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/RACE/SAP/Pathobiology: 2015 Bitter crab disease prevalence in immature Chionoecetes spp. at 6 index sites in eastern Bering Sea

1.2. Summary description of the data:
This dataset contains crab data from a field survey of Chionoecetes bairdi and C. opilio collected at six designated index sites in the Bering Sea during the 2015 NOAA/NMFS/AFSC/RACE crab-groundfish bottom trawl surveys of the eastern Bering Sea. Each of the six index sites were made up of approximately 10 survey stations and chosen based on historical incidences of the parasite Hematodinium sp., the causative agent of Bitter Crab Syndrome (BCS). Blood samples were taken from collected crab using non-lethal methods and were preserved in 100% ethanol. Samples were tested in a laboratory with a DNA test to detect the presence of the parasite Hematodinium sp., the causative agent of Bitter Crab Syndrome (BCS) to evaluate any changes in intensity of disease within the index sites that may provide information as to how the disease is moving or changing within EBS crab populations. The data includes sampling year, index site, species, crab morphometrics, Hematodinium sp. parasite presence/absence based on PCR assay results.

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:
2015

1.5. Actual or planned geographic coverage of the data:
W: -176.5, E: -158, N: 60.5, S: 54
Eastern Bering Sea, Alaska

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:
Pam Jensen

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):

Process Steps:

- This dataset contains randomly chosen samples of crab collected from the annual NOAA/NMFS/AFSC/RACE crab-groundfish bottom trawl survey of the eastern Bering Sea continental shelf. The standard survey area, surveyed each year since 1975, encompasses a major portion of the eastern Bering Sea shelf between the 20 meter and 200 meter isobaths and from the Alaska Peninsula to the north of St. Matthew Island. The study area is divided into a grid with cell sizes of 20 x 20 nautical miles (37 x 37 kilometers). Sampling takes place within each 20 x 20 nautical mile grid cell. Each tow is one-half hour in duration, averaging 1.54 nautical miles (2.86 kilometers) - exact tow duration and distance fished for each haul can be found in RACEBASE.HAUL.

- Six index sites, composed of approximately 10 survey stations each, were preselected prior to the RACE crab-groundfish bottom trawl survey. The target sample size was 200 randomly chosen crabs (20 samples from each station).   The sex of the crab is identified (1 = Male, 2 = Female, 3 = Unknown, 9 = no sex reported for this crab specimen). Individual crab carapaces were measured (± 1 mm), exclu ding spines, and are reported as size. Null or blank fields in data represent no size information reported for crab specimen. Chela height is measured on right ch ela at greatest distance (± 0.1 mm) excluding spines. Null or blank fields in data rep resent no chela height information reported for crab specimen.

- Shell condition class serves as a semi-quantitative index of molt status and time in shell post-molt. Carapace shell condition was assigned to one of six classes according to specific criteria (0 = premolt or molting, 1 = soft and pliable, 2 = new hardshell both firm and clean, 3 = oldshell slightly worn, 4 = oldshell worn, 5 = very oldshell, 9 = no shell condition information reported for crab specimen).

- DNA was extracted using modified Ivanova et al. (2006) protocol.   Extracted DNA was assayed with two primer sets, targeting either 18S or ITS1 rDNA, to determ ine presence or absence of Hematodinium spp. Refer to metadata Point of Contact for PCR conditions. PCR Result is identified (0 = negative for Hematodinium DNA, 1 = positive for Hematodinium DNA, 3 = undetermined, at the limit of detection).

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):

unknown

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
- 7.2. Name of organization of facility providing data access

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/36057

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:
There are no legal restrictions on access to the data. They reside in public domain and can be freely distributed.

7.2. Name of organization of facility providing data access:

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

7.2.2. URL of data access service, if known:
https://console.cloud.google.com/storage/browser/_details/nmfs_odp_afsc/RACE/SAP/Pathobiology%3

7.3. Data access methods or services offered:
unknown

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:
no delay

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.