

*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:**

A Dataset from Bio-Loggers Deployed on Adult Bearded Seals (*Erignathus barbatus*) in Kotzebue Sound, Alaska, USA (2009-2012)

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

Bearded seals (*Erignathus barbatus*) are one of the most important subsistence resources for the indigenous people of coastal northern and western Alaska, as well as key components of Arctic marine ecosystems. Yet, relatively little about their abundance, seasonal distribution, migrations, or foraging behaviors has been documented scientifically. Ice-associated seal populations may be negatively impacted by offshore oil and gas development as well as by climate change. Our ability to predict impacts, however, is limited by inadequate knowledge of seal population structure and foraging ecology. By working cooperatively with Alaska Native subsistence hunters we developed methods for live- capturing bearded seals in the Chukchi Sea using nets set in the shallow coastal waters where bearded seals were foraging. Capture efforts were based out of Kotzebue and various locations in the North Slope Borough from Wainwright to Barrow in June and July from 2009 to 2012. In all, 7 seals were caught (2 adults and 5 sub-adults; 4 males and three females; ranging in length and weight from 159 cm and 116 kg to 216 cm and 253 kg), all from Kotzebue Sound. Each seal was released with two different types of bio-logging devices: the SPOT5, attached to a rear flipper, provided information on the timing of hauling out and on the seal's location for up to three years. The MK10, glued to the top of a seal's head, provided the same information as well as data on the timing and depths of dives. MK10 deployments remained active up to ten months and were shed from the seal during the annual molt.

The data files within this dataset represent the 'raw' data obtained from the Wildlife Computers data portal. Each deployment (unique tag id + animal id combination) is provided as a zipped archive. The root folder also includes additional documentation. The various files and detailed column descriptions are described in the 'Spreadsheet-File-Descriptions.pdf' which was downloaded from Wildlife Computers (<https://wildlifecomputers.com/support/downloads/>). The '00\_kotzeb0912\_get\_data.Rmd' file is an RMarkdown file that provides code and documentation of the data retrieval process. The corresponding '00\_kotzeb0912\_get\_data.html' file is autogenerated from the

RMarkdown file.

**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:**

2009 to 2012

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

Bering Sea, Chukchi Sea, Beaufort Sea, Arctic Ocean

W: -174, E: -143, N: 74, S: 59

**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: Animal Mounted Instrument - Argos Satellite Transmitter

Platform: Animal Based Platform - Mammal - Phocid

Physical Collection / Fishing Gear: N/A

**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:**

Josh London

**2.2. Title:**

Metadata Contact

**2.3. Affiliation or facility:**

**2.4. E-mail address:**

josh.london@noaa.gov

**2.5. Phone number:**

206-526-4296

**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:**

Stacie Hardy

**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?**

Yes

**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):*

Lineage Statement:

During June and July of 2009-20012, NOAA researchers and Alaska Native hunters captured, instrumented and released 7 adult or sub-adult bearded seals with satellite-linked dive records in Kotzebue Sound, Alaska. Capture efforts also occurred near Wainwright, Peard Bay, and Utqiagvik. Adult age class animals were targeted. Although, there is uncertainty associated with field classification of age in seals. Satellite telemetry devices were attached to the hair of the back of the seals using fast-setting epoxy and to the rear inter-digital flipper webbing with two posts and holes. All data provided are included as zipped archives that contain a variety of files processed on the Wildlife Computers Data Portal. The specific files included are dependent upon the tag hardware, firmware, and programming options selected. The files and column heading descriptions are provided in the 'Spreadhseet-File-Descriptions.pdf' which was downloaded from the Wildlife Computers web site (<https://wildlifecomputers.com/wp-content/uploads/manuals/Spreadsheet-File-Descriptions.pdf>) on May 20 2019. The programming specifications and tag details are provided in either a \*.htm or \*.rpt file. These are the files created at the time the tag was programmed. The included '00\_kotzeb0912\_get\_data.Rmd' is an R Markdown file that describes the process for downloading and renaming files from the Wildlife Computers Data Portal. The '00\_kotzeb0912\_get\_data.html' file is created when this R Markdown file is run

Process Steps:

- The included R Markdown file '00\_kotzeb0912\_get\_data.Rmd' and the

corresponding HTML file '00\_kotzeb0912\_get\_data.html' provide the R code and inline documentation describing the process by which the data were obtained from the Wildlife Computers Data Portal

**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):**

Limited quality control procedures have been employed. This dataset is an archive of the processed output from the Wildlife Computers data processing software. These tags were deployed on free-ranging, wild animals in challenging environments. In all cases, additional quality control procedures and evaluation from experts familiar with the tags, programming and species will be required.

## 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?**

Yes

**6.1.1. If metadata are non-existent or non-compliant, please explain:**

**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/47176>

**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:**

Alaska Fisheries Science Center (AFSC)

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

**7.2.2. URL of data access service, if known:**

[https://access.afsc.noaa.gov/data-zips/47176\\_BeardedSeals\\_Kotz.zip](https://access.afsc.noaa.gov/data-zips/47176_BeardedSeals_Kotz.zip)

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

The data set is intended to be archived with the US Animal Telemetry Network and the Data Observation Network for Earth (DataONE). Once the archival process is complete and verified, the data set will be publicly available.

**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:**

data not automatically processed

**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)*

WORLD\_DATA\_CENTER\_WDC\_FACILITY

**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):**

Alaska Fisheries Science Center - 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.*