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/GAP/McConnaughey: Trawlex Chronic Effects: Trawlex (1996) Macrofauna CPUE (count/hectare)

# 1.2. Summary description of the data:

The eastern Bering Sea has experienced rapid and intensive development of commercial trawl fisheries. Because of good record keeping and the relatively brief history of fishing it is possible to reconstruct the spatial and temporal patterns of exploitation. Previously unfished (UF) areas can be identified and directly compared with heavily fished (HF) areas to investigate long-term consequences for the benthos. Using this approach, macrofauna populations in a shallow (48 m average) soft-bottom area were studied during 1996.

# **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:

1996 to 1997

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

W: -162.455799, E: -159.664745, N: 58.07317, S: 56.101181

#### 1.6. Type(s) of data:

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

Steve Intelmann

#### 2.2. Title:

Metadata Contact

# 2.3. Affiliation or facility:

#### 2.4. E-mail address:

steve.intelmann@noaa.gov

#### 2.5. Phone number:

(206) 526-4157

# 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:

**Bob McConnaughey** 

#### 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:** 

- Data were entered into a spreadsheet and converted to point features in ArcGIS.

- Point features were converted to line features based on feature and vertex ID to represent the starting and ending locations of each trawl deployment. Catch and other environmental data, such as depth and temperature, were then spatially joined to each line segment based on a key field identifier from the original data. - 1996-08-01 00:00:00 - Macrofauna sampling was conducted aboard two identical 40 m chartered stern trawlers, the sister ships FV ??Aldebaran?? and FV ??Arcturus??. Each is powered by a 1525 hp main engine and fitted with a variable pitch propeller and propeller nozzle. Macrofauna were sampled with identical 83?112 eastern otter trawls, selected to ensure relatively large samples of patchily distributed organisms and to minimize clogging of the opening by large macrofauna (e.g. sea stars). These nets have a 25.3 m headrope and a 34.1 m footrope and have been the standard sampling gear used for annual NMFS groundfish-crab surveys in the EBS since 1982. The trawl was towed behind 1000 kg steel V-doors and 54.9 m paired dandylines. Each lower dandyline has a 0.61 m chain extension connected to the lower wing edge to improve bottom-tending characteristics. For this study, the standard trawl was modified to improve catchability and retention of macrofauna. It was equipped with a tickler chain and a hula skirt, and had a 3.8 cm liner covering both wings and the entire bottom body, with complete coverage top and bottom of the intermediate and codend. An acoustic net mensuration system and a mechanical bottom contact sensor were used to assess net configuration and collect performance data for area-swept and catch-per-uniteffort (c.p.u.e.) calculations. Each vessel sampled adjoining HF-UF stations (??pairs??) by towing the trawl through the centre of a 1 nm2 cell for 1.39 km (i.e., 3 knots for 15 min). Catches were fully processed in the field by sorting macrofauna to the lowest possible taxon and then weighed and enumerated separately. Weights were determined using a motion-compensated precision electronic balance. Biogenic substrate, such as empty gastropod and bivalve shells, and identifiable egg masses were also weighed, so as to provide a more complete characterization of the benthos. Prior to analysis, catch data were lumped into larger taxonomic groups to resolve classification differences between the vessels and to reduce the number of dependent variables. Bottom trawl catches (CPUE) are standardized according to area swept, as determined with Scanmar ascoustic system and GPS coordinates of vessel. Catch values are counts of organisms/hectare.

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):** see Process 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?

Nα

## 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/28208

# 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:

Alaska Fisheries Science Center (AFSC)

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

Yes

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

https://access.afsc.noaa.gov/data-zips/32318\_GAP\_1996\_Trawlex\_chronic-effects-other.zip

### 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:

#### 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.