

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:

Genetics approaches to determine population vital rates

1.2. Summary description of the data:

This project addresses major gaps in knowledge on vital rates such as age to maturity, survival, sex ratios, and population size (including the males) which have made it difficult to conduct meaningful population and risk assessments. Although vital rates are difficult to observe directly, genetic analysis provides a practical approach to understand these processes. Understanding the proportion of males to females in any population has important consequences for population demographic studies. Using hatchling and maternal DNA fingerprints, one can deduce the paternal genotypes from one to many fathers per clutch. The resulting genotypes represent individual males that are actively breeding in the population. This means that males can effectively be sampled without ever having seen them or having to catch them in the field. The nesting population on St. Croix is an important US Index Population for leatherbacks that has been intensively monitored using a variety of Capture-Mark-Recapture (CMR) methods since 1981 (Dutton et al. 2005). Due to the richness and consistency of the demographic data, this population offers unique opportunities for research and development of tools & approaches for getting at vital rate parameters that are needed to improve stock assessments in sea turtles, as identified in the recent NRC Report (2010). These approaches can then be applied to other populations, e.g. the critically endangered Pacific leatherback. We have developed non-injurious in-situ techniques to mass sample large numbers of live hatchlings for genetic fingerprinting as part of a long term CMR experiment, and also demonstrated the feasibility of using hatchling genotyping and kinship analysis to determine the genotypes and number of breeding males in the population (Stewart & Dutton 2011). We have sampled a total of 17,087 hatchlings between 2009-2011 as part of this project, will continue field effort in 2012 toward the goal of a minimum sampling of 50,000 hatchlings over the next 2-4 years. At an appropriate time in the future, we will use high throughput genotyping methods currently being developed in the next 2-4 years to create a database of individual hatchling identifications (?genetic tags?) that will be compared to those first time nesters sampled annually into the future. This project will also genotype a subset of the

samples collected in 2011 to assess males in two consecutive seasons for a more accurate census of the number of males in the breeding population and to determine the extent of male fidelity and breeding periodicity. Objectives include 1) mass-tagging of leatherback hatchlings for Capture-Mark-Recapture (CMR) studies to determine age at first reproduction and age-specific survival rates and 2) application of kinship approaches to reconstruct parental genotypes from mother-offspring comparison to census males, determine operational sex ratios (OSR) of the breeding population, reproductive success of males and mating system.

1.3. Is this a one-time data collection, or an ongoing series of measurements?

Ongoing series of measurements

1.4. Actual or planned temporal coverage of the data:

2010 to Present

1.5. Actual or planned geographic coverage of the data:

Pacific and Atlantic oceans

1.6. Type(s) of data:

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

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: Computer

Platform: Desktop

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:

Peter H Dutton

2.2. Title:

Metadata Contact

2.3. Affiliation or facility:

2.4. E-mail address:

peter.dutton@noaa.gov

2.5. Phone number:

(858) 546-5636

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:

Peter H Dutton

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:

All steps from sample collection, DNA extraction and genetic analysis are tracked and standard QA protocols are followed. Standard Operating Procedure documents are on file

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):**

Standard laboratory QA/QC procedures are performed. Standard Operating Procedure (SOP) documents are on file for various steps

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/18744>

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:

Southwest Fisheries Science Center (SWFSC)

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

7.2.2. URL of data access service, if known:

<https://swfsc.noaa.gov/mmttd>

7.3. Data access methods or services offered:

Contact PI

7.4. Approximate delay between data collection and dissemination:

1 yr

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):**

Southwest Fisheries Science Center - La Jolla, CA

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

4 weeks

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

Stored in a secure server.

9. Additional Line Office or Staff Office Questions

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