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: Canadian Ice Breaker, Sir Wilfred Laurier Cruise - Ice Characterization

1.2. Summary description of the data:

NOAA's Office of Response and Restoration lead a multi-agency research team including the Coastal Response Research Center (CRRC), students from the University of New Hampshire (UNH) and scientists from the Bureau of Safety and Environmental Enforcement (BSEE), the Environmental Protection Agency (EPA), and the United States Coast Guard (USCG) designed experiments to evaluate the capabilities of various technologies such as multispectral and thermal sensors, to characterize oil in ice environments. This information is used to help responders understand the particular strengths of different technologies to characterize oil in broken ice environments.

This project involved 2 separate experiments which were conducted on near the shore of the Beaufort Sea in Alaska at the DOE testing facility at Oliktok Point and at the Kuparuk River between May 31st and June 6th and aboard the Canadian Coast Guard Cutter Sir Wilfrid Laurier between July 25th - 28th, 2022. The findings of these studies will be used to support spill response and assessment activities in open water ice environments throughout the navigable waters of the US.

- **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:** 2022-05
- **1.5. Actual or planned geographic coverage of the data:** Canadian Ice Breaker, Sir Wilfred Laurier Cruise

1.6. Type(s) of data:

(e.g., digital numeric data, imagery, photographs, video, audio, database, tabular data, etc.) Zipfiles, TIFF Maps

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:** Office of Response and Restoration (ORR)
- **2.2. Title:** Metadata Contact
- **2.3. Affiliation or facility:** Office of Response and Restoration (ORR)
- 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?

No

4.2. Approximate percentage of the budget for these data devoted to data management (specify percentage or "unknown"):

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):

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): Not Available

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)
- 2.4. Point of Contact Email
- 3.1. Responsible Party for Data Management

- 5.1. Processing workflow of the data from collection or acquisition to making it publicly accessible

- 7.4. Approximate delay between data collection and dissemination

- 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/68982

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?

No

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? No

7.1.2. If there are limitations to public data access, describe how data are protected from unauthorized access or disclosure:

None

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://www.diver.orr.noaa.gov/

7.3. Data access methods or services offered:

RDC Oil in Ice data can be obtained through the DIVER portal:

https://www.diver.orr.noaa.gov/

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)

OTHER

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 Silver Spring, MD
- **8.3. Approximate delay between data collection and submission to an archive facility:** TBD

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.