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:

Alaska Harbor Seal Glacial Surveys

1.2. Summary description of the data:

Floating glacial ice serves as a haul-out substrate for a significant number (10-15%) of Alaskan harbor seals, and thus surveying tidewater glacial fjords is an important component of statewide efforts to estimate seal abundance. Surveys conducted during pupping suggest that glacial haul outs have higher than average productivity and thus may serve as important source populations statewide. The availability of ice for hauling out varies with seasonal glacial dynamics, but over decades of climate change most tidewater glaciers are now retreating toward eventual grounding with many already ceasing to calve ice into the water. Compounding glacial retreat and thinning is the trend at most of these sites toward increasing tourism and a low compliance of tour vessels to seal approach guidelines and regulations. It is thus important to track glacial populations over the long-term especially as various impacts may degrade seal habitat leading to fewer glacial seals and potential impacts to the population state-wide.

There are currently 28 glacial sites that have at least one actively calving tidewater glacier and in turn seals that haul out on the ice during the seals' molting period, when most surveys have occurred. Due to concerns about vessel disturbance, Disenchantment and Icy Bays have been surveyed during molting almost annually between 2001-2011 (ex 2003); surveys occurred during pupping and molting in 2004 and 2005, and have occurred just during molting apx. every other year since 2011. Johns Hopkins Inlet in Glacier Bay has been surveyed annually using these methods since 2007, with surveys occurring during both pupping and molting. The remaining 25 sites have been surveyed on an opportunistic schedule (based on weather and aircraft availability), which for most sites equates to about every 2-3 years. Some of the smallest sites have been surveyed on a 4-5 year schedule. These schedules will likely continue with more abundant sites in Prince William Sound (e.g., College Fjord and Columbia) and Southeast Alaska (Tracy Arm, Endicott Arm, LeConte Bay, and Glacier Bay) having higher priority and contingent on management concerns.

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:
2004 to 2011

1.5. Actual or planned geographic coverage of the data:
W: -150.5, E: -132, N: 61.5, S: 56.8
There are currently 25 glacial sites that have at least one actively calving tidewater glacier and in turn seals that haul out on the ice during the seals' molting period, when the surveys are focused.

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: Digital SLR Camera
Platform: Airplane
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:
John Jansen

2.2. Title:
Metadata Contact

2.3. Affiliation or facility:

2.4. E-mail address:
john.jansen@noaa.gov

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:
John Jansen

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):
Lineage Statement:
AFSC's current methods for surveying glacial fjords were first used in 2004, employing a cost-effective technique of high-resolution, vertical photography, using over-the-counter digital SLR cameras adapted to shoot vertically from a plane suitable for flying transects at 1000 feet in sometimes narrow glacial fjords. The resulting high-quality photographs (<4cm per pixel), which represent a sample of the ice habitat, produce spatial maps of seals which can then be used via statistical models to estimate density and ultimately abundance (with standard error). This technique, known as the LATTE method (short for Low AlTitude Transect Estimation), has been incrementally improved with higher resolution cameras (from 10 to 25 MP), faster, more accurate GPS's to aid in transect navigation, and a system that has a 3-camera, forward motion-compensating camera system to increase coverage and reduce flight time.

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):
Data represented in this dataset are the result of a culmination of multiple observations, data collection protocols and spatial analysis. Through the process various checks are performed to insure data are of the highest quality. These include, but are not limited to: collection of geographic coordinates with high resolution GPS units, high resolution navigational systems on board the aircraft, the use of high resolution DSLR cameras and

quality lenses, synching camera time with GPS provided time, and counting of photographs on large, high quality screens with modern software. Despite these quality control checks, users of these data must understand the data are often collected under challenging field conditions and additional processing and testing must be done before these data can be used appropriately.

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/17348

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?

Yes

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

The data set is in the process of being archived with the NOAA National Centers for Environmental Information. Once the archival process is complete and verified, the data set will be publicly available.

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:

not needed; planned for NCEI-MD

7.2.2. URL of data access service, if known:

http://www.nmfs.noaa.gov/data_not_yet_available

7.3. Data access methods or services offered:

The data set is in the process of being archived with the NOAA National Centers for Environmental Information. 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 are 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)

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):

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.