

*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:**

AFSC/MML: Acoustics long-term passive monitoring using moored autonomous recorders in the Bering, Chukchi, and Western Beaufort Seas, 2007-2023

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

The Marine Mammal Laboratory (MML) has deployed long-term passive acoustic recorders in various locations in Alaskan waters and in the High Arctic to determine spatio-temporal distribution of marine mammals as well as environmental and anthropogenic noise. Following the timing of peak calling among the various long-term recorders may provide some insight into finer-scale movements of cetaceans throughout the Bering, Chukchi, and Beaufort Seas as well as in the Gulf of Alaska. Changes in ambient noise levels can also be tracked. Recordings are available since 2007 in the Bering and Beaufort Seas, since 2010 in the Chukchi, since 2019 in the Gulf of Alaska, and from 2008-2012 in Fram Strait. The majority of these recorders were deployed on MML subsurface moorings, although several have been deployed on the oceanographic moorings of other researchers. Several different types of autonomous passive acoustic recorders have been deployed, most for one year. Recording parameters varied among instrument types and have evolved among projects. The majority of these recorders and deployments were funded by the Bureau of Ocean Energy Management (BOEM); however, funding in recent years has come from the Office of Naval Research (Marine Mammals and Biology Program), NMFS Office of Protected Resources, and the NMFS Office of Science and Technology (including the Ocean Acoustic Program).

**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:**

2007 to 2014

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

W: -174.8, E: -0.5, N: 78.9, S: 53.5

Eastern Bering, Chukchi, and Western Beaufort Seas, with a couple recorders in Fram Strait

**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.)*

**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:**

Catherine Berchok

**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"):

0

## 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:

Three different types of passive acoustic recorders have been used: AURALs (Autonomous Underwater Recorder for Acoustic Listening, Multi-Électronique, Inc., Rimouski, QC), EARs (Ecological Acoustic Recorders, in collaboration with Drs. Marc Lammers and Whitlow Au, Hawaii Institute of Marine Biology, Univ. of HI, Kaneohe, HI), and Haruphones (Haru Matsumoto, CIMRS/NOAA, Newport, OR)); the majority have been AURALs. Recording parameters vary among instrument types and have evolved among projects. Most recorders are deployed for one year and are duty cycled to record for a full year. However, several recorders were deployed short-term (1 week to 1 month) in the Beaufort Sea and have higher duty cycles/sampling rates. Sampling rates range from 2 kHz-40kHz (majority 8kHz or 16kHz), and all recorders are duty cycled from 23-97% (majority around 30%) on a cycle period of 20min-5hrs. The majority of these recorders were deployed on MML subsurface moorings, although several have been deployed on the subsurface oceanographic moorings of other researchers.

These moorings include the Pacific Marine Environmental Laboratory/NOAA (Phyllis Staben) moorings along the 70m isobath in the Bering Sea, the University of Alaska, Fairbanks (Steve Okkonen) moorings off Barrow, AK, one Woods Hole Oceanographic Institution (Robert Pickart) mooring in the Chukchi Sea, the AIM-1 site on the Chukchi Plateau (Institute of Ocean Sciences - Fisheries and Oceans Canada/ Humfrey Melling), and two sites in the Fram Strait: Alfred Wegener Institute for Polar and Marine Research (Dirk Kalmbach) and University of Oslo (Øystein Wiig). After recorder is retrieved, data are extracted, converted into ten-minute wave files, and given standardized filenames that provide the location, recorder type, and field time information. Further information can be obtained via the following final reports: <http://www.afsc.noaa.gov/nmml/PDF/BOWFEST-2013-Final-Report.pdf>.

Process Steps:

- NA

**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):

Recordings are analyzed for presence of marine mammal vocalizations. Questionable or

ambiguous acoustic detections are analyzed in more detail, and if necessary, clips are sent to colleagues for confirmation or identification.

## 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)
- 2.1. Point of Contact Name
- 2.4. Point of Contact Email

### 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/17343>

### 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?

Yes

#### 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://data.nodc.noaa.gov/cgi-bin/iso?id=gov.noaa.nodc:0143303>

**7.3. Data access methods or services offered:**

Data can be found at <http://data.nodc.noaa.gov/cgi-bin/iso?id=gov.noaa.nodc:0143303>

**7.4. Approximate delay between data collection and dissemination:**

Unknown

**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)*

NCEI\_CO

**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 Marine Mammal Laboratory - Seattle, WA

**8.3. Approximate delay between data collection and submission to an archive facility:**

Unknown

**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*

IT Security and Contingency Plan for the system establishes procedures and applies to the functions, operations, and resources necessary to recover and restore data as hosted in the Western Regional Support Center in Seattle, Washington, following a disruption.

**9. Additional Line Office or Staff Office Questions**

*Line and Staff Offices may extend this template by inserting additional questions in this section.*