

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:

Oyster Larval Survival Counts from Probiotic OY15 Experiments

### 1.2. Summary description of the data:

Environmentally-friendly methods for controlling microbial pathogenesis in aquaculture with probiotic bacteria are becoming increasingly preferred over use of chemical means, such as disinfectants or antibiotics. Recent research at the Milford Laboratory has shown that naturally-occurring bacteria isolated from the digestive glands of adult oysters, *Crassostrea virginica*, may be used as potential probiotic candidates in oyster larviculture. Probiotic candidate selection was based upon the Kirby Bauer Disc Diffusion Method, in which zones of inhibition suggested competitive exclusion of a known shellfish larvae pathogen (B183). In challenge studies, survival of 2-day old oyster larvae supplemented with probiotic candidate OY15 (*Vibrio* sp.) was similar ( $p < 0.3883$ ) to that of control larvae (no added bacteria), indicating no harmful effects. Further, addition of OY15 to oyster larvae challenged with B183 significantly improved survival ( $p < 0.0141$ ) compared to the pathogen alone. An in vitro study to determine the effects of OY15 or the pathogen B183 upon oyster hemocytes and their immune functions demonstrated immuno-stimulation of oyster hemocytes by OY15 and immuno-suppression by B183, suggesting an immuno-modulation mechanism for OY15.

### 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:

2006 to 2011

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

W: -73.053572, E: -73.053572, N: 41.212161, S: 41.212161

Oysters cultured, bled or spawned occurred at the Milford Laboratory with the above latitude and longitude.

### 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:**

Diane N Kapareiko

**2.2. Title:**

Metadata Contact

**2.3. Affiliation or facility:**

**2.4. E-mail address:**

diane.kapareiko@noaa.gov

**2.5. Phone number:**

203-882-6539

**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:**

Diane N Kapareiko

**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"):**

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:

Fisher's Island oysters spawned at the Milford Laboratory, and larval bioassays run with 4 treatments: no bacteria control, probiotic OY15, pathogen B183 (*Vibrio Corallilyticus*) and combination treatment with OY15+B183. Bacteria were dosed every other day and larvae subsamples were taken for survival counts.

**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 validation during data entry

## 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)

### 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/26979>

### 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:

Northeast Fisheries Science Center (NEFSC)

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

#### 7.2.2. URL of data access service, if known:

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

See Data Access Constraints

NEFSC Data Access Procedure:

1. Formal request in writing usually to the data owner/contact or Center Director;
2. Requester is contacted by data owner to review and verify the request content and details for data delivery options.
3. If data is confidential then owner will determine if the data may be released to the requester;
4. If data can be released, the data is downloaded and packaged for delivery electronically; or the requester may be directed to where the data is available online.

### 7.4. Approximate delay between data collection and dissemination:

6 months

#### 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)*

NO\_ARCHIVING\_INTENDED

#### 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):

NEFSC Milford Lab - Milford, CT

### 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*

Regularly-scheduled desktop and network backups for disaster recovery and contingency planning.

## 9. Additional Line Office or Staff Office Questions

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