dissolved Oxygen Raw Voltage (from primary sensor, SBE 43, 0-5 VDC) Dissolved Oxygen Raw Voltage (from secondary sensor, SBE 43, 0-5 VDC) CDOM Relative Fluorescence (WET Labs CDOM Fluorometer, 0-5 VDC) CHL_A Relative Fluorescence (WET Labs ECO-

AFL Fluorometer, 0-5 VDC) Altimeter (when in range, depth off the bottom, m) Depth (in salt water, m) Density (from primary sensors, sigma-theta, kg/m^3) Density (from secondary sensors, sigma-theta, kg/m^3) Potential Temperature (from primary sensors, ITS-90, deg C) Potential Temperature (from secondary sensors, ITS-90, deg C) Sound Velocity (from primary sensors, Chen-Millero, m/s) Sound Velocity (from secondary sensors, Chen-Millero, m/s) Dissolved Oxygen (from primary sensor, SBE 43, ml/l) Dissolved Oxygen (from primary sensor, SBE 43, mg/l) Dissolved Oxygen (from primary sensor, SBE 43, umol/l) Dissolved Oxygen (from primary sensor, SBE 43, umol/kg) Dissolved Oxygen (from secondary sensor, SBE 43, ml/l) Dissolved Oxygen (from secondary sensor, SBE 43, mg/l) Dissolved Oxygen (from secondary sensor, SBE 43, umol/l) Dissolved Oxygen (from secondary sensor, SBE 43, umol/kg) Salinity (from primary sensors, Practical, PSU) Salinity (from secondary sensors, Practical, PSU)

The NOAA fleet cruise IDs for these two surveys are NF-16-02 and NF-16-03. However, the CTD were processed together and the cruise ID NF-16-02 refers to data from both cruises. A completed cruise track and project overviews are presented in the included supporting document: NF1602_and_NF1603_CTD_overview.pdf.

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:
2016-05-10 to 2016-06-15

1.5. Actual or planned geographic coverage of the data:
W: -87.36117, E: -63.39133, N: 24.004, S: 17.72667

1.6. Type(s) of data:
(e.g., digital numeric data, imagery, photographs, video, audio, database, tabular data, etc.)
Table (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.)
Instrument: SBE 911plus CTD
Platform: Nancy Foster (NF)

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:
Ryan H Smith

2.2. Title:
Metadata Contact

2.3. Affiliation or facility:

2.4. E-mail address:
ryan.smith@noaa.gov

2.5. Phone number:
(305) 361-4328

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:
Ryan H Smith

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 sea water property (profile) data submission comprises the final Conductivity, Temperature, Depth (CTD) dataset collected aboard the NOAA Ship Nancy Foster during two merged collaborative fisheries oceanography surveys (described in detail below) conducted from April 28, 2016 to June 25, 2016. The vessel's Sea-Bird Electronics (SBE) 911plus CTD system was operated at 119 discrete station locations along the survey track. At each location, the CTD package was lowered from the surface to a predetermined depth, sampling continuously. The CTD was configured with a pressure sensor, dual temperature, conductivity, and dissolved oxygen sensors, a chlorophyll a (

chl_a) fluorometer, a colored dissolved organic matter (CDOM) fluorometer, and an altimeter. The sensor package was attached to a frame configured with a 24-bottle water sampler and 10-liter Niskin water sampling bottles.

Process Steps:

- The raw CTD data were post-processed to a final state using the SBE Data Processing Software package (Windows-based, publicly available at www.seabird.com). The specific subroutines applied to the data are outlined in the header of each ascii data file found in the dataset (.cnv files). The header of each file also includes the time and location of the cast. In addition to the ascii data in this data submission, .jpg plots of each CTD cast have also been included. These data were not calibrated to bottle samples and are considered final. (Citation: NF1602 and NF1603 CTD overview)

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:

- 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
- 7.3. 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
- 8.3. 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/69335

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:
NOAA National Centers for Environmental Information (NCEI)

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

7.2.2. URL of data access service, if known:
https://www.ncei.noaa.gov/archive/archive-management-system/OAS/bin/prd/jquery/accession/dow

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):
National Centers for Environmental Information - Silver Spring, Maryland - Silver Spring, MD

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.