Data Management Plan

Data Policy Compliance

The project investigators will comply with the data management and dissemination policies described in the *NSF Award and Administration Guide* (AAG, Chapter VI.D.4) and the *NSF Division of Ocean Sciences Sample and Data Policy*.

Description of Data Types

The project will produce several observational and experimental datasets, as described below.

Observational Datasets:

Beach seine data: Haul identifiers (location, date, time, habitat descriptors), species number and size distribution per haul. Excel file converted to .csv. Repository: BCO-DMO

Seagrass community data: Sample identifiers (location, date, time), species composition and biomass of seagrass, mesopredators, grazers, epifauna & epiphytes. File types: Excel file converted to .csv. Repository: BCO-DMO.

Sea otter data: Sample identifiers (location, species, date), counts, species and number consumed. File types: Excel file converted to .csv;. Repository: BCO-DMO.

Environmental data: Sample identifiers (location, species, date, depth), nutrient concentration, temperature, light, salinity, dissolved O2, sediment carbon %. File types: Excel file converted to .csv. Repository: BCO-DMO.

Other data: We will use publicly accessible data available from the Nearshore Fish Atlas http://alaskafisheries.noaa.gov/habitat/fishatlas/ and the Alaska ShoreZone Coastal Imagery and Mapping program http://alaskafisheries.noaa.gov/shorezone/

Experimental Datasets:

Trophic cascade experiment: Data on abundance of seagrass, mesopredators, grazers, epifauna and epiphytes in experimental cages over time. File types: Excel file converted to .csv. Repository: BCO-DMO.

Data and Metadata Formats and Standards

Field observation data will be stored in flat .csv files, which can be read easily by different software packages. Field data will include date, time, latitude, longitude, and sample number, as appropriate. Quality flags will be assigned according to the ODS IODE Quality Flag scheme (IOC Manuals and Guides, 54, volume 3; http://www.iode.org/mg54_3). Metadata will be prepared in accordance with BCO-DMO conventions (i.e. using the BCO-DMO metadata forms) and will include detailed descriptions of collection and analysis procedures.

Data Storage and Access During the Project

The investigators will store project data (including spreadsheets, ASCII files, images, and GIS files) on laboratory computers that are backed up by the University's central IT organization. We will utilize the University of Alaska Fairbanks Cloud Services for data storage and sharing among project investigators using Google. Personal computers in all laboratories are backed up daily using Apple Time Machine to an onsite external hard drive, and weekly to an offsite hard drive.

Mechanisms and Policies for Access, Sharing, Re-Use, and Re-Distribution

Metadata will be provided using the BCO-DMO Dataset Metadata submission form. Data sets produced by the science party will be made available through the BCO-DMO data system within two-years from the date of collection. The project investigators will work with BCO-DMO data managers to make project data available online in compliance with the NSF OCE Sample and Data Policy. Data, samples, and other information collected under this project can be made publically available without

restriction once submitted to the public repositories.

Data produced by this project may be of interest to biological oceanographers and marine ecologists. We will adhere to and promote the standards, policies, and provisions for data and metadata submission, access, re-use, distribution, and ownership as prescribed by the BCO-DMO Terms of Use (http://www.bco-dmo.org/terms-use).

Plans for Archiving

The PI will work with BCO-DMO to ensure that project data are submitted to the appropriate national data archive and that proper and complete documentation are archived along with the data.

Roles and Responsibilities

The Lead PI, G. Eckert, will coordinate the overall data management and sharing process and will submit the project data and metadata to the Biological and Chemical Oceanography Data Management Office (BCO-DMO) who will be responsible for forwarding these data and metadata to the appropriate national archive. Each graduate student will be responsible for sharing his/her subset of data among the project team in a timely fashion.