

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/EcoFOCI: NPRB project number 926: Assessing the condition of walleye pollock, *Theragra chalcogramma*, larvae in the eastern Bering Sea with muscle-based flow cytometry cell cycle analysis

1.2. Summary description of the data:

Walleye pollock are an important component of the eastern Bering Sea ecosystem due to their vast numbers and biomass and are of great commercial importance. Their recruitment in the eastern Bering Sea is not well understood but it is largely determined during the first year, so the larval stage may play a significant role. Starvation may contribute to the high and variable mortality that occurs during the larval stage so it is important to monitor and quantify it. This metadata describes data from laboratory and field studies conducted from 2009 to 2012 for NPRB project 926. The project completed the development of an assay using flow cytometric cell cycle analysis to assess the physiological condition of walleye pollock larvae, and applied it to field collected specimens. The use of RNA to improve the accuracy of the assay was also investigated, as well as the relationship between flow cytometric measurements and growth.

Results showed that the overall classification accuracy of the assay (healthy or unhealthy) ranged between 75 and 83% depending on the type of cross-validation testing. A nuclear RNA variable (the ratio of the number of S phase nuclei to the number of high nuclear RNA content G1 phase nuclei) improved overall classification accuracy by 11% compared to a model without it. Unhealthy walleye pollock larvae were present in the southeastern Bering Sea in 2009, and this was most likely the result of cold environmental conditions affecting prey availability and larval feeding. In 2010, no unhealthy larvae were detected. This may be the result of less spatial coverage and smaller collections of larvae than in 2009, given that the environmental conditions were similar between years.

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:

W: -171.1, E: -163.3, N: 57.4, S: 54.3

Bering Sea

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:

Kimberly Bahl

2.2. Title:

Metadata Contact

2.3. Affiliation or facility:

2.4. E-mail address:

kimberly.bahl@noaa.gov

2.5. Phone number:

206 526 4314

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:

Steve Porter

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:

PORTER, S. M., and K. M. BAILEY. 2013. Using measurements of muscle cell nuclear RNA with flow cytometry to improve assessment of larval condition of walleye pollock (*Gadus chalcogrammus*). Fish. Bull., U.S. 111:337-351.

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):

PORTER, S. M., and K. M. BAILEY. 2013. Using measurements of muscle cell nuclear RNA with flow cytometry to improve assessment of larval condition of walleye pollock (*Gadus chalcogrammus*). Fish. Bull., U.S. 111:337-351.

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)
- 7.2. Name of organization of facility providing data access
- 7.2.1. If data hosting service is needed, please indicate

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/12673>

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:

Contact Point Of Contact for data request form.

7.2. Name of organization of facility providing data access:

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

7.2.2. URL of data access service, if known:

https://console.cloud.google.com/storage/browser/_details/nmfs_odp_afsc/RACE/RPP/NPRB%20926%3

7.3. Data access methods or services offered:

Contact Distributor

7.4. Approximate delay between data collection and dissemination:

varies

7.4.1. If delay is longer than latency of automated processing, indicate under what authority data access is delayed:

Requires human identification and analysis of samples.

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)

TO_BE_DETERMINED

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:

varies

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

local and offsite backups

9. Additional Line Office or Staff Office Questions

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