

*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/NMML: Bowhead Whale Aerial Abundance Survey off Barrow, Alaska, Spring 2011

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

Aerial photographic surveys for bowhead whales were conducted near Point Barrow, Alaska, from 19 April to 6 June in 2011. Approximately 4,594 photographs containing 6,801 bowhead whale images were obtained (not accounting for resightings). The 2011 field season was very successful: we flew 36 out of 49 available days and conducted 49 flights in that time; we were grounded due to weather on 13 days. The longest period of time that we were grounded due to weather (low ceilings/fog) was three days. This occurred after the migration had slowed down, during a time when few whales passed the ice perches according to the ice-based visual survey. The 2011 migration was steady with several peaks (30 April, 4-5 May, 12 May), and then the migration rate slowed down considerably after 14 May. The photographs taken in 2011 are a significant contribution to the bowhead whale photographic catalogue. They will be used to calculate a population estimate that may be used for comparison with the 2011 ice-based estimate and will provide better precision in estimates of bowhead whale life-history parameters.

**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:**

2011-04 to 2011-06

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

W: -165, E: -148, N: 72, S: 68

Chukchi and Beaufort Seas off Barrow, AK.

**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:**

Julie Mocklin

**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"):**

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:

The 2011 spring aerial abundance survey was conducted jointly by the North Slope Borough Department of Wildlife Management (NSB-DWM) and the National Marine Mammal Laboratory (NMML). Methodology was similar to earlier studies (Koski et al. 1992; Angliss et al. 1995). Surveys were conducted in an Aero Commander 690 with bubble windows in the two forward observer positions. The aircraft flew at an average air speed of ~217km/h (117kts) and altitude of 200m (656ft), and flew directly over bowhead whales during photographic passes. Photographs were taken with a Canon Mark III-1DS digital camera affixed with a Zeiss 85mm fixed f/1.4 Planar T\* lens pointed directly downward through the aircraft's ventral camera port that was covered with optical quality glass. Shutter speed was typically 1/2500th second or faster. Aircraft altitude was recorded every 2 seconds with a portable Garmin 76CSx GPS unit and saved on a laptop computer. Robogeo software was used to embed latitude, longitude and altitude into the Exif metadata of each photograph. Calibration targets of known dimensions were photographed twice during the season, at the beginning and end of the survey. These calibration photographs were taken from the same altitudes flown during survey effort. Additionally, each flight began with a photographic pass over a table of known dimensions at a set altitude of 152m (500ft) to act as a daily check of altimeter performance.

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):**

After each survey day, data is quality controlled by checking all entered information from that day. All weather, sighting, group number, position, and comment data are checked for errors and spelling.

**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/17334>

**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:0133937>

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

Data can be accessed at <http://data.nodc.noaa.gov/cgi-bin/iso?id=gov.noaa.nodc:0133937>.

**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\_MD

**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.*