

## DATA MANAGEMENT PLAN

We will appoint the requested laboratory assistant (Seibel, technician) as the Data Manager for this project. I anticipate that this will account for <10% of the funded effort. The Data Manager will coordinate project-specific communication between PIs, students and collaborators as well as ensuring consistency and quality of all data compiled and reported and for archiving data in a National Data Center. Data management and sharing are essential to the goals of the proposed research. The PIs are committed providing open-source access to resulting experimental data. We will work with the Biological and Chemical Oceanography Data Management Office (BCO-DMO), an NSF-funded data repository, to archive and make all data sources publically available. The PIs have corresponded with BCO-DMO and are assured that they will be able to assist with archiving and storing data generated from this proposed project. During year 3 of this project, the PIs have budgeted salary time to organizing, managing and publishing data from this project.

BCO-DMO will also archive project data at the appropriate national data facilities, including the National Oceanographic Data Center (NODC) and EcoTaxa. Acoustic data from the Wire Flyer EK80 and shipboard EK60/80 will be hosted by the NOAA Water Column Data Archive. The .raw SIMRAD manufacturer formatted files will be archived. Free data readers are available online and the files contain all the information from the instrument. Appropriate metadata including the date, time, location, cruise, instrument setup will also be associated with the archived data files. This project will produce large amounts of data in the form of: (i) physiological and behavioral animal measurements, (ii) physical and chemical parameters of the ocean and (iii) imagery, acoustics and counts of zooplankton. Each PI will have copies of these data and videos for use in teaching, outreach, and analyses.

### **Raw data management and storage**

During the field trials, data will be downloaded, stored on separate computers and backed up daily to 2x portable hard drives. Access to these samples will be provided upon request. Detailed plans for cruise track, instrument deployment, water sampling strategy and water sample allocation will be written up as a science implementation plan. The actual sampling events will be recorded on paper logs (scanned into PDF documents) and in an ipad-based digital event log. Upon returning from expeditions, digital data will be backed up, categorized and organized for improved access. Hard drives in the respective PIs laboratories.

### **BCO-DMO archival and integration of project data**

The PIs will work with BCO-DMO to archive and integrate all data from this project and make it available for use. BCO-DMO will assist with archiving the raw and processed biological and oceanographic data (e.g., temperature, salinity, dissolved oxygen). The raw and processed data files will be made available at the time of manuscript publication and project completion. Links and references to the data will be available in the associated presentations and publications.

### **Availability of presentations and publications**

Educational files, images, videos, handouts and presentations produced as a part of this work will be disseminated to the respective outreach collaborators for future collaborations and distributions. Further distributions will be offered upon request and to encourage this, sample videos and handouts will be placed on the PIs websites. Links to these outreach and raw data will be reflected on PIs websites. We will advertise the resources on-line availability to schools and individuals and also distribution options for those without high-speed internet. Presentation data and peer-reviewed publications will also be available upon request in accordance with the intellectual property, or other rights or requirements of the related

conferences and journals. Open access to these articles will be requested and is included in the budget. Data compliance activities will be summarized and documented in annual reports led by the PIs. The lead PI will oversee the management of these data.