**Data Management Plan**

Description of Data:
   The type of data collected in this project will include ribosomal sequences, next-generation sequence data, microbe (bacteria, protist and phytoplankton) abundances for a seasonal/yearly time series, and digital images associated with phytoplankton and protist counts.

Data Management:
   Gast will be responsible for the sequence and abundance data for the time series, along with corresponding environmental metadata.

   Data quality – Sequence quality will be assessed by parameters described by the sequencing facility; Quality Score and Continuous Read Length.  QPCR data quality will be assessed by examination of melt curve profiles and confirmation of the presence of the correct peak for each target species.
   Data documentation - Sequence data will be stored as FASTA format, and files will be transmitted electronically.
   Data archival - Sequence data will be accessioned at GenBank or the NCBI Short Read Archive, with copies of the electronic files also managed by BCO-DMO (see resource description below).  Microbe abundance data from the IFCB will be sent to BCO-DMO as excel files.
   The raw data from IFCB comprises continuous time series of images of plankton and other particles, and of the optical signals associated with each image.  The total amount of data generated ($\sim 1$ GByte day$^{-1}$) is too large for standard data management and serving systems to handle (e.g., BCO-DMO, C. Chandler, pers. comm.); so it is maintained in the Olson and Sosik laboratories and archived by WHOI's Computer and Information Services.  It can be made available to interested scientists as copies of data tapes.  As part of an on-going project (separately funded) to establish mechanisms for rapid and easy access to these type of data, from our labs we will also directly enable open web access to images collected during this project (as is currently being done for IFCB imagery collected at MVCO; see http://ifcb-data.whoi.edu/ where data are accessible through html, PNG, RDF, XML, and other standard formats).

Sharing and dissemination of data:
   The Principal Investigators, with the assistance of the graduate student, will ensure that results are published in the peer-reviewed primary literature and presented at national or international conferences in a timely manner.

Resource References:
   BCO-DMO  Biological and Chemical Oceanography Data Management Office http://bco-dmo.org   BCO-DMO was created in late 2006 to serve PIs funded by the NSF Geosciences Directorate (GEO) Division of Ocean Sciences (OCE) Biological and Chemical Oceanography Sections and (with augmented funding in 2010) Office of Polar Programs (OPP) Antarctic Sciences (ANT).  BCO-DMO manages and serves oceanographic biogeochemical, ecological, and companion physical data and information developed in the course of scientific research and contributed by the originating investigators.  The BCO-DMO data system facilitates data stewardship, dissemination, and storage on short and intermediate time-frames.